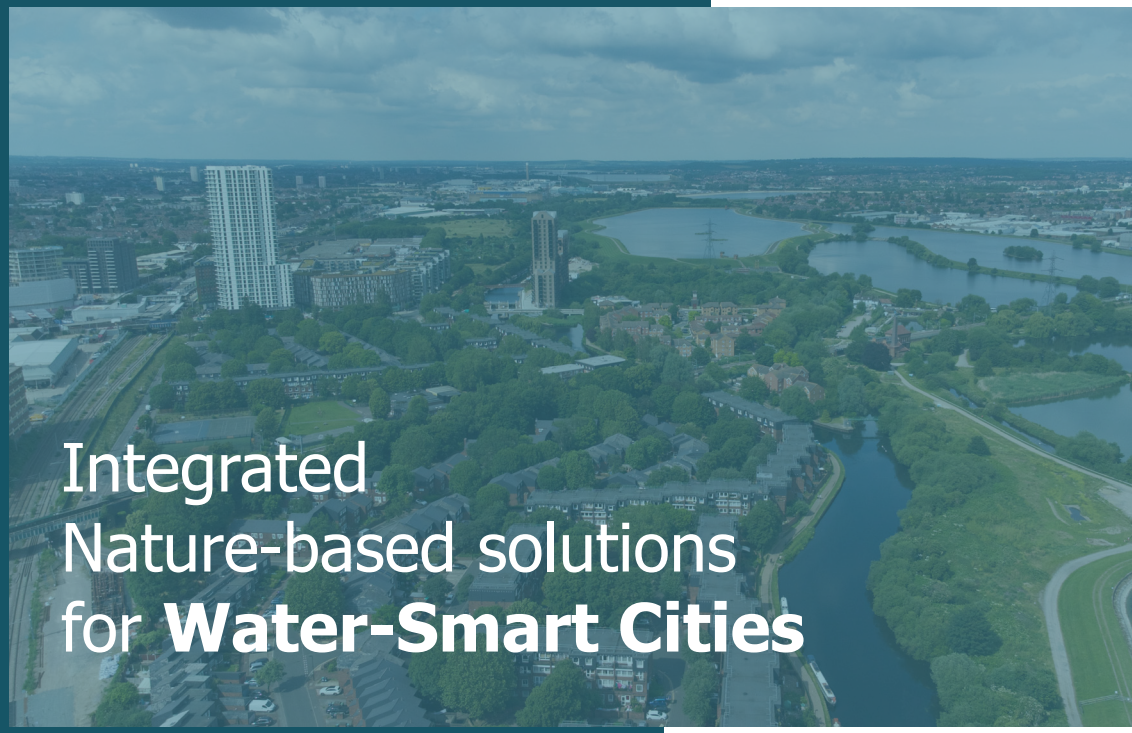
MULTISOURCE

PARTNERS

KEY FACTS

- Duration: 4 year project (01/06/2021 – 31/05/2025)
- Estimated Project Cost: €5,169,165.00
- Requested EU Contribution: €4,999,631.25
- Funding Programme: Horizon 2020
- Consortium: 20 partners, 12 countries
- Coordinator: INRAE



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CHALLENGE

Increasing urbanization poses a range of challenges worldwide. To satisfy their water demand, cities rely on extensive supply infrastructure to transfer water over long distances. This limits the resilience of cities against the effects of climate change because the infrastructure cannot be easily or cost-effectively adapted, expanded, or repaired.

Therefore, the integration of decentralized approaches into existing centralized infrastructure is essential for achieving sustainable, efficient, and affordable water resource management, increased water reuse, and establishing a circular water economy.

THE CONCEPT

MULTISOURCE will facilitate the systematic, city-wide planning of nature-based solutions for urban water treatment, storage, and reuse. With seven technical pilots across Europe and USA, a wide range of urban waters will be treated throughout the project, and decision support tools will be co-designed together with municipality partners in Girona, Oslo, Lyon and Milan as well as other local, national, and international stakeholders.

MULTISOURCE will demonstrate the benefits of increased water quality, water storage, reuse, but also contribute to the creation of valuable urban habitats and provide other important ecosystem services.

7 TECHNICAL PILOTS

HIGH-STRENGTH WASTEWATER

Location: Bozeman, USA

Technology: VF wetland with recycle and partial saturation

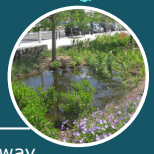
Main innovation: Seasonal operation, recirculation for increased nutrient removal from high-strength wastewater

RAINWATER

Location: Leipzig, Germany

Technology: Green roof + storage (five variations)

Main innovation: Improvement of evaporation efficiency and biodiversity via vegetation selection and management



ROAD RUNOFF

Location: Oslo, Norway

Technology: Raingarden, water-treatment, storage and potential irrigation

Main innovation: Exploring possibilities for alternative water sources for irrigating urban green areas. Demonstrating the use of innovative sorption materials for water treatment.

GREYWATER

Location: Girona, Spain

Technology: Aerated + free water surface wetland

Main innovation: Increase urban resilience to extreme events, reduce pressure on sewers; new NBSWT market opportunities

PRE-TREATED WASTEWATER

Location: Leper, Belgium

Technology: Phytoparking®

Main innovation: Compact (<1m2/PE*) can be retrofit in parking lots and provide secondary use for parking

RAW WASTEWATER

Location: Lyon, France

Technology: Rhizosph'air aerated french wetland

Main innovation: Compact (<1m2/PE*), new design guidance; innovative/ICT monitoring approaches

COMBINED SEWER OVERFLOW

Location: Merone, Italy

Technology: Aerated + free water surface wetland

Main innovation: Increase urban resilience to extreme events, reduce pressure on sewers; new NBSWT market opportunities

OBJECTIVES

NATURE-BASED SYSTEMS

Demonstrate enhanced nature-based systems in operational environments for a wide range of polluted urban waters

NBS TECHNOLOGY

Develop state-of-the-art guidance for NbS technology selection and preliminary design

CITY-WIDE SCALE NBS

Provide comparative spatial environmental and economic scenarios for implementing NbS on a city-wide scale

URBAN WATER TOOLS

Engage urban water stakeholders in the development of urban water planning tools

GOVERNANCE & POLICIES

Improve urban governance and policies related to NbS and water reuse