



# LISBON

## PILOT 1. RENATURA – Restoring Urban Ecosystems with Nature-Based Solutions



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## PILOT 1. RENATURA – Restoring Urban Ecosystems with Nature-Based Solutions

**Start date:** April 2020

**End date:** August 2024

### What?

This pilot aims to restore urban ecosystems using Nature-Based Solutions (NBS) designed and maintained through co-creation with local communities. It emphasizes social integration and place-keeping principles.

The RENATURA Pilot has two complementary main NBS interventions: Renatura I and Renatura II.

**Renatura I** is an experimental co-management of a public green space. The civil society proposed to the Conexus Team (municipality) the rehabilitation of low-used biodiversity spaces into high density small urban forests classified as mini-forests/fast-forests, applying the Miyawaki method, to enhance the existing ecosystem (already managed by the municipality services). The proposal favoured the introduction of low-maintenance endemic native species, with the involvement of the local community in carrying out several tasks of planting and maintaining these spaces. The proponents became the NGO URBEM, based in Lisbon, which aims to awaken citizens living in cities to nature. The works in the pilot started in a 300m<sup>2</sup> experimental plot, adjacent to the pedestrian bridge of Vale da Montanha I.

In 2023, a new plot, with 1.500m<sup>2</sup>, less sloppy, on the other side of the bridge, started being co-managed co-design using the same municipal protocol, with the essential help of hundreds of volunteers with diverse backgrounds, ages (students, children, scouts, retirees, digital nomads, travellers, business employees, partners, among others).

**Some species:** *Arum italicum*, *Arbutus unedo*, *Coronilla Glauca*, *Ceratonia siliqua*, *Jasminum fruticans*, *Lavandula stoechas*, *Lavandula multifida*, *Laurus nobilis*, *Olea europae*, *Prunus spinosa*, *Pistacia lentiscus*, *Quercus coccifera*, *Quercus faginea*, *Quercus robur*, *Quercus suber*, *Rhamnus alaternos*, *Rosmarinus officinalis*, *Viburnum tinus*.

**Renatura II** is the requalification of a 12.000 m<sup>2</sup> area in the continuity of Vale da Montanha I, foreseeing community urban allotment gardens, native and adapted plant species, vegetation cover with low maintenance requirements, preservation of structures with high heritage and historical value.

Lisbon participation in this inclusive project, based on the restoration, rehabilitation, and creation of innovative SBN, is an example of a coordinated intervention that is part of the ongoing municipal strategy to adapt the city to the effects of climate change.



## What and Where?

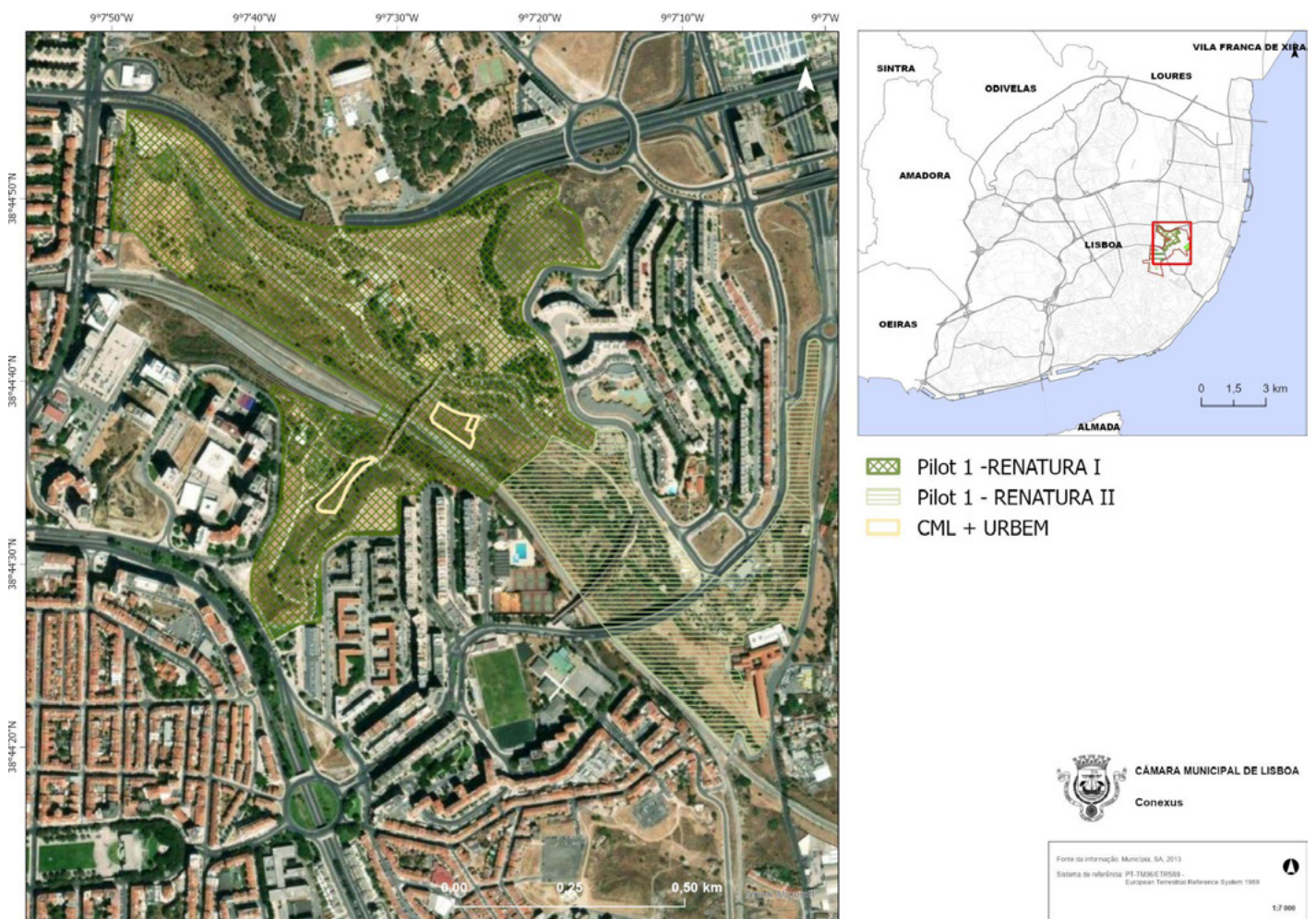
<b>Location:</b>	Lisbon.
<b>NBS type, and habitat/s:</b>	<p><b>NBS interventions on existing and future green corridors and parks include:</b></p> <ul style="list-style-type: none"><li>• Restoring degraded soil conditions with biodiverse rain-fed pastures.</li><li>• Planting high-density small urban forests.</li><li>• Implementing organic farming at urban allotment gardens.</li><li>• Using rain garden principles (Sustainable Urban Drainage Systems - SUDs) to enhance the water cycle and address floods.</li><li>• Redesigning public space highlighting the importance of biodiversity.</li></ul>
<b>Ecosystem services:</b>	<p><b>Regulating Services:</b> mitigate the urban heat island effect and air pollution, retain stormwater, sequester carbon, and regulate water cycles, pollination, provide habitat for a variety of species.</p> <p><b>Services:</b> recreational opportunities, aesthetic enjoyment, spiritual and cultural enrichment, and inspiration for art, literature, and music.</p> <p><b>Supporting Services:</b> nutrient cycling, soil formation, and photosynthesis.</p>
<b>Management &amp; maintenance:</b>	<ul style="list-style-type: none"><li>• Co-management with local communities and NGOs</li><li>• Long-term monitoring and maintenance plans by the municipal services.</li></ul>



## Where?

**Renatura** is situated in Lisbon, on the Vale da Montanha Park and surrounding areas, in a specific part of the Eastern Green Corridor of Lisbon, which merges to the inner city, in the Areeiro Parish. This area represents a legacy of 1960s–70s city planning, with clusters of municipal housing and semi-abandoned areas crossed by ring roads and railways. The green corridor started being implemented 15 years ago and serves as a natural interface between the inner-city and denser built areas, and it is based on the creation of large areas of extensive NBS landscape, a system of large parks connected to each other by pedestrian and bicycle bridges, representing 150 hectares of green. Some NBS' techniques already employed were natural drainage, native planting, massive tree-planting schemes, and urban allotment gardens.

## Map



# Why?

## Our Goals

- Enhance ecological connectivity and sustainable production.
- Promote climate justice by addressing urban heating and improving air quality.
- Trial resilient, low-cost, and low-maintenance NBS.
- Engage socially sensitive contexts through Nature-Based Entrepreneurship (NBE).
- Restore degraded urban ecosystems through innovative NBS, enhancing resilience to climate change and improving urban liveability.
- Co-creation with communities.
- Strategic location in Vale da Montanha II Park leverages existing green spaces for maximum impact.

## STRENGTHS

- Change the image of the area, namely the perception of degradation.
- Revitalization of the space as a recreational and leisure area for the community to enjoy.
- Acceleration of territory adaptation to climate change.

## WEAKNESSES

- **Low level of acceptance of NBS to be overcome during the project;**
  - The need to establish partnerships with citizens in co-management actions is an innovative step.
  - The need of mental shift in local services to accept new ways of working with the population.

## OPPORTUNITIES

- Motivation/enthusiasm of civil society – More communities awareness about climate changes and the importance of the green structure.
- The existence of synergies and commitment between public, private entities, and the communities.
- Increase in social inclusion, social interaction, and sense of ownership within communities.
- Promotion of a healthier lifestyle connected to nature.

## THREATS

- Low performance in space maintenance actions, with the risk of reverting to a state of abandonment and degradation.
- Difficulty in maintaining partnerships and community involvement.



## When?

Trimester/Year	Activities
Nov 2021	URBEM (NGO) signed the first co-management protocol for a 300m <sup>2</sup> plot.
Dec 2022	A new plot of 2000m <sup>2</sup> was defined for co-management.
2022–2023	Ongoing local community engagement.
1st half 2023	Start of work on the new urban green park “Vale da Montanha II.”
> 2024	Fast forest is growing and it has a very diversified agenda to engaged others actors (private sector, workshops, guided visits, team building).

## How?



Renatura I , plot 1 and plot 2





Plot 2

Urbem's call for volunteers, Urbem's facebook post with a school visit and maintenance day.





Guided visit to plot 2 and volunteers during a mulch transportation activity. School activity.







Challenges thrown at Conexus from outside: introducing shelters for biodiversity with bricks made from natural materials, carrying out a project and implementing the hola element for use in irrigating the microforest.



## RENATURA II – Vale da Montanha II



Future Vale da Montanha II Park – location, project, 3D images.



## So what?

**RENATURA demonstrates the potential of NBS to transform urban landscapes, benefiting both the environment and local communities through the cooperation between civil society and local authorities.**

### 1. Important Achievements:

- **Mainstreaming NBS:** RENATURA has successfully raised awareness about NBS, making them more accessible and accepted.
- **Engaging Local Services:** By involving municipal services, RENATURA has made them more open to NBS solutions.
- **Building Networks:** The project has facilitated connections between local services and civil society, leveraging their combined efforts.
- **Recognizing Partners:** The project acknowledges the importance of each partner's role in its success.
- **Involving Schools:** Schools and students of various ages actively participate in the project.
- **Knowledge Exchange:** Partners, including the municipality and Urbem, share knowledge and insights.

### 2. Nature-Based Thinking (NBT) Framework:

- **Nature with People, Not for People:** RENATURA prioritizes community engagement, social learning, and diverse local knowledge. Aft
- **New Organizational Structures:** LISGREEN develops innovative structures, coordinating across various municipal departments to ensure effective implementation.
- **Long-Term Perspectives:** The project aligns with nature's cycles and ecological processes, considering both short-term and long-term impacts. At this stage of the project, we have been contacted to support other NBS projects in other areas of the city and even in other municipalities. With the completion of the project in August 2024, it has not been possible to support these initiatives. However, in the continuity strategy we intend to carry out other actions with the community.



# Project Partners



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