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NatUR-W – Nature-based Regeneration through Water: Integrating the water cycle in urban renaturalization



NatUR-W

Barrios Altos, Municipality of Lorca, Spain

MUNICIPALITY OF LORCA

- Region of Murcia
- Area: 1,675 Sq. Km.
- Population: 98,477 (2023)
- Climate: Mediterranean semi-arid
- Long, hot and dry summers (over 30°C)
- Mild winters (10-15°C)
- Annual precipitation: 250-300 mm



BARRIOS ALTOS

- Located between the City Centre and the Castle.
- City of Lorca population: 96,238.
- Neighbourhood population: 1,420.
- Many low income families and migrants.
- Excluded from activities and amenities of the City.
- Limited public spaces for leisure/social interaction.



3,500 sq. m. of
unused land
regenerated






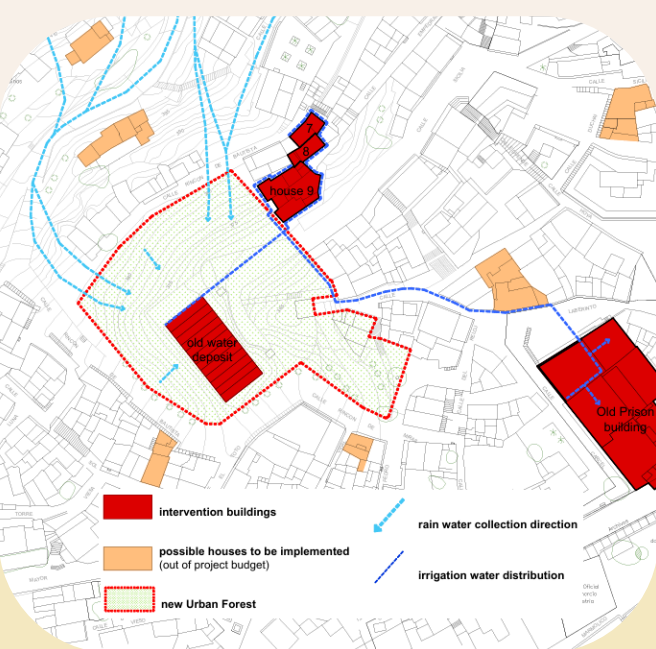
1,293 sq. m. of public
buildings with
improved energy
efficiency



100 stakeholders
involved in co-
implementation
activities

CURRENT SITUATION

- The neighbourhood lacks a stormwater collection system.
- Steep slope: allowing runoff to discharge on the surface by gravity.
- Households:
 -  60% in dilapidated, bad or deficient state.
 -  50%: inability to keep an adequate temperature in winter.
 -  70%: inability to maintain an adequate temperature in summer.



CHALLENGES AND SOLUTIONS

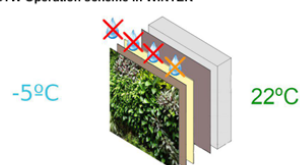
- The main challenges to be addressed are energy poverty and climate change adaptation and mitigation in the urban area of intervention, Barrios Altos (Lorca).
- The proposed solution to the challenges experienced by Lorca is to regenerate the urban area of Barrios Altos through innovative, sustainable and self-sufficient NbS that integrate the water cycle management.

THREE STEPS

1. Improve energy efficiency of the buildings.
2. Interior of an old prison building will be renovated.
3. New green space will be created.



GTW Operation scheme in WINTER



GTW Operation scheme in SUMMER



BENEFITS OF RENATURALIZATION

- More shade.
- Less hard floors that retain heat.
- Less noise.
- Improves population health.
- Economic savings.
- Improves air quality.
- Regulates high summer temperatures.

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