



WORKING GROUP

# Urban Water Resilience

Driving water- and climate-resilient urban development



German Water  
Partnership



# Shaping resilient cities through water

The Urban Water Resilience Working Group of German Water Partnership e. V. brings together leading experts, companies and institutions to develop and implement innovative solutions for the challenges of climate change and urbanisation.

The group combines expertise in hydrology, geology, urban water management, landscape architecture, urban planning, and digitalization, and fosters interdisciplinary collaboration and strong partnerships. It promotes integrated approaches to water management—from stormwater and water security to digital planning and resilient infrastructure.

Its goal is to strengthen urban resilience worldwide by initiating projects, unlocking financing opportunities and connecting stakeholders.

## WATER SUPPLY

### We ensure a high-quality and reliable water supply

A sustainable and secure water supply requires the development of strategies and technologies to safeguard water resources in both quantity and quality. This includes the protection and sustainable use of all available resources (groundwater, surface water, and rainwater). Key fields of action include minimising water losses, increasing efficiency through modern technologies, creating storage capacities above ground or via Aquifer Storage and Recovery (ASR), and hydro(geo)logical modelling. Intelligent control of water reservoirs and the protection of vulnerable infrastructure are complemented by the use of rainwater and greywater.



## INTERDISCIPLINARY SYNERGIES

### Together, we drive water- and climate-resilient urban development



Climate change requires a fundamental transformation of our cities. Urban water resilience can only be achieved through consistently holistic and interdisciplinary planning. We combine expertise to optimise planning processes across disciplines. Our goal is to strengthen and secure blue green grey infrastructure, retain water and make it visible in the urban environment, and develop interconnected biotope networks. We actively foster dialogue with relevant stakeholders.

## WASTEWATER & REUSE

### We are committed to future-proof wastewater solutions

From wastewater collection and sewer networks to pumping stations, treatment plants and innovative reuse technologies: we combine services and high-performance products into smart, reliable solutions. In doing so, we strengthen urban water resilience and flood protection—efficiently, sustainably and with a focus on energy performance. A holistic approach, from entire settlements to drainage systems and receiving water bodies, reduces emissions into the environment. In response to increasing water scarcity, we deliver reuse technologies that help conserve drinking water resources.



## PLANNING, PREVENTION & SAFETY

### Based on smart technologies, we ensure safety across all water-related challenges

Integrated planning forms the basis for the versatile use of urban areas. Coupled hydrological and hydrodynamic models, together with citizen participation, support the development of effective concepts. These enhance water resilience through prevention, early warning systems, and the provision of technologies and systems for rapid response to extreme events. Forward looking planning reduces construction and operational costs despite increasing urbanisation and climate change pressures. Monitoring, real time control and AI further improve the safety of urban drainage, flood protection and waterbody protection.



## RAINWATER & WATER BODIES

### We bring together diverse disciplines to develop forward-looking solutions for urban water resilience

Rainwater is a valuable resource within the urban water cycle. However, climate change is leading to increasingly uneven distribution, with both droughts and heavy rainfall events. Our challenge is therefore to use rainwater in a targeted, innovative, and multifunctional way. Integrated stormwater management and the well considered integration of urban water bodies are key levers for climate adaptation. The sponge city approach connects green roofs, swales and infiltration systems, open water bodies and controlled flood areas into a balanced and sustainable urban water cycle.





# German Water Partnership

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The Urban Water Resilience Working Group is organised under German Water Partnership e.V.—the central network of the German water sector for international markets.



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