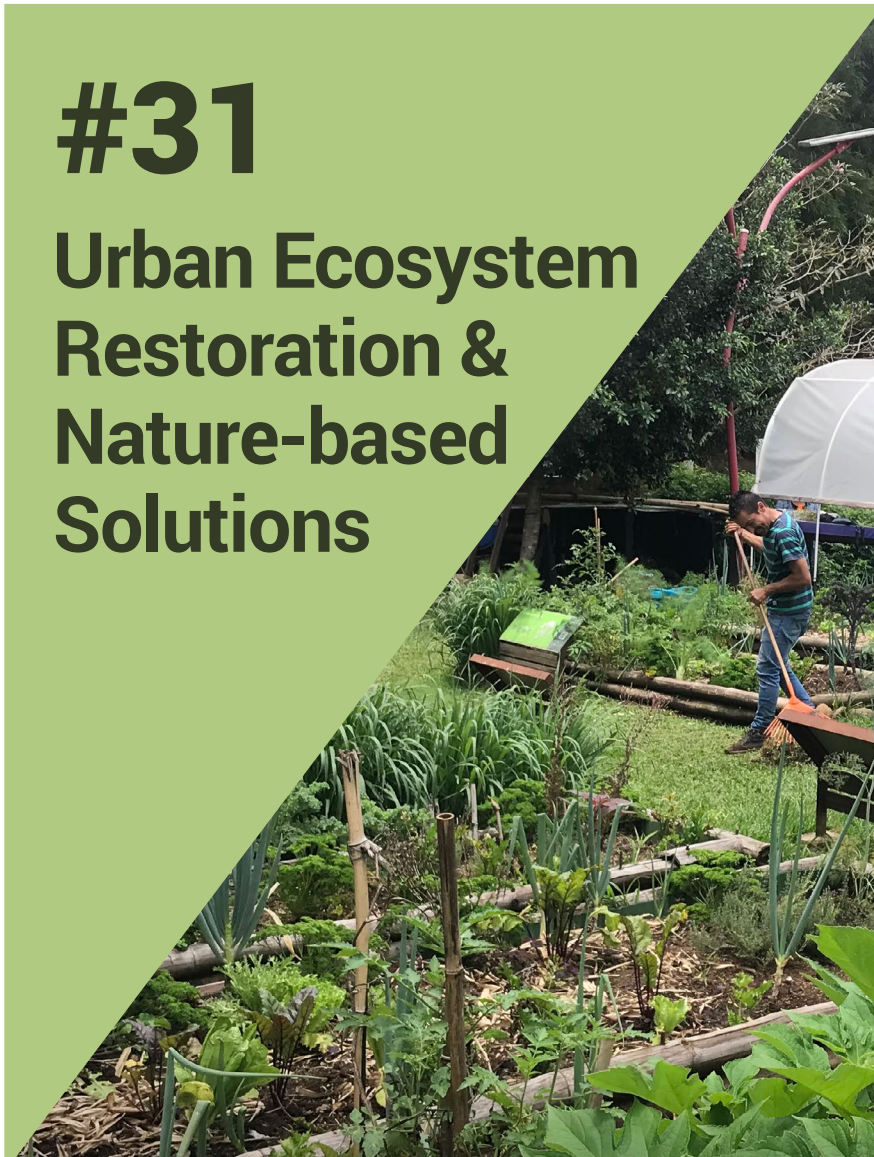


# #31

## Urban Ecosystem Restoration & Nature-based Solutions



Peer Learning  
San José, Costa Rica. May 2022



Learning  
UCLG

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# Foreword

**Nature is the basis of survival and development for cities and our communities. Understanding nature, learning from it and working with it allows us to cultivate multiple benefits in terms of health, education, recreation, biodiversity, development, risk mitigation, and social cohesion. Nature-based solutions (NBS) are an innovative tool available to local governments large or small that allows us to better understand our territory and implement strategies tailored to the needs of our communities.**

The Municipality of Alajuelita, one of the five municipalities that share the Interurban Biological Corridor Maria Aguilar (CBIMA) in Costa Rica, has been part of the INTERLACE project for two years. For our local government, participating in this project has been a very enriching experience in different areas, particularly in terms of the application and community outreach of the high level of research and knowledge about nature-based solutions (NBS) from other countries in our territory. Being part of INTERLACE along with other neighboring municipalities provides many benefits to the community such as breaking down barriers of mistrust and fear, weaving hope and bonds, and reinforcing the physical, emotional and mental benefits of nature that we have been able to transmit to our citizens.

The Cities Talk Nature peer learning event and the signing of the Commitment Letter were extremely important for us to learn more about NBS. For a municipality like Alajuelita, there must be a balance between urban and rural, between development and conservation. Like in all cities in the valley, Alajuelita's urban growth is spreading over natural areas, and the concept of NBS allows us to approach the sustainability of this

process with more criteria. We embrace the concept of innovation in the city while appreciating the existing realities and the proposed visions.

The visit of representatives from other cities, academic teams, researchers and project partners to our territory has been a great opportunity to show how even in poor neighborhoods, and especially in them, nature-based solutions can be part of a participatory process to consolidate quality public spaces, increase respect for nature, and connect our communities.

This note seeks to share with other cities, local and regional governments, communities and interested organizations what we have seen, discussed and learned during this first face-to-face meeting of the INTERLACE project. We hope that you find the examples of the different cities inspiring and that, like us, they will help you to integrate nature in the search for a more inclusive, sustainable and resilient development. We thank UNGL, UCLG and its strategic partners for providing timely support and follow-up to our Municipality in this project that has a great impact on the community and especially on environmental conservation.



© Source: UNGL

**Mr. Modesto Alpizar Luna**  
Mayor of Alajuelita



# Introduction

**This Peer Learning note documents the practices and discussions shared between cities and partners during INTERLACE's consortium meeting and the first in-person "Cities Talk Nature" engagement event, which took place from May 9-13, 2022 in Costa Rica.**

The EU-funded INTERLACE project connects cities from Europe and the Community of Latin American and Caribbean States (CELAC) and equips them to effectively restore and rehabilitate (peri-)urban ecosystems for livable, resilient and inclusive cities. The good practices, tools and methods documented or developed in the project are shared with municipalities across the globe via the CITIES TALK NATURE programme, which offers webinars and in-person events.



INTERLACE Consortium members. Source: UNGL.

**82**  
participants

**11**  
countries

**23**  
municipalities

The "Cities Talk Nature" event and peer learning in Costa Rica was attended by 82 participants (41 women and 41 men) from 11 countries across Latin America and Europe: Chile, Colombia, Costa Rica, Ecuador, Germany, Mexico, Poland, Spain, Netherlands, Puerto Rico and the United Kingdom. This included representatives from five of INTERLACE's city partners (CBIMA, Chemnitz, Envigado, Granollers, and Portoviejo), other INTERLACE partners including city networks, research institutions, civil society organisations and communication experts, as well as other cities and local government associations from Costa Rica and other countries in the region.

## During the five days, participants engaged in a rich program which included:

- Exchange of good practices and experiences in implementing NBS.
- Group discussions to identify key lessons learned and transferability of the different practices and governance mechanisms of partner cities.
- A field visit to learn about the CBIMA biological corridor, and the different projects, neighborhoods, challenges and territorial contexts it encompasses.
- Roundtables and a marketplace to share, discuss and enrich the different products under development within the project.
- Engaging dynamics to learn about the different nature-based solutions available, and how to communicate them to different stakeholders.
- The Cities Talk Nature engagement event gaining the commitment from 23 elected officials to foster nature-based solutions and ecological restoration in their territories.

# Background

## Restorative Nature-based Solutions for Resilient, Inclusive and Sustainable Cities

### Environmental and social challenges in cities

Urban sprawl and the conversion of open spaces coupled with environmental pressures such as climate change and pollution place immense strain on cities' social-ecological systems and their peripheries. These processes can in turn worsen the degradation and destruction of natural habitats, fragment ecosystems and have consequences for human health and well-being, social cohesion and equity as well as a city's resilience. Such challenges are particularly relevant for small and intermediary cities. Their administrations often lack the resources and tools to address the problem of ecosystem degradation, while also ensuring that negative effects do not disproportionately affect already vulnerable populations and result in increased social inequality and poverty.

Given the significant proportion of urban populations in the EU and CELAC regions that live in towns and cities of less than 300,000 people (57% and 41%, respectively) (UN DESA 2018), these municipalities play a decisive role in ensuring widespread action to achieve the Sustainable Development Goals (SDG) and restore and conserve critical urban and peri-urban ecosystems.



Cities are increasingly recognising the potential of nature-based solutions (NBS) to address a range of societal challenges in parallel. These are solutions that are:

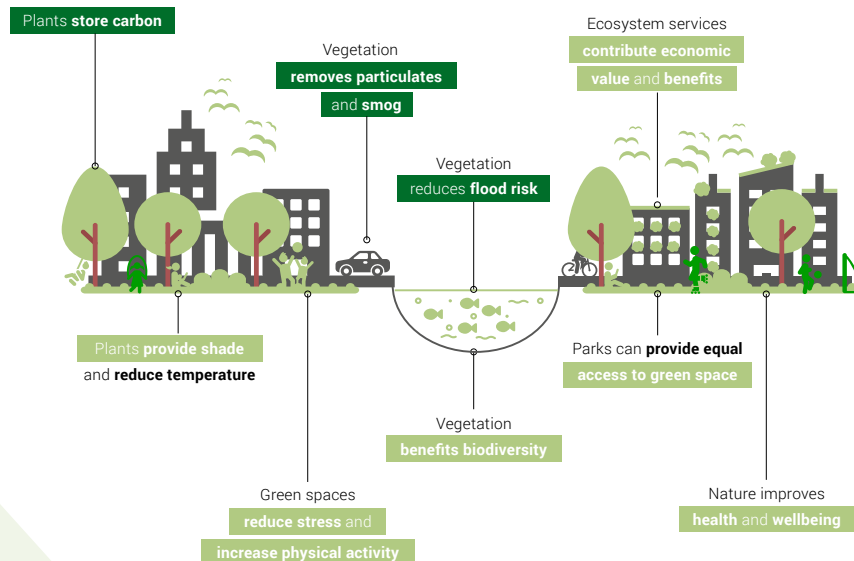
**Supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. NBS must benefit biodiversity and support the delivery of a range of ecosystem services.**

EC, 2020

There is thus unprecedented momentum to restore, protect and increase the quantity and quality of urban green areas. Restorative NBS specifically focus on the restoration of ecosystems and the ecological structure in and around cities and regions. Examples of (peri-)urban NBS range from creating biodiverse (peri-)urban forests to replacing or complementing grey infrastructure with green and blue alternatives.

Due to their multifunctional character and the diversity of benefits NBS can produce, they have the potential to contribute to diverse policy goals. Specifically, NBS have the potential to contribute to the achievement of: SDG 3 (Good Health and Wellbeing), 11 (Sustainable Cities and Communities), 13 (Climate Action), 14 (Life Below Water) and 15 (Life On Land), as well to SDG 5 (Gender Equality), 6 (Clean Water and Sanitation), 8 (Decent Work and Economic Growth), and 10 (Reduced inequalities).

Restoring a degraded urban area and creating a community garden out of it with the active engagement of different segments of the population, including poor, youth, migrant and other vulnerable communities provides an example for an NBS that contributes to different SDGs (i.e. SDGs 2 (Zero Hunger), 3 and 10). It also contributes to SDG 15 if biodiversity aspects (selection of species, animal-aided design, etc.) are considered in planting.



**Benefits provided by NBS in cities.** Source: UCLG infographic, Resilience Learning Module II (p. 62).

<sup>1</sup> Nature-based solutions and global climate protection: Assessment of their global mitigation potential and recommendations for international climate policy. Reise et al. (2021). German Environment Agency.

<sup>2</sup> Getting the message right on nature-based solutions to climate change. Seddon et al. (2021). In: Global Change Biology 27 (8), pp.1518–1546. DOI: 10.1111/gcb.15513.

NBS provide benefits to biodiversity through the enhancement of diverse ecosystem functions, ecosystem resilience and ecosystem health. They can also facilitate the protection or enhancement of species richness in a given ecosystem, or ecosystem richness in a given area.<sup>1</sup> Such solutions build on natural ecosystem processes to realize these benefits (e.g. attracting a diversity of pollinators to help plants reproduce). Monoculture plantations which disrupt natural ecosystem processes, remove or fragment habitats or which directly harm habitats and species thus do not qualify as NBS.<sup>2</sup>

The participation of local communities in the co-production of solutions is crucial for reaping these potential benefits and for fostering society's relationship with nature. However, existing social inequalities can prevent certain communities from participating in the design and implementation

of NBS and from having access to the benefits produced. Being sensitive to the relevance of ethical, cultural and gender issues in designing locally appropriate solutions is crucial to minimize the risk of negative social side-effects of NBS.<sup>3</sup> In addition to the participation of local communities, various actors need to collaborate in their development, maintenance and monitoring to ensure their effective implementation. These actors include local and regional governments, national agencies, urban planners, civil society organisations and academia.

## Relevant global and (inter-)regional policy processes

In addition to the Sustainable Development Goals and the New Urban Agenda, which envisages cities and human settlements that protect, conserve, restore and promote their ecosystems, water, natural habitats and biodiversity, the international community has also put special emphasis on the importance of ecosystems and their restoration for our common future.

In 2021, the UN announced the Decade for Ecosystem Restoration 2030, which aims to prevent, halt and reverse the degradation of ecosystems. The UN Climate Change Conference (COP26) held in Glasgow in 2021 recognised the interconnections between the global biodiversity and climate crises. The event also highlighted that nature plays a role in both climate adaptation and mitigation. NBS, however, were not explicitly mentioned in the final declaration. In March 2022, NBS were formally recognised for the first time in the United Nations Environment Assembly (UNEA). Under the Convention for Biological Diversity (CBD), NBS are part of the Post-2020 Biodiversity Governance Framework.

In addition, there have been many developments at the (inter)regional level to accelerate the use of NBS. The EU Nature Restoration Law has set an overarching target to restore 20% of EU's land and sea area by 2030 and eventually extend this to all ecosystems in need of restoration by 2050. Further processes are taking place to foster the cooperation on NBS between different regions. Apart from specific interventions like the INTERLACE project, the EU–Latin America and the Caribbean Policy Dialogue Support Facility (EU-LAC PDSF) is an Action funded and managed by the Service for Foreign Policy Instruments (FPI) EU that aims to deepen the EU's engagement with Latin America and the Caribbean (LAC).

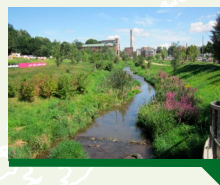
<sup>3</sup> Inclusive participatory process for urban ecosystem restoration - Guidance on gender, cultural, and ethics-related considerations. Øian H et al. (2021). Interim report. INTERLACE Project.

## Analysis of Governance and Policy Coherence for NBS: Examples from INTERLACE

In the INTERLACE project, i) the impact and coherence of policy instruments and ii) current governance practices participating cities were analyzed.

Both deliverables (available at [interlace-project.eu](http://interlace-project.eu)) offer an interesting overview of policy instrument impacts and coherence and governance approaches as well as supporting factors that can inform future NBS policies and initiatives in INTERLACE and beyond.

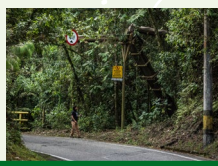
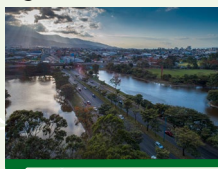
**City of Chemnitz**  
Renaturalized  
Kappelbach river



**Metropolia Krakowska**  
River parks



**CBIMA**  
Corredor Biológico  
Interurbano María  
Aguilar



**Envigado**  
Wildlife crossing



**Granollers**  
Lledoner Park



**Portoviejo**  
Parque Lineal  
Las Vegas

We support the



## Challenges to implement NBS at scale

Several challenges are linked to NBS implementation on the ground. These include the multifunctional character of NBS which require a cross-sectoral approach to planning and implementation that is not always reflected in the administrations relevant for NBS implementation. Although NBS are already implemented in many cities across Europe and globally, there is a lack of coordinated approaches and frameworks that allow for adaptive design and implementation. Consequently, NBS as a novel concept, are often not yet sufficiently integrated into policy processes. Professional capacities and secured funding are needed for NBS planning, implementation and maintenance. Also, to exploit the full potential of NBS, they need to be integrated in a coherent landscape planning approach, which also takes into account connections with peri-urban and rural areas. NBS can also have negative side effects, such as gentrification and social injustice.

Possible actions to address these challenges include an adequate participation of citizens and the considerations of their needs in the planning process. This can ensure that the benefits of NBS for each individual are clearly communicated and that their implementation is legitimized. Cooperation between different actors across sectors and governance levels should be enabled. This can be facilitated by a standardization of NBS implementation and integrative urban and landscape planning frameworks. Powerful supporters, also from the private sector, can increase the acceptance of NBS. Improved financing for the management and maintenance of land as well as new business models, such as Public-Private-Partnerships are another way forward.

Finally, policy frameworks (e.g. the degree to which NBS are included in different policies and strategies across sectors) and the political context (such as the buy-in of decision-makers) are decisive for the uptake and acceptance of NBS, both at local and national level. Different local contexts require tailored NBS planning and implementation which accommodate each city's specific and diverse policy and governance structures, challenges and needs. In order to get an understanding of how restorative NBS and related green space interventions are implemented, realized, and embedded in cities' urban policy and planning contexts, a sound analysis is key. Learning and exchange between municipalities is also crucial to demonstrate the effectiveness of NBS on the ground. An example for such an inter-city exchange is provided in this note.



# Peer Learning with “Cities Talk Nature”

## Site visit

**On May 12, 2022, participants visited five different locations along CBIMA’s corridor, getting to see first hand the diversity of challenges, approaches and opportunities for environmental restoration across the five different municipalities that the biological corridor passes through.**



Field visit to Sabanita. Source: UCLG Learning.

The María Aguilar Interurban Biological Corridor (CBIMA), established in 2009, comprises five municipalities in the Greater Metropolitan Area of San José de Costa Rica with a combined population of around 400,000. CBIMA spans 39 km<sup>2</sup> of modified and natural habitats interconnecting the watershed of the María Aguilar River and contains part of the only Key Biodiversity Area within an urban area in Costa Rica.

The rapid expansion of residential and commercial land uses, including illegal encroachment on natural areas, has affected riverbanks and fragmented the landscape in the metropolitan area, creating disaster risk, threatening biodiversity and affecting surface water quality. Insufficient ecosystem connectivity has also increased species vulnerability in adapting to highly altered urban ecosystems, reducing the number of species seen in the urban area and its surroundings.

In the face of these challenges and the impact water pollution was having in other regions further down the larger watershed, CBIMA was established as an inter-institutional and multi-level governance body bringing together national level organizations, local governments, academia, private sectors, NGOs, and other engaged citizens and stakeholders. It is one of the first interurban corridors established in Costa Rica under its National System of Conservation Areas (SINAC), and works through a local coordination committee in which the different national institutions (including the Ministry of Environment and Energy, the National Institute of Housing and Urbanism, and the Water and Sewage Institute), the five municipalities (San José, Alajuelita, Montes de Oca, La Unión and Curridabat), and other entities participate. While it has no regulatory competences, and works based on the existing jurisdiction and competences of participating entities, it has proven useful to align the vision across the territory and bring together the efforts to promote the restoration and conservation of green spaces taken by different organizations, institutions and civil society within the watershed. Through CBIMA’s efforts, the territory has undergone a gradual process of restoration and recovery of the green fabric both on the banks of the river and in the city.<sup>4</sup>

<sup>4</sup> Diagnóstico multidimensional del Corredor Biológico Interurbano María Aguilar. MINAE-GEF-PNUD (2019).



# Corredor Biológico Interurbano María Aguilar

## Projects visited

### 1 Sabanita Alajuelita

Open space in self-built neighbourhood next to the river to be refurbished based on design co-created with community members.



#### Key issues

- Participatory design
- Face to the river
- Recreational spaces

#### Nature-based solutions used

- Permeable pavement
- Riverbank conservation/restoration
- Indigenous vegetation

### 2 Proyecto Estrella del CBIMA Hatillo 1, San Jose

Key school commuting route restored with additional green spaces, increased sense of security, and participation of those living on the street.

[▶ Learn more](#)



#### Key issues

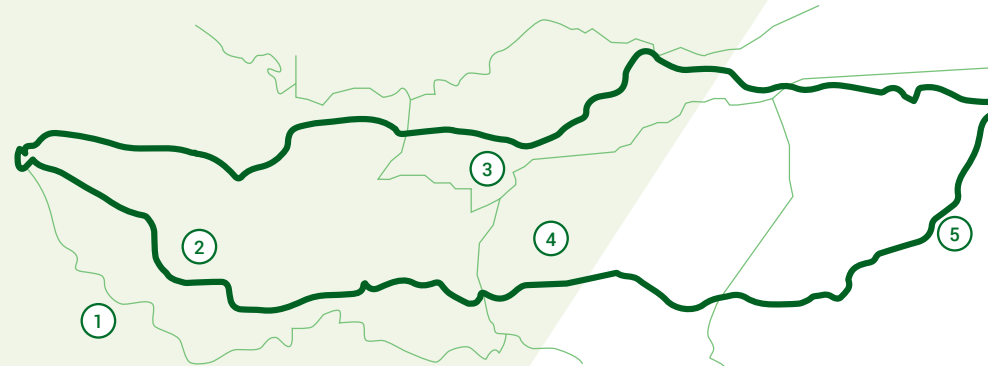
- Safety
- Accessibility
- Slope erosion
- Drainage clogging

#### Nature-based solutions used

- Permeable sidewalks
- Slope erosion prevention gardens
- Rainwater gardens

### 3 Bulevar Los Yoses San Pedro, Montes de Oca

Linear park next to main avenue being refurbished with indigenous trees, spaces for children and elderly, and increased tree canopy connectivity.



### 4 Parque Las Piedras Curridabat

Community garden and “sweet sidewalks” with pollinator-friendly native plants, managed by neighborhood association in high income neighborhood.



#### Key issues

- Community cohesion
- Multipurpose parks
- Green connectivity

#### Nature-based solutions used

- Community vegetable gardens
- Pollinator gardens
- Riverbank conservation



#### Key issues

- Air pollution
- Heat island
- Lack of green spaces

#### Nature-based solutions used

- Indigenous vegetation
- Park management
- Soil restoration

### 5 Finca Los Lotes Dulce Nombre, La Unión

Municipal tree nursery in upper river basin helping conserve watershed and serving as educational centre.



#### Key issues

- Water conservation
- Propagation of plants for urban parks and gardens
- Awareness-raising

#### Nature-based solutions used

- Reforestation
- Nature conservation
- Environmental education

# Challenges

During the field visit, participants were able to see the multiple projects being undertaken within CBIMA and the many collaborations among different institutions, levels of government, as well as academia and organized citizenship that have been facilitated by this multi stakeholder partnership. A key element of many of these projects are the participatory processes being used in different municipalities to ensure nature-based solutions used are adapted and responsive to local contexts. From the participatory design of the interventions in Alajuelita and San Jose, to the neighborhood management of the community garden in Curridabat with technical assistance from the municipality, to cycling tours organized by CBIMA as a whole, cities and institutions are making various efforts to engage citizens and gain ownership of the corridor by local communities. Cooperation among municipalities to foster reforestation across city borders has also proven successful, including through the use of the Finca Los Lotes as a nursery for the whole biological corridor, and the collaboration and support of national institutions and international programs such as UNDP's Productive Landscapes.

Along with this valuable progress, remaining challenges and opportunities for further actions were also pointed out by the different local government representatives and practitioners accompanying the visit.



Community garden in Curridabat. Source: UCLG Learning



## Cultural change & resources

The reconnection with the biosphere and a cultural change among all citizens to respect, protect and conserve natural areas and the biological structure of the city is a long term goal, requiring active environmental education and engagement activities to show how life quality in the city will improve if nature is restored. Achieving a change in mentality and raising awareness among all citizens, as well as the private sector could help change policy-makers priorities, mobilizing funds as well as human resources required to develop the many green spaces that are still in need of intervention and restoration, with further ownership from neighboring communities and companies.



## Inclusivity & engagement

Successful examples of cooperation with citizen organizations and neighborhood associations already exist within CBIMA, where local gardens have been installed with an equal share of investment by the beneficiary communities and the municipality. However, improvements can be made as usually it is the same people who participate, and underrepresented groups are rarely engaged. Officials who work on green spaces often have no experience yet in working with underrepresented groups making this a challenging process.



## Urban green policies

There is currently no shared policy for the CBIMA region specifically regarding urban green space. Green spaces are still a low priority for policy-makers within the participating municipalities, with budgets and focus of attention usually directed towards the infrastructure of streets and roads. While there are some regulations for real estate developers that require them to leave 5 – 20% of space for parks (depending on the average size of the lots, the intended land use and the development plans of the municipality), these green spaces are not always of high quality. Without clear urban green space policies and plans, municipalities have in the past accepted land for parks and public green space from developers in steep slopes, with accessibility issues, bad soil quality among other factors that compromise the quality and availability of green space in the city.



# Good practices

## Granollers, Spain

Environmental and social recovery of the Congost River

**The Congost River is a great example of the potential of Nature-based Solutions to recover critical habitats for biodiversity in urban and periurban areas while at the same time providing multiple environmental, social and economic benefits to citizens through a multilevel governance approach.**

The Congost River gave birth to the city of Granollers in Catalunya, which grew along the river in the outskirts of the city of Barcelona. As the city grew and the region industrialized, the river was canalized and pollution coming from across the flat-lands turned it and the Besòs river in which it flows into one of the most contaminated riverways in Europe in the 1970s and early 80s. The degradation of the river was such that there were even plans to tunnel the river and build parking lots on top. However, through efforts of the community and ecological organizations in different municipalities, and increasing environmental awareness in the late 1980s, the decision was made to create a consortium to stop the pollution of the river and restore its natural habitats.

The creation of the Environmental Department of the Catalunya Government in 1991 gave way to a comprehensive treatment plan for the river, reconducting sewage and contaminated waters into new treatment plants along its rivershed, which helped the river recover some of its water quality during the next decade. In Granollers, the city put green-blue connectivity at the heart of its urban strategic plans, setting up a network of parks and non-drinkable water systems around the river and the city. This has been achieved through the establishment and alignment of management plans and investments at multiple levels of government (EU, regional and municipal).

The wetland Can Cabanyes was established along the river in the early 2000s, providing an important habitat for endangered species, including migratory birds that often pass through the city. The constructed wetland receives the treated water from the nearby water treatment plant providing a tertiary

filter based on ecological processes before being released into the river. The intervention also included the restoration of the adjacent forest, the creation of an environmental education center, and the closure of a landfill across the river. In the last decade, further emphasis has been put on restoring the environmental quality of these green spaces and the river bank, aiming to improve and protect the biodiversity along the river.



Can Cabanyes wetland (top) and park areas along the Congost river (below). Photos courtesy of Ajuntament de Granollers.

Additionally, the city has established multiple initiatives to bring people closer to the river and these recovered spaces. Municipal vegetable gardens were established along the river for interested citizens to grow food. Connections between the different green spaces in the city have been established through pedestrian pathways, cycle paths, and signs displaying suggested itineraries and information about the city's environmental heritage. Multiple activities have also been organized with neighborhood associations, educational institutions and volunteer groups to explain and engage citizens in the recovery of the river and its surrounding environment. In the coming years, the green spaces along the river will continue to be expanded and connected, prioritizing non-motorized mobility. The introduction of a second wetland for tertiary treatment, the restoration of natural meanders in the river bank, and the use of water permeable surfaces, rain gardens and other Nature-based Solutions is also being planned.

## Key Lessons

**Aligning plans at multiple levels of government** secures better planning, resource mobilization and management

**Natural riverbanks offer multiple benefits** in terms of flood protection, biodiversity conservation, health and leisure

**Spaces for citizen engagement and environmental education** are key for citizens to understand NBS interventions and their benefits, and to gain political support

## Envigado, Colombia

### Local System of Protected Areas (SILAPE)

**Envigado's Local System of Protected Areas connects and protects critical spaces for the ecological structure, ecosystem services, and cultural heritage of the municipality.**

The city of Envigado, with approximately 240,000 inhabitants, is located in the Central Mountain Range of the Colombian Andes, in the department of Antioquia. It is one of the 10 municipalities that make up the Metropolitan Area of the Aburrá Valley in Colombia, together with Medellín.

The first steps to protect biodiversity were taken by the municipality through the development of its Land Management Plan (POT, in its Spanish acronym) in 2000. In this plan, some protected soils were defined with the biological and cartographic tools that the municipality and the supra-municipal environmental authority Corporación Autónoma Regional del Centro de Antioquia (Corantioquia) had at the time. In 2011, the POT was updated, significantly modifying its content and conservation objectives, which allowed for the definition of highly important ecosystems. In this POT it was decided that, in the short term, a system of protected areas should be formally defined. This process was materialized with Municipal Agreement No. 09 in 2016 through which the municipality declared 40% of its territory as a protected area through the creation of a Local System of Protected Areas (SILAPE).



Flora and fauna found in Envigado's protected areas. Photos courtesy of Municipality of Envigado.



The SILAPE in Envigado aims to preserve strategic ecosystems, forests and water tributaries of special importance for local ecological connectivity and with neighbouring municipalities. It also protects the habitat of biodiversity and the species found in the territory. In 2013, it was estimated that the biological richness of the municipality spanned to around 600 species. However, a study conducted in 2019 by the National University of Colombia and the use of modern identification and measurement tools, it was discovered that the biological richness amounted to 1700 species. Thus, the biodiversity of the territory is much greater than initially thought. The territory is inhabited by species that are under different degrees of threat, as well as charismatic species, such as felines, which has been a novelty in the municipality and has generated interest in biodiversity, particularly among decision makers.

The local system, in addition to being a model of conservation from the municipal territory, contributes to the objectives of the Colombian National System of Protected Areas to decentralize, regionalize and localize environmental conservation with the aim of: 1) secure ecological processes and protect biological diversity; 2) safeguard environmental services and goods essential for human welfare; and 3) protect the natural environment and its components as a basis for safeguarding the country's cultural diversity and the social value of nature, given the accelerated and intense growth that fragments habitats and generates disconnection in the ecosystems.

Highlighting the cultural importance of the natural environment for the communities of the territory has been a key objective of the Municipality and a critical factor in gaining the acceptance and commitment of the local communities in the implementation of the system. In this sense, the municipality of Envigado has generated different strategies in its urban and rural territory to generate citizen ownership of biodiversity. Multiple approaches have been used to involve the communities, for example: mural painting in strategic places to provide spaces to reinforce cultural and natural values, photographic contests, nature walks through the territory (biotours), lectures in schools and awareness-raising on rural roads and trails. A successful example with great potential, at the urban citizen level, has been to involve children in identifying insects and their role in the ecological network. In this sense, through the care of caterpillars, an exciting place was created to learn about nature and the role of butterflies and other pollinating species.

Some of the key upcoming activities introduced by the municipality for the coming years include the declaration of the Ayurá Creek - one of the city's main rivers, as a cultural and natural heritage area. This process has already gained the support of thousands of citizens, and the increasing cooperation and coordination of efforts with neighboring municipalities in the Valley of Aburra metropolitan area.

## Key Lessons

**Monitoring is very important to understand existing biodiversity**, identify challenges, and showcase the positive impact of environmental restoration.

**Recovering and fostering communities' cultural attachment** to local natural environments is critical for its conservation.

**Integrating environmental conservation** into long-term municipal and regional land management plans helps to ensure their continuity.

## Portoviejo, Ecuador

### River connectivity

**The Portoviejo River Corridor Project aims to revive the river's function as a central axis of the city, through a integral comprehensive, multidimensional and multiscale intervention on its banks, ecosystems and adjacent neighborhoods.**



Portoviejo, a city of around 200,000, developed on both sides of the Portoviejo river encompassing 34 kilometers of its banks. With the expansion of the city, the river went from being its central axis to an overlooked element dividing the city in two. Deforestation due to agricultural activities or urban development, clandestine sewage discharges, sedimentation and bank erosion, reduction of the river banks' width, and human settlements in the river banks, have put increasing pressure on the river leading to higher flooding and health risks. Approximately 37,484 residents are estimated to be living in high risk areas, a reality further exacerbated by the increasing episodes of torrential rains and floods in recent years

Starting with the creation of the Las Vegas park (see Peer Learning Note #26), the city developed and is implementing the Portoviejo Corridor Project. Through it, the city aims to increase ecological connectivity, restore the river basin and water quality, reduce sedimentation in the river

banks, and open new green spaces to foster environmental restoration and social inclusion. The project includes the redevelopment and adaptation of 7 public parks along the river, and approximately 43.5 kms of riverbanks to be managed and restored, supporting the urban, social, environmental and ecosystemic transformation of the city, while at the same time reducing flood and soil liquefaction risks for neighborhoods along the river.

The whole project is based on the use of Nature-Based Solutions, and principles of citizen participation, equity and economic viability. It focuses on strengthening the landscape and environmental qualities of the river, improving the supply of recreation and leisure areas and improving connectivity between the city's neighborhoods with infrastructure for active mobility. Public-private partnerships will be key to the success of the project, particularly taking into account that a large part of the land along the river is privately owned, and there is no right of passage along rivers and other water bodies in Ecuador, as there is for beaches and coastal areas.

The city has started this process by working with existing associations, environmental groups, and other conservation actors. It has also built on the success of the Las Vegas park, which has been well adopted by the community as a recreational space, and has shown the potential of expanding the river banks, establishing areas for inundation, and using other nature-based solutions to diminish flood risk further down the river.

## Key Lessons

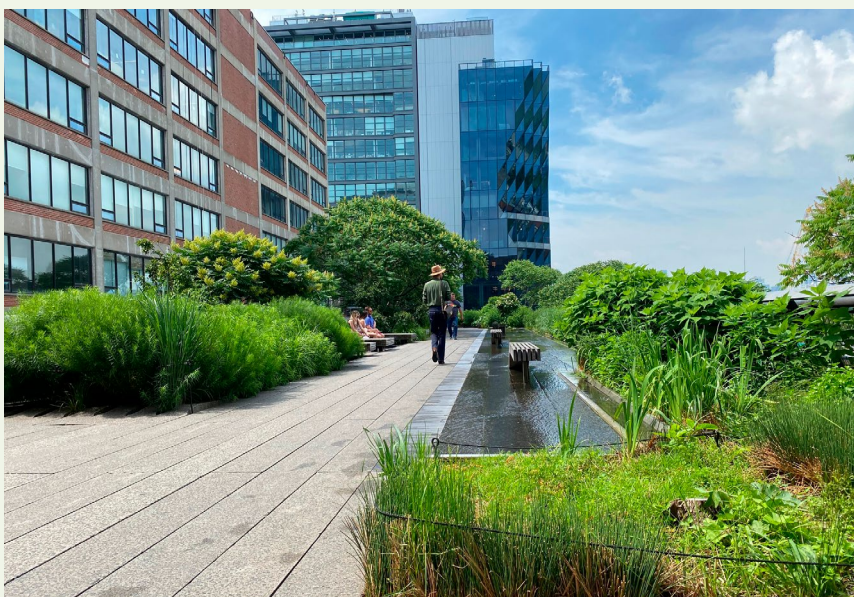
**Ecological connectivity and an integral approach** to ecosystem restoration can bring extend NBS benefits to the whole city

**Working with existing groups and providing** examples of NBS' implementation can help build momentum and support

**Understanding policy limitations** and developing appropriate planning tools and regulations is key

# Key lessons & recommendations

During the event, representatives of INTERLACE cities engaged in discussions of their experiences implementing nature-based solutions (NBS). The discussion topics spanned a variety of themes, ranging from inclusive participation of citizens and democratisation of public spaces to success factors for NBS projects and territorial planning and concrete challenges such as raising funds. Below you will find some of the key lessons and recommendations coming out from these discussions:



New York Highline. Source: Sandra Naumann.

## 1. Hear citizens' needs and promote inclusive engagement

One of the recurring topics of conversation was promoting inclusivity in the participation of citizens for designing and implementing nature-based solutions. The involvement of community and concrete works and maintenance can build new relationships between people and space and increase ownership. The city representatives taking part in the discussion reflected on the fact that citizens' participation should be led by their needs and interests, rather than imposed from the top (including from prescribed research or political agendas). This also requires understanding and addressing alternative preferences or potential issues, such as mobility.

## 2. Work with existing community groups and methodologies

A practical way to build on a community's needs is to approach and work with existing community groups, such as parents and teacher associations or neighbourhood associations when planning participatory processes. This requires an openness to existing methodologies and approaches used within the given community and adapting one's process. Building a lasting relationship between community groups and the local municipality was highlighted as another strategy. This can be achieved, for instance, by inviting groups and individuals to first participate in educational and awareness raising activities such as citizen science or educational walks.

## 3. Make the case for urban nature through cultural shifts

Educational activities and awareness raising activities also play a role in extended stakeholder engagement processes. Re-designing existing green spaces or creating new nature-based solutions might require a cultural shift. For example, understanding the concept of ecosystem services might change



how citizens think about green spaces. Another example brought up in the discussions was the potential of nature-based solutions for stormwater management. In order to introduce such solutions, it is important for citizens to understand the potential benefits of retaining water in urban environments to shift their perceptions of such storage areas as being undesirable. Making the case for urban nature as an opportunity to achieve better environmental health was proposed as a possible strategy to engage individuals in this discussion and reframe some critical perceptions of urban greening.

#### 4. Ensure the inclusivity and accessibility of green spaces

Another discussion focused on the democratisation of public spaces through inclusive design. The participants remarked on the importance of making public green spaces accessible, safe and designed in a way that responds to a variety of needs. The participants from CBIMA and Envigado discussed concrete examples of cases where involving women, children and vulnerable groups in the design of green spaces allowed to highlight concerns and perspectives previously unknown to the municipality. This influenced decisions on the use and design of specific NBS projects.



Site visit to community garden in Curridabat. Source: UCLG Learning.

#### 5. Integrate NBS in your city's strategic urban planning

Furthermore, the cities exchanged on success factors for NBS projects. The participants highlighted that NBS must be designed in an integrated, authentic, and contextual way in order to cater to the needs and demands of the population. Municipalities also need to assign appropriate time and resources to obtain a final participatory project that ensures that the investment on site is of quality, inclusive and accepted by the community. With nature-based solutions still being a novel concept, technicians and city officials who work on NBS must at the same time steer the technical project and ensure it receives and maintains political support. Project leads in municipalities should engage colleagues in different departments and try to gather the best available information to inform the decisions on how to intervene in a public space. In the long term it is recommended to integrate NBS as an approach in strategic urban planning to secure long-term political support.

#### 6. Assess future scenarios to facilitate fit-for-purpose NBS planning

Going beyond the topic of nature-based solutions, the cities discussed strategies for successful territorial planning. The underlying challenges highlighted the fact that planning is often based on decisions taken in the past that might not appropriately reflect the current situation. On the other hand, planning should take into account predictions for the future regarding the development of the city, changing climate and changing demographic structure - which requires appropriate resources and capacities. An important prerequisite for territorial planning is high quality of information and ability to share this information with key actors in different departments in the city.



## 7. Mobilize funds and resources across levels of government, stakeholders and municipal borders

The discussion touched upon the very practical challenge of raising funds to finance NBS interventions. One of the European cities present in the discussion, Granollers, indicated that the NBS projects in that city were all funded externally, for example through EU funding. The participants concluded that policy instruments such as a green management plan or concrete environmental regulations are necessary to ensure that NBS are included in municipal budgets. Here the topic of involving and engaging citizens was raised again: the representatives of Envigado, Colombia highlighted that an involvement of young people was instrumental in making green space planning a higher political priority in the city.

## 8. Advocate for LRGs key role in biodiversity and environmental agendas

Securing support for NBS, and technical, financial and political resources to foster urban and peri-urban ecosystem restoration also requires increased recognition of the role of LRGs in this regard. To achieve this, cities need to continue advocating inside their regions and countries, as well as internationally, for the natural environment around their territories. Continued engagement in global agendas and international discussions such as the UN Climate Change Conference, the UN Environment Assembly, and the UN Biodiversity Conference, in addition to ongoing efforts towards the SDGs, the Sendai Framework for DRR, and the New Urban Agenda, will be critical to secure enabling environments for restorative NBS at the local and regional levels.

# Interlace Project & Cities Talk Nature



Photo courtesy of Portoviejo Municipality

The EU-funded INTERLACE project led by the Ecologic Institute connects cities from Europe and the Community of Latin American and Caribbean States (CELAC) and equips them to effectively restore and rehabilitate (peri) urban ecosystems for **livable, resilient and inclusive cities**. The project will improve the knowledge of restorative NBS, promote ecologically coherent city planning, and lay the foundation for lasting peer-to-peer interactions between EU and CELAC cities.

More ecologically coherent and integrated city planning processes, fostering of participatory approaches including children and young people, development of an assessment tool for restorative NBS and developing business cases for urban ecosystem restoration are some of the topics dealt with in INTERLACE. The good practices, tools and methods documented or developed in the project are shared with municipalities across the globe via the **CITIES TALK NATURE** programme, which offers webinars and in-person events.

Through the Cities Talk Nature engagement events, INTERLACE partners, including UCLG, also aim to build political support and commitment for the integration of nature-based solutions and environmental restoration in cities' agendas.

**To achieve this goal, we invite cities to join Cities Talk Nature and commit to the following actions:**

- To actively participate in the mutual exchange by taking part in a CITIES TALK NATURE event, talk or input.
- To showcase good practice and inspire other municipalities through the CITIES TALK NATURE Showcase.
- To support NATURE and biodiversity by applying innovative restorative nature-based solutions to create new green areas and recover degraded ecosystems improving urban ecosystem health, resilience and sustainability, benefitting biodiversity, and optimizing the delivery of ecosystem services and other benefits within a coherent and integrated planning approach.
- To cultivate shared PLACES for exchange between urban, peri-urban and rural populations and administrations by connecting physical places to cultivate a shared sense of place and equitably address the diverse needs of our citizens.
- To strengthen connectedness between PEOPLE in urban settings –both with one another and with the natural environment– taking into account diverse human values, perceptions and social realities, so that together we can become sustainable, resilient, inclusive and livable cities.
- To adopt, support and promote the integration of nature-based solutions into policies at all levels of government by seeking intra- and inter-sectoral coordination

In Costa Rica, 23 municipalities have signed the Cities Talk Nature engagement letter, committing to support restorative nature-based solutions for nature, people and places and to actively participate in the peer learning exchanges promoted by the project. These cities included: Alajuela, Alajuelita, Curridabat, Buenos Aires, Desamparados, Escazú, Goicoechea, Guarco, Jiménez, La Unión, Moravia, Oreamuno, San José, San Rafael, and Tilarán (from Costa Rica), Envigado, Girón, and Mosquera (from Colombia), Chemnitz (Germany), Comerio (Puerto Rico), Granollers (Spain), Huechuraba (Chile), and Portoviejo (Ecuador).

**Learn more about the CITIES TALK NATURE program and how your city can join [interlace-hub.com/cities-talk-nature](https://interlace-hub.com/cities-talk-nature).**



Representatives from Cities Talk Nature signatory cities after signing the Cities Talk Nature engagement letter. Source: UNGL.

## Partners

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