

European Urban Ecology Academy

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Report Case Studies

Transnational Meeting Lisbon 6-10 November 2023



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INTRODUCTION

The kick-off meeting of the European Urban Ecology Academy (Eureca) project took place in Lisbon, from 6 to 10 November 2023, organized by the partner EDU.IN – Associação para a Educação Integral. The meeting included, according to the project design, guided visits to commendable examples of urban ecology with case study potential. The subject of the report is these cases and visits.

The situations proposed by the organizing partner to the consortium and the visits decided together are, in general, related to the choice of Lisbon as the European Green Capital in 2020, although some are previous and others posterior to it. Some of them also have a strong component of social inclusion and local development, in addition to ecological aspect.

Three guided visits were carried out to different places in the city - Bairro Padre Cruz, Parque Florestal de Monsanto, Dom Luís da Cunha public school – and a colloquium was held with Portuguese experts at the Lisbon Urban Information Centre.

All visits enabled multidimensional approaches to groups of urban ecology problems and their solutions, all related to the United Nations SDG 2030.

Representatives of the Eureca consortium visiting the Monsanto Forest Park (Photo by Eureca)



1. PADRE CRUZ NEIGHBORHOOD

1.1. Lisbon CLLD Network

The first visit was to Bairro Padre Cruz, considered the largest social neighborhood in the Iberian Peninsula with around 20,000 inhabitants, located in the civil parish of Carnide, on the extreme north of Lisbon city.

The visit began at the Resource Center of the Lisbon Community-Led Local Development Network, where are the headquarters of EDUI.IN – Associação para a Educação integral that is an associated member Lisbon CLLD Network.

The Lisbon CLLD Network is an organization that brings together around 200 private and some public civil entities, including the Municipality of Lisbon. This network co-manages a Local Development Strategy that covers 67 areas and neighborhoods of priority social intervention in the city of Lisbon, with around 144,000 inhabitants.

The Local Development Strategy has three focuses: Education, Employment and Inclusion. Its general objective is to develop to a city scale, local activities based on taking advantage of the locally existing potential, leveraging them with financial, social and human capital interventions.

The Lisbon CLLD Network manages two Resource Centers (Carnide and Olaias) which are spaces that welcome organizations from different areas and support the execution of projects that promote citizen participation and local development.



Carnide Resources Centre (Photo by Eureca)



1.2. Food Wave Project

In Carnide resource center, the roof was transformed into a community vegetable garden as part of the Food Wave project, managed directly by the Lisbon CLLD Network, which was presented to members of the Eureca consortium.

Food Wave is a European project to raise awareness and train young people (15-35 years old) through courses, activities, meetings and workshops linked to issues of food and environmental sustainability. The project is coordinated by the city of Milan and involves a diverse range of actions at local and international level, with 30 partners from 21 cities, including Lisbon.

The objectives are to contribute to greater awareness of sustainable approaches of food production and consumption in cities, supporting the efforts of mitigation and adaptation to climate changes. In Lisbon, the project has been dynamically linked to the development and implementation of community vegetable gardens, a subject that will be developed further (see **3. Urban Agriculture**).



Vegetable garden in Carnide Resources Centre roof (Photo by Eureca)



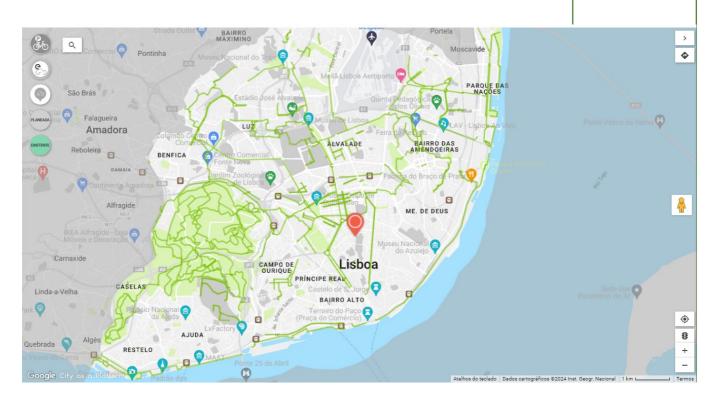
1.3. Ciclopes Project

Another project incubated at the Resource Center and also introduced to Eureca consortium was Ciclopes that promotes the use of bicycles by young people for an active and smooth mobility, and as a means of inclusion and integration of people in the city's territory.

Lisbon is known as the city of seven hills, but for Drive Impacte, the project's leading organization, this is not an obstacle. The project's motto is "Flatten hills. Flatten bias. Flatten inequalities."

This project, financed by the European Social Fund, although primarily aimed at neighborhoods and areas of priority social intervention, is also related to the promotion of bicycles use in Lisbon. In 2017, there were 90.5 km of cycle paths in Lisbon; in 2020, year of the European Green Capital, it was 125.8 km; in November 2023 there are 173 km and it continues to grow. Also important has been the municipal fleet of shared bicycles that is also increasing: there are around 1,600, parked in 130 locations. The costs of using are : annual pass \in 25, monthly pass \in 15, daily pass \in 2.

Cycle paths network in Lisbon interactive map by CML in https://www.lis boa.pt/cidade/ mobilidade/mei os/bicicleta/ma pa-redeciclavel





1.4. Eco-neighborhoods

During the visit to Padre Cruz neighborhood, it was possible to observe the ecological characteristics of the buildings that were reconstructed in the recent years and also the ones that are currently being built to relocate families, due to the degradation of the buildings constructed between the 40s and 60s. Of the 67 Lisbon social neighborhoods, three of them are considered eco-neighborhoods: Boavista, Cruz Vermelha and Padre Cruz.

In Padre Cruz neighborhood, it was possible to see the urban transformations of the neighborhood, the housing constructions and even to visit an environmentally sustainable building. A building with an architectural design that allows future adaptations to new family configurations, built and equipped with: i) a higher level of insulation that protects against humidity and contributes to reduce energy consumption; ii) solar panels that provide hot water for each apartment; iii) rainwater collectors for watering small vegetable gardens; iv) light inputs in all directions to take advantage of the natural light; v) use of bath water for toilet flushing.



Ecologically social constructions sustainable on Bairro Padre Cruz, Carnide (Photos by Rui Franco)





In addition to housing that makes these neighborhoods examples of environmental sustainability, social inclusion and local development, there are other measures that contribute to this, as, in fact, was widely presented in the colloquium with experts (see **3. Colloquium Urban Ecology in Lisbon**). In the Boavista neighborhood renewable energy technologies were installed in community buildings, such as solar panels that heat the water in the neighborhood's swimming pool, a pedestrian circuit ("PediBus") was created and granted free access to the Internet ("Net-Verde").

Environmental awareness and education actions for residents have accompanied the relocation and modernization program. Actions that contribute to improve the resident's life quality at a community and family level. An example is DOOBRA program, to save electricity, water and gas costs and promote local commerce, resulting from a collaboration protocol between Lisbon CLLD Network and Adene – National Energy Agency. Each participating house is assigned a mediator, who indicates ways to save on consumption and monitors the respective reductions in bill values. In addition to this direct saving, residents benefit from a corresponding allocation of OLI vouchers for purchases at local businesses.



eco-bairro BOAVISTA Ambiente + um modelo integrado de inovação sustentável



2. MONSANTO FOREST PARK

The second visit of the integrated program of the meeting Eureca project in Lisbon was to the Monsanto Forest Park, considered the "green lung" of Lisbon, with approximately 900 hectares, equivalent to 9% of the area of Lisbon city.

The visit included a detailed presentation of the creation and development of the Park, at the Monsanto Interpretation Center, and an observation tour through some of the most ecologically important areas, both guided by engineer Fernando Louro Alves, main advisor to the Park's management.

Monsanto is a public park created in 1934, managed by the Municipality of Lisbon. In 2021, it received Forest Management Recertification within the scope of the Forest Steward Council, the most important global certification in terms of environmental compliance for forestry farms.

Space of vast areas of diverse forest, Monsanto Park offers great potential for passive recreation. The dense forest is not always a welcoming place for humans, however the contrast with clear and wide views over the Lisbon city and Tagus River make the Park a very attractive place from a scenic point of view.

Eureca partners got to know and observe details of the Monsanto Park (Photos by Eureca)







Monsanto is part of a Biodiversity Space, a reserved area measuring around 16 hectares, dedicated to the conservation of nature and biodiversity. A unique space in Lisbon city, where you can obtain information about the park history, geology, fauna and flora. In addition to interpretation trails, this space includes a nature observation tower, an artificial lake that recreates a wetland with its characteristic flora and fauna, cork oaks that have never been harvested, an old water mine and equipment FitoEtar and a wild animal recovery center.

The Monsanto Forest Park is connected to Lisbon city center, through a Green Corridor with a length of around 2.5 km, a network of trails with around 40 km and an area of 51 hectares with thousands of trees and shrubs, gardens and parks, and an agricultural area. It also includes equipment: a children's playground, a skate park, kiosks, cycle paths and viewpoints.

This green corridor, designed in the 70s, was the first and is the most important of the nine corridors that connect important areas of Lisbon city and contributes to the fight against climate change and to the implementation of the Lisbon Local Biodiversity Action Plan, whose objective is to increase the performance of biodiversity in the city with the green area occupying 25% of the total area in 2025.

Lisbon's "green lung" has three artificial lakes (Photo by Eureca)





3. "FROM SCHOOL TO TABLE" EB Dom Luís da Cunha

Another case study visit of the Eureca consortium representatives gathered in Lisbon was to the public primary school Dom Luís da Cunha, named after a Portuguese diplomat who had an important role in the Utrecht Treaty in 1712.

The school is considered an Eco school because in the space outside there is a hydroponic vertical vegetable garden, a horizontal vegetable garden, an agroforestry ring and a composting station. This productive set - called "From School to the Table" - is also used as a pedagogical tool to awaken children's interest in biodiversity and sustainable food and consumption, with the objective of preserve the environment, the social and physical well-being and the mental health of the school and local community as the products are sold to residents of the neighborhood.

This process is co-managed by the school management and the non-profit association Upfarming, whose mission is to "promote food literacy, community development, participatory ecology and well-being in cities through the implementation of holistic urban agriculture projects".





Tiago Sá Gomes, president of the association's board, explained to Eureca project partners the aspects of the method they use to implement a new urban food ecosystem.

Regarding the environment, "we grow food within a short distance of where it will be consumed, which reduces the need of transport that is responsible for air pollution and traffic. It also reduces the use of packaging and food waste." Regarding health, largely dependent on food quality, he recalls: "A plant as soon as it is harvested begins to lose nutritional value, so by reducing the time between harvesting and consumption, we get more nutritional value of the vegetables." Regarding the community aspect, Upfarming "empowers people to observe and participate in the process of growing food on their doorstep, through educational workshops in the communities in which we operate".

Upfarming co-manages other community vegetable gardens projects in the city, horizontal and vertical, using "cultivation processes, fertilizers and pest control substances of natural origin and never using genetically modified products". Tiago Sá Gomes highlights: "We buy our plants, seeds, growing suports and other products whenever possible to Portuguese suppliers, we are always looking for local suppliers and partners".

Regarding pest control, he adds: "We control pests and diseases using a combination of mechanical (e.g. crop rotation), biological (e.g. ladybugs) and natural substances (e.g. vegetable oils)".

The vegetable gardens co-managed by Upfarming are a small part of the vegetable gardens that have flourished in the city, as part of the ecological revitalization movement induced by Lisbon European Green Capital. In the end of 2023, there were 21 vegetable gardens and 3 municipal farms in Lisbon, occupying 16.4 hectares of the city's area, and 70 small vegetable gardens in public schools, with educational and community purposes.

> Hydroponic vertical garden (Photo by Eureca)





4. COLLOQUIUM URBAN ECOLOGY IN LISBON

Eureca project meeting in Lisbon included a colloquium with representatives of the partners and Portuguese experts on urban ecology issues. The colloquium was open to the public and had the participation of invited people and entities. For two and half an hour, several subjects were discussed, constituting a valuable contribution to the cases studies of Lisbon city.Three experts participated: Elisa Vilares, architect, head of the Territory Development and Urban Policy Division of Directorate General for Territory; Rui Franco, architect, specialist in local development, city councilor at Lisbon City Council without assigned department due to being elected by a party not belonging to the majority; Victor Vieira, environmental engineer, specialist in circular economy at E-Nova - Lisbon Energy and Environment Agency.

Elisa Vilares presented the main characteristics of the territorial planning and development policies in Portugal, pointing out the critical factors and existing vulnerabilities from the perspective of the landscape approach for transition. The expert also presented the National Initiative for Circular Cities, a government program aimed to support and empower municipalities and their communities in the transition to the circular economy. At the date of the colloquium, November 8th 2023, 28 municipalities had joined the initiative and there were 32 local circular economy plans involving 600 entities.



At the colloquium table (from left to right): Rui Franco, Elisa Vilares, Victor Vieira and Katarzyna Sztop-Rutkowska (Photo by Eureca)



City councilor Rui Franco, currently in opposition, was an active member of the Lisbon City Council in the two previous mandates with responsibilities for the local areas and neighborhoods of priority social intervention development. Rui Franco presented in detail the example of the econeighborhood of Boavista (see **1.5. Eco-neighborhoods**) which he considers to be an integrated model of sustainable innovation with proven evidence and it is being replicated in other Lisbon social neighborhoods. A model that combines several innovative and environmentally friendly technical solutions and thas has as an essential pillar the population participation in planning and defining the solutions to be implemented.

Victor Vieira brought to the debate the importance for the climate transition process of applying circular economy strategies in cities. Cities only occupy 2% of the land area, but they concentrate more than 50% of the population, representing 85% of the Gross Domestic Product, consuming 75% of natural resources, producing 50% of waste and being responsible for 60 to 80% of greenhouse gas emissions. In Lisbon case, he presented an overview of ongoing circular economy initiatives in the areas of energy, water, mobility, sustainable housing, waste transformation and a system of connections to the rural areas for food sustainability.

Presentations in support of interventions by Rui Franco, Victor Vieira and Elisa Vilares

Rui-Franco Boavista Eco-District ActionPlan Eureca 2023Nov08.pdf



Victor-Vieira Lisbon-CircularStrategies Eureca 2023Nov08.pdf



Elisa-Vilares DGT Eureca 2023Nov08.pdf





CONCLUSION

The visits of relevant cases empirical observation included in the European Urban Ecology Academy learning program met their objectives. The partners of the project that traveled to Lisbon had an overview of the city's ecological situation and a detailed observation of some situations and solutions.

They also become aware that there are still situations to be solved, some of them even worsened after 2020, the year of the European Green Capital. Air pollution due to car traffic is one of them. The improvement of public transport being some free of charge, the increasing in smooth mobility and the increasing on electric vehicles it is still not enough to compensate the CO2 emissions of the approximately 350,000 vehicles that enter daily in Lisbon. The location of the international airport at one of the city end is another source of air and noise pollution. Cruise ships that dock in Lisbon are also a major source of air pollution. In fact, the increasing mass tourism in Lisbon has an obviously negative environmental impact. It is an impact that no one seems interested in calculating, the logic of economic growth ignores the climate threat and the need for measures of mitigation and adaptation.

Another aspect that participants in the guided tours and the colloquium had the opportunity to infer from their observations and dialogues was the close correlation between the environmental ecosystem and social equity.



In the social neighborhoods of Lisbon, ecological solutions are being tried (Photo by Eureca)

Acknowledgments

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