

Rain garden in Genova

Genova will turn the Gavoglio military barracks, located in the centre of the Lagaccio district, into an urban park. The Gavoglio urban park will contain 12 types of nature-based solutions, closely connected to each other. One of these solutions is the rain garden, which is located in a very important area of the park at the intersection of two valleys. During heavy rainfalls, runoff becomes significant in this area.



The idea of the urban park came from the urban planning sector of the city following requests from the citizens: this part of the city suffers from a severe lack of public green spaces. The idea of deploying NBS to build this park is the outcome of a longer process involving local stakeholders and public administration.

Quick facts

Site: Old military base in a city district

Aim: Reduce the risk of floods

Cost: 9,740 EUR (€33/m²)

CHALLENGES



Flooding



Lack of green spaces

BENEFITS



Decrease in runoff



Water infiltration



Improved water quality



Temporary retention of rain water

CO-BENEFITS



Reduced heat stress



Enhanced biodiversity



Improved air quality



Technical specifications

The rain garden has been planned in a spot where there is a continuous water flow from natural slopes uphill. This spot also constitutes a natural catchment point for rainwater runoff. Grasses have been selected to resist both flooding and protracted drought periods. Two willow trees were placed at the sides to provide shade and foster a moist environment. The most visited part was reinforced with a vegetated pave in order to allow grass to survive and to keep the ground plane and stable.

The layout of the rain garden is set out in three main zones: a vegetated grid pave closer to the path, which is separated by a row of benches; a meadow with trees; and a temporary pond with water-prone grasses.

Monitoring



Air quality



Temperature & UHI effect



Rain water retention & runoff



Biodiversity & number of pollinators



Water infiltration capacity



Water quality



Increase in green & blue spaces



Distribution of & access to public green spaces



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