

FIVE CASE-STUDY CITIES



Cities are increasingly vulnerable to climate change related risks, including more frequent and intense heavy rainfall events. In cities without green infrastructure and where wastewater, stormwater and urban runoff are routed together to sewage treatment plants, drainage systems can be flooded. These so-called **combined sewer overflow (CSO)** events lead to the discharge of contaminated water directly into rivers, streams or other nearby water bodies.

The NICHES project (April 2022–March 2025) aims to identify new solutions and increase the knowledge base for urban water management and reduce the burden on both society and aquatic ecosystems by exploring the potential of **nature-based solutions (NBS)** to mitigate CSO events. NICHES will raise awareness and capacities about NBS integration into urban planning. In doing so, the project will protect aquatic biodiversity and the delivery of wider societal and economic benefits.

WHAT DO WE WANT TO ACHIEVE?



Showcase the potential of NBS to safeguard aquatic ecosystems and deliver further environmental benefits.



Determine the social and economic benefits of nature-based solutions for urban dwellers.



Support science-society-policy exchange to design resilient urban water management systems.



Engage with key stakeholders across the five NICHES cities to produce relevant and upscalable results.



Co-develop transition pathways for increasing the integration of nature-based solutions in local policy frameworks.



Provide decision support for the successful selection, design and implementation of urban nature-based solutions to mitigate runoff impacts.



Determine city-specific vulnerabilities and develop spatially specific recommendations.

CO-CREATING SOLUTIONS

NICHES will use five global cities as **co-design arenas** to explore these topics/pursue these activities, namely: **Berlin, Rotterdam, Barcelona and its Metropolitan Area (AMB), Sheffield, and Boston**. Working together with key stakeholders (e.g. policy makers, practitioners, NGOs and community groups, private, and sectoral actors), the project will co-create knowledge and develop a shared understanding of nature-based solutions and their potential for reducing stormwater runoff. These efforts will help to overcome policy and planning silos and transition towards greener, more inclusive and resilient urban water management for the benefit of society and biodiversity alike.

PARTNERS

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-  Netherlands Institute of Ecology (NIOO-KNAW)
-  University of Sheffield (USFD)
-  Northeastern University (NU)
-  Pensoft Publishers



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