Water recycling strategy: summary

Berlin-Brandenburg, Germany

Interreg Baltic Sea Region

Co-funded by the European Union

SUSTAINABLE WATERS

WaterMan

KWB's Model Strategy for Advancing Water Reuse in Berlin-Brandenburg

Summary of strategic objectives, priorities and future activities

Regional context and strategic objective

The Berlin-Brandenburg region faces increasing pressure on its water resources due to climate change, population growth, declining river flows and limitations on groundwater abstraction. Water reuse offers opportunities to strengthen regional water resilience by substituting conventional freshwater resources in applications that do not require drinking-water quality.

Within the WaterMan project, the Berlin Centre of Competence for Water (KWB) developed a model strategy outlining how its research activities, scientific expertise and regional networks can contribute to advancing water reuse in Berlin-Brandenburg. Its objective is to foster the safe, sustainable and economically viable implementation of water reuse by generating scientific evidence, reducing uncertainties, facilitating knowledge exchange and connecting relevant stakeholders.

The strategy reflects KWB's role as an applied research institution and knowledge facilitator and defines how KWB can complement the activities of key decision makers such as the Senate Department of Berlin and the Berlin Water Utilities and support informed decision-making.

Key findings and strategic priorities

The strategy builds on an assessment of regional water challenges, stakeholder perspectives, existing initiatives and international best practices. It identifies significant opportunities for water reuse alongside regulatory, technical, economic and institutional barriers. The WaterMan feasibility studies at WWTP Ruhleben and Stahnsdorf particularly highlight the importance of site-specific conditions, adequate treatment performance, reliable end-user demand and economically viable infrastructure. Differences in governance structures between Berlin and Brandenburg further underline the need for locally adapted solutions and stakeholder cooperation.

Based on these findings, KWB identified six complementary fields of action:

1. Knowledge generation: Address technical, economic and environmental uncertainties through applied research, feasibility studies and risk assessments
2. Capacity building: Strengthen expertise through workshops, training, technical tools and the dissemination of practical experience
3. Stakeholder engagement: Facilitate dialogue and cooperation among water utilities, authorities, potential water users, researchers and other relevant organizations
4. Evidence-based policy support: Contribute scientific findings to regulatory discussions and the development of technical guidance and risk management approaches
5. Communication and outreach: Raise awareness, disseminate best practices and build trust through transparent communication and practical examples
6. Research and demonstration: Develop and participate in research projects and support pilot initiatives to investigate promising applications and generate transferable knowledge

KWB's contribution to future implementation

KWB follows a research-driven and collaborative approach, seeking to bridge the gap between scientific knowledge and practical implementation. Close cooperation with the Berlin Water Utilities, relevant public authorities in Berlin and Brandenburg, water and wastewater associations (e.g. Brandenburgische Wasserakademie), prospective end-users and research institutions is central to this approach. KWB provides scientific input and facilitates exchange, while regulatory, investment and implementation decisions remain with the responsible authorities, infrastructure operators and other relevant actors.

Remaining gaps and next steps

Wider implementation remains constrained by uncertainties regarding regulatory requirements, treatment performance and health risks, economic viability, public acceptance and practical operating arrangements. KWB's future activities will focus on addressing selected knowledge gaps through applied research, particularly concerning treatment validation and risk assessment, while strengthening stakeholder networks, especially in Brandenburg. Continued knowledge transfer, participation in research and demonstration projects, and contributions to technical guidance will further support the development of practical water reuse solutions.

Overall, KWB's model strategy defines a research- and knowledge-driven contribution to advancing water reuse in Berlin-Brandenburg. By strengthening the evidence base, fostering cooperation and reducing implementation barriers, KWB aims to enable informed decisions by the responsible actors and support the longer-term uptake of water reuse where local conditions are favorable.

Authors:

Pia Schumann, Elisa Rose and Ulf Miehe from Kompetenzzentrum Wasser Berlin gGmbH

The „BSR Water Recycling Toolbox" was elaborated as part of the WaterMan project, which is co-financed by the European Union (European Regional Development Fund) and implemented within the Interreg Baltic Sea Region Programme. More information:

eurobalt.org/WaterRecyclingToolbox
interreg-baltic.eu/project/waterman

WaterMan promotes a Baltic Sea Region-specific approach to water recycling, which makes use of the alternation of too much and too little water that has become typical for humid areas in the EU to strengthen the resilience of local water supply. Building on this approach, the project supports municipalities and water companies in adapting their water supply strategies.

The contents of „BSR Water Recycling Toolbox" are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Union, the Managing Authority or the Joint Secretariat of the Interreg Baltic Sea Region Programme.

Interreg Baltic Sea Region

Co-funded by the European Union

SUSTAINABLE WATERS
WaterMan