This project is co-funded by the European Union and Republic of Türkiye.

Valladolid and Madrid Study Visits

The first study visits within the scope of the "Enhancing Adaptation Action in Türkiye" Project, funded jointly by the European Union and the Republic of Türkiye under the Instrument for Pre-Accession Assistance (IPA II) Environment and Climate Action Sector Operational Program (ESOP), took place in Spain between November 28 and December 1, 2022.

The visit was attended by the Climate Change and Zero Waste Department Heads of the Metropolitan Municipalities of Konya, Muğla, Sakarya, and Samsun, as well as representatives from the Ministry of Environment, Urbanization, and Climate Change, the Directorate General for EU Investments, and the Directorate of Climate Change, all of which are involved in the project as part of the pilot provinces. During the visit, representatives from Valladolid Municipality and Madrid Municipality shared different local policies, actions, and practices for climate change adaptation with the visiting team. They provided detailed information on on-site inspections and exemplary implementations.

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This project is co-funded by the European Union and Republic of Türkiye.

Local Governments in Climate Change Adaptation Process

Local governments, responsible for managing resources and infrastructure within their jurisdictions, play a crucial role in the process of climate change adaptation. They have the power to create resilient communities in the face of the impacts of climate change through land-use planning, infrastructure investments, and involving city residents. They also have the ability to implement policies and projects that can reduce the effects of climate change on cities. Local governments also play an important role in educating and raising awareness among local residents about the risks and potential solutions related to climate change adaptation. They can collaborate with other public institutions and stakeholders to develop comprehensive adaptation strategies and share best practices.

The Importance of Study Visits

Study visits provide an opportunity for local governments to examine the work of other municipalities, communities, and organizations that have implemented successful climate change adaptation projects or policies. Visiting other cities and observing the implementation of projects and policies allows them to see the existing practices, challenges, and successes of these actions, providing an opportunity to learn from them.

Representatives can gain practical knowledge that can be applied in their own cities through direct observation and interaction. It helps local governments learn from each other and develop more effective and efficient strategies for climate change adaptation. By enabling representatives to establish networks and collaborate with other individuals and organizations working on similar issues, study visits facilitate the sharing of ideas and best practices.

Study visits also support capacity building and technical assistance for local governments with limited resources to address climate change adaptation.

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Winning Combination in Climate Change: Local Governments and Nature-Based Solutions

Nature-based solutions are one of the effective ways that local governments can utilize in combating climate change. These solutions include methods such as afforestation projects, sustainable agricultural practices on farms and pastures, and increasing city parks and green spaces.

These solutions contribute to environmental health by increasing natural carbon storage capacity, preserving biodiversity, preventing soil erosion, and conserving water resources. Nature-based solutions involve harnessing the power of nature to reduce the impacts of climate change and support sustainable development. Here are a few ways in which local governments can employ nature-based solutions to combat climate change:

Preservation and restoration of natural ecosystems: Local governments can undertake projects to protect and restore natural ecosystems like forests, wetlands, and grasslands that can serve as carbon sinks and help absorb greenhouse gas emissions from the atmosphere.

Promotion of green infrastructure: Local governments can prioritize green infrastructure such as green roofs, rain gardens, and permeable pavements, which can help manage stormwater flow and reduce the urban heat island effect.

Development of urban green spaces: Local governments can create more parks, green roofs, and other green spaces in urban areas, which can help mitigate the urban heat island effect, provide shade, and improve air quality.

By utilizing nature-based solutions, local governments not only combat climate change but also provide a range of co-benefits such as improved water quality, enhanced biodiversity, and a better quality of life for their citizens. Additionally, local governments can collaborate with other public institutions, civil society organizations, and the private sector to develop a comprehensive approach to climate change mitigation using nature-based solutions.

This project is co-funded by the European Union and Republic of Türkiye.

FIELD VISITS

Vertical Garden, Valladolid

The vertical garden on the facade of the El Corte Inglés retail store was created as part of the URBAN 'GreenUp' Project, aiming to promote urban transformation in the city, reduce the effects of climate change, improve air quality and water management, and enhance sustainability. The vertical garden application, developed in collaboration between El Corte Inglés and Valladolid City Council, is an exemplary practice that encourages private sector involvement in the process of climate change adaptation.

Pollination Modules, Valladolid

Another action proposal of the URBAN 'GreenUp' Project is the installation of pollination modules, which attract and support birds and insects, allowing pollination to occur and enhancing the quality of their habitats. These modules serve as a green corridor complementing existing green spaces, aiming to ensure the continuity of fauna pollination. These pots, which include water sources for pollinators and birds, contribute significantly to the sustainability of biodiversity.

Street Shading Elements,Valladolid

Shading elements are triangular structures that cover a section of the street with the aim of reducing temperatures, filtering pollutants, and improving air quality. The Valladolid City Council anticipates both environmental and economic benefits from this initiative. The vegetation in these structures improves air quality by absorbing carbon dioxide, creates a sense of coolness through moisture retention against the urban heat island effect, and enhances biodiversity through the associated fauna. Economically, these elements are seen as attraction points that can draw tourists or promote local consumption in a more appealing city center.

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Marketplace
Green Roof Application, Valladolid

A green roof of 488 m² has been constructed in the market area with the aim of greening the area and creating a more enjoyable and healthier space for both Valladolid residents and tourists. To establish the vegetation on the roof, mineral wool, which is an inert substrate that operates with a hydroponic irrigation system, has been chosen. The pipes used are automatic drip irrigation pipes. Additionally, the canopy has undergone cleaning and waterproofing processes, and gutters and downspouts have been installed for rainwater collection. This vegetative carpet is equipped with an automatic control system. Its cooling effect provides advantages in terms of the microclimate of the city.

Campo Grande Park, Valladolid

Campo Grande Park, with over eleven hectares of land scattered in a triangular shape, is the largest urban park in the city of Valladolid. As one of the most significant green spaces in Valladolid, this park is frequently visited by both locals and tourists. Its design in the heart of the city offers the advantage of serving as a refuge during heatwaves.

The Forest of the City, Madrid

The Forest of the City, spanning an area of 35,000 hectares and encircling the entire city of Madrid, is the largest green infrastructure built in Europe. This 75 km-long green corridor aims to provide benefits such as combating climate change, reducing carbon dioxide emissions, and restoring ecological and landscape integrity of degraded areas. By connecting regional parks around the Guadarrama, Jarama, and Manzanares rivers with the Sierra del Guadarrama National Park, it creates biodiversity corridors that bring nature closer to the city. Having green spaces close to residential areas also enhances the quality of life for the residents of Madrid.

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Manzanares River, Madrid

With the Green Belt Project along the banks of the Manzanares River, over 50 hectares of land that had previously been occupied by surface traffic, closed off in the 1970s for highway construction, have been transformed into recreational areas. Additionally, approximately 100 hectares of underutilized adjacent lands have been incorporated into this space. This has created a corridor connecting significant green spaces in the city. The river hosts various ecosystems, contributing to increased plant and animal diversity in the area.

City Garden, Madrid

In a neighborhood within the city, this garden, developed through the collaboration of local residents, has been a vacant and unused space for over 30 years. It serves as an open space for the neighborhood, promoting the convergence of generations and cultures, leveraging local resources, and fostering relationships among residents. Following similar initiatives, the primary goal is to create a shared space for neighbors and those interested in tending to the garden, establishing a non-profit public area for their use and enjoyment. It also serves as a good example of evaluating urban voids in terms of climate sensitivity, offering benefits such as improving quality of life, protecting against climate hazards, and enhancing microclimates

Retiro Park, Madrid

Covering an area of over 125 hectares and consisting of more than 15,000 trees, Retiro Park has recently been included in the UNESCO World Heritage List. As a preserved park in the city center, with a history of 400 years, it serves as one of the lungs of the city. Natural landscaping practices are implemented in the park to adapt to changing climates. It offers significant advantages in terms of enhancing biodiversity and improving microclimates.

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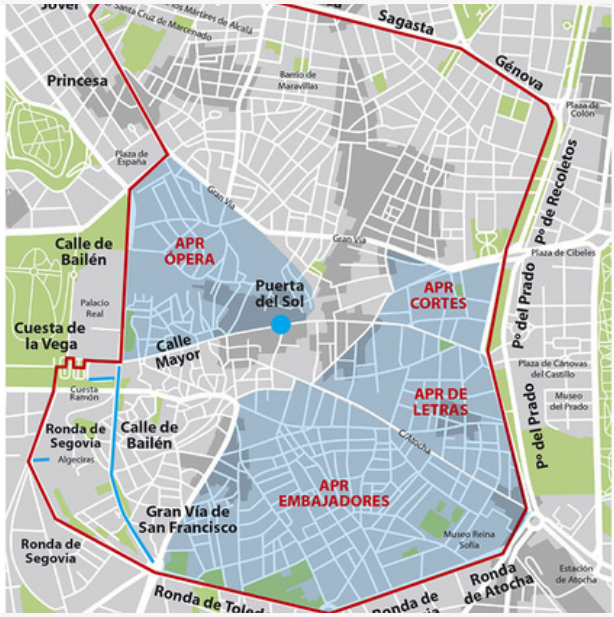
Retiro Vegetables Garden, Madrid

The Retiro Environmental Information and Education Center aims to promote a more responsible attitude towards the environment by informing and educating individuals who participate in its activities. It offers one or multi-day courses, talks, conferences, workshops, guided tours, and exhibition visits. In addition, theoretical and practical training on home ecology, lasting for one or several years, is organized for different participant profiles.

Zero Emission Zones, Madrid

One of the most significant impacts of the Sustainable Mobility Regulation is the creation of the "Madrid Low Emission Zone." The "Madrid Low Emission Zone" refers to a geographically defined area encompassing all public roads under the jurisdiction of the Madrid City Council, where a traffic regulation is permanently implemented to prohibit the access and circulation of vehicles classified as environmental classification A. The aim of this regulation is to comply with state regulations regarding nitrogen dioxide limits and air quality set by the community, as well as to improve air quality and protect the atmosphere.



Vertical Garden, Madrid

The Vertical Garden of Caixa Forum Museum, located in the heart of Madrid's cultural district, is the first example of a vertical garden established in Spain. Covering a 40 m^2 wall, it is adorned with over 15,000 plants from 300 different native and foreign species, nestled in a moist felt blanket. The species were carefully selected considering the challenging seasonal conditions of Madrid, which are extremely hot in summer and cold in winter. The vertical garden starts with a polyurethane panel, a plastic mesh, and a non-biodegradable felt blanket with pockets for potting the plants, resulting in highly developed plant roots. It is estimated that the total weight of the vertical garden is around 30 kilograms per square meter. It stands out for its cooling effect and contribution to biodiversity.

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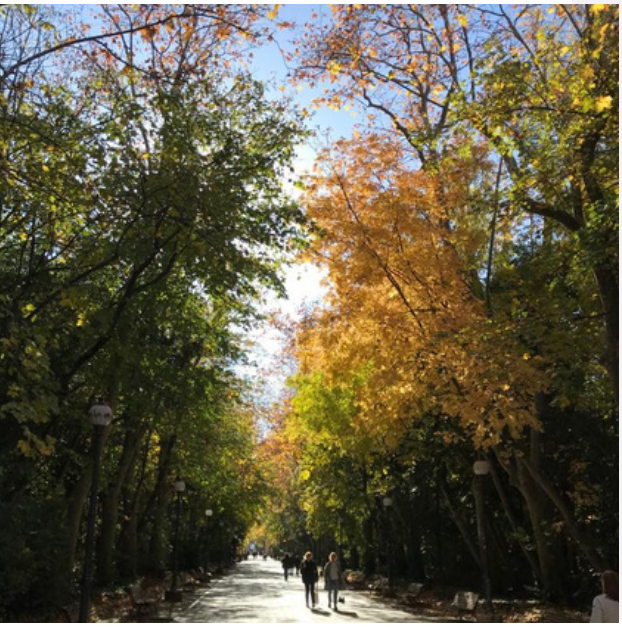

Botanical Park, Madrid

The Botanical Park, spanning 8 hectares, is divided into seven main sections and five greenhouses, hosting 90,000 plants and flowers, as well as 1,500 trees. The designed route for exploring the botanical garden aims to convey its history, the uniqueness of plant specimens, their applications, and their importance in human life.

The Park provides excellent examples of natural farming practices, serving as a model for users to gain knowledge about climate change and agricultural production. It also offers advantages in terms of microclimate, food security, biodiversity, and quality of life.

El Pozo City Garden, Madrid

The Barrios Productores Program aims to promote agricultural activities in urban areas in Madrid. This program provides opportunities for commercially viable agricultural practices on currently unused municipal lands within residential urban areas. The first action undertaken within this Municipal Program was the establishment of El Pozo Education Garden, which covers an area of 8,800 m^2 and is equipped with necessary elements such as cultivation areas, greenhouses, an educational classroom, and services. The El Pozo Education Garden is intended to offer training for the unemployed and individuals seeking to acquire skills, with the goal of raising awareness about urban agriculture through the provided education.

Alfredo Kraus, Madrid

As part of the efforts by the Madrid City Council to improve energy efficiency in public buildings throughout different areas of the city, the Alfredo Kraus Cultural Center is included in the project to make the buildings compliant with the 50001 Energy Management System. An effective system has been installed within the building to monitor heat and energy consumption, resulting in an 18% savings in the first 11 months. In addition to the cultural center, 74 other buildings have been made energy efficient under this program, with the goal of encompassing all 1,500 buildings owned by the Madrid City Council. Furthermore, the installation of this monitoring system is mandatory for new buildings.