

Construction of bioclimatic house, green urban path project and adaptation of an urban park to climate change



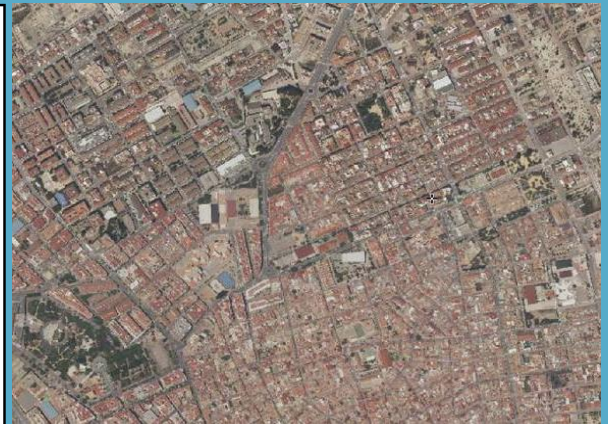
LIFE **CITYADAP3**

Molina de Segura
(Spain)

248,017.08 €

6 months

CO-FINANCING COMPANIES



1

Adaptation of Nelson Mandela Park to climate change, as a model to follow in the design of urban green areas in the municipality of Molina de Segura and in other municipalities.

4

Analyse **atmospheric parameters** to determine the impact of the actions

MAIN OBJECTIVES

2

Study and signal a **sustainable urban itinerary** to establish plant elements, that give shade and a pleasant atmosphere, that serves as a model to adapt the city to the effects of climate change

5

Improvement of the **biodiversity of the city and increase of permeable surface area** in the municipality

3

Construction of a **ecological house-bioclimatic classroom** to sensitise the local population about the reality of climate change and the importance of building more sustainable, ecological and energy efficient housing

CLIMATE RISKS ADDRESSED

- Overheating of urban areas, with heat waves and loss of thermal comfort
 - Storm floods
- Loss of biodiversity due to climatic alterations and increase of pests and diseases.
 - Loss of soil, by drags due to heavy rains.

To request the full technical document on the design of this pilot action, send an email to lifecityadap3@fmr.es

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DESCRIPTION OF THE ACTION

- **Ecological House-Bioclimatic Classroom:** recreation of a single-family house of 1 floor as a visitable example of bioclimatic construction. It incorporates eco-friendly building materials (wood, brick, stone,...) and energy efficient systems, with a reduction of the carbon footprint in the construction process. The purpose of the building is to create a multipurpose public space aimed at raising awareness about the environment and climate change. The house is an open space that has a living room, a bedroom, a toilet, a warehouse and a kitchen.
- **Reforestation with native species and establishment of sustainable urban drainage systems (SUDS) in Nelson Mandela Park,** as a role model in the fight against the effects of climate change. Construction of vegetated ditches on road edges, which transport runoff water to 7 trenches and 4 infiltration wells, avoiding dragging and soil erosion and reducing the strut flow of torrential rains. Invasive plants have been removed and more than 600 plants native to the Region of Murcia have been planted: trees (pines, carob trees, ripe trees, clams, carts, walnuts, laurels,...), shrubs and herbaceous.
- **Green Urban Path Project:** study of the characteristics of the streets to create a green path. A project has been drafted with selection of plant species adapted to the area (which is an example to imitate in the rest of the city), linking La Compañía Park with Nelson Mandela Park, in order to mitigate the heat island effect of the city and make the city more friendly.

Impacts (monitoring results)

You can consult the weather data (rains, temperatures and humidity) of Nelson Mandela Park at the following link and on the website of the City Council:

<https://ciudadinteligente.molinadesegura.es/visualizador/d/f6HR-zrMz/ciudad-de-molina?orgId=1&kiosk>

Based on these data, we will be able to analyse the influence of the actions carried out in reducing the effects of climate change. This is basically in the rising temperatures of the summer months and the increased intensity of torrential rains, with increased peak flows that can cause flooding.