

# Rolling out water recycling in the BSR

## Recommendations & lessons learnt from the WaterMan project



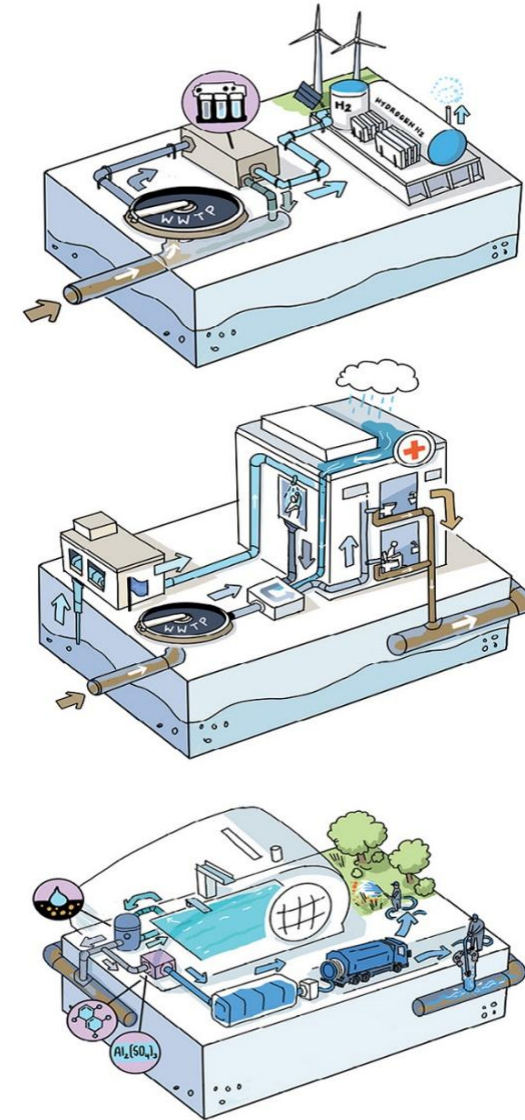
## Local & regional model strategies for water recycling

### Pilot measures that bring water recycling into practice



## Origin & nature of the following recommendations:

- Hands-on perspective of practitioners of municipalities & local water companies working in the WaterMan project from 2023 - 2025
- Based on **practical lessons learnt** in the course of creating:
  - **Real-world** pilot measures on typical use cases of water recycling
  - **Feasibility studies** on further use cases with strategic value
  - **Local & regional water recycling strategies / action plans**
- Try to answer the following questions:
  - **What can other municipalities & water companies in the BSR learn from the experiences made within the WaterMan project for getting started with water recycling?**
  - **How could they be more effectively supported** by regional & national authorities as well as the EU in this context?



## Revisiting & specifying water scarcity in the BSR

- **Scarcity alternates with** periods of **too much water**, turning **rainwater & stormwater** into both a problem (> floods) – and a **resource**
- Does not **refer** to water in general here, but **to the availability of drinking water** (> used so far for almost all human needs)
- Is **caused** by **less availability**, but also **more demand** (e.g. industry, tourism season) – and in particular if both factors occur together
- Implies so far mostly a **temporary shortage of drinking water** in specific, **geographically** rather **limited areas** – and usually over **shorter periods**
- Occurred **almost everywhere at times** – so there is experience that **human need** had to be temporarily **compromised** or even suspended
- Is – increasingly – **seen as challenge** by the general public, but **still not acknowledged** everywhere & consistently an issue **of strategic importance** that would justify radical policy shifts or larger public investments



## Operationalising water recycling in the BSR

- Can build on **three main pillars** that should be examined with **equal attention** to make local water supply climate resilient:
  - Retention & recirculation of **rainwater** (> low threshold)
  - **Recycling loops** within households & industry (> low to high threshold)
  - Reuse of **municipal wastewater** (> rather high threshold)
- **Boils down** to the following **two questions** (to be answered locally):
  - For what specific **human needs** may the use of drinking water be replaced by **water of lower qualities**?
  - Are **alternative local water sources** available that can be utilised to supply such “fit-for-purpose” water and **satisfy these demands**?
- Water recycling may **in many cases** substantially **stabilise local water supply** if these **three alternative water sources** are thoughtfully considered



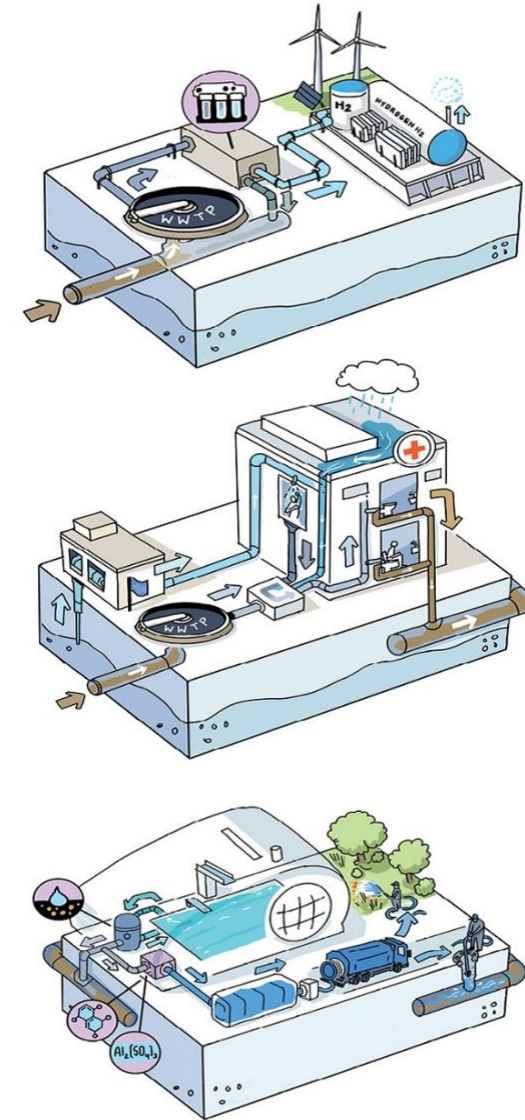
## Shaping effective strategies at local & regional level

- **Each single water utilisation** that can be **served with non-potable** or from alternative water **sources helps** to stabilise local water supply
- Ideal: **Systematic analysis & identification** of potentials on both the **demand side** and **the supply side**, along with climate change projections
- Already of great help: Concrete **action plans** that **bring low-threshold measures** that are driven by willing local actors **into practice**
- Special potential: **Synergies** with acknowledged & **accepted investment needs** that improve cost-benefit ratio of water recycling measures, e.g.
  - Launching water reuse when upgrading WWTP for **recast UWWTD**
  - Adding water recycling to e.g. **flood prevention**, biodiversity or nutrient reduction measures (e.g. tap points at retention ponds)
  - Creating recycling loops (e.g. rainwater harvesting, dual pipe systems for grey water) when **(re-)constructing public (& private) buildings**



## Designing meaningful technical-organisational solutions

- A **wide range of effective water recycling solutions** that can be implemented right away **based on available & mature technology** – and without need for further technological innovation
- Smart choice: **Adapting** field-tested (on-scale) **solutions from south & central Europe** (e.g. Spain, Flanders / BE) or **EU projects** (e.g. WaterMan, ANCHOR, ReNutriWater, etc.) – and utilising advice & resources of related networks and initiatives (e.g. Water Reuse Europe)
- First choice: **Low-hanging fruits** that bring **immediate & visible effects** at low effort (> proved to be game changers in terms of local awareness & door openers for further measures and strategic approaches)
- Consolidating choice: **Tailored solutions** for the **specific local situation** that address main strategic potentials and ensure long-lasting effects



## Policies & funding at regional, national & EU level: **Wishes**

- Safeguarding **financial support** not only for research & innovation, but in particular **for the rollout** of real-world & **on-scale water recycling measures** that are based on field-tested and validated solutions
- Supporting the **piloting & step-by-step refinement** of **locally-adapted solutions** that may be upscaled in the next step **over longer periods**
- Launching **specific support** programmes **for local & regional authorities** (e.g. municipalities, regions) to develop & adopt **strategies** and action plans for stabilising local supply through water recycling
- Supporting the creation of a **hands-on eco-system** that **supports local & smaller entities** in the design, implementation & operation of water recycling measures (e.g. specialised consultancy & laboratory services)
- Enabling further **international exchange & knowledge transfer** on the topic – as this can lead discussions out of “national deadlocks”



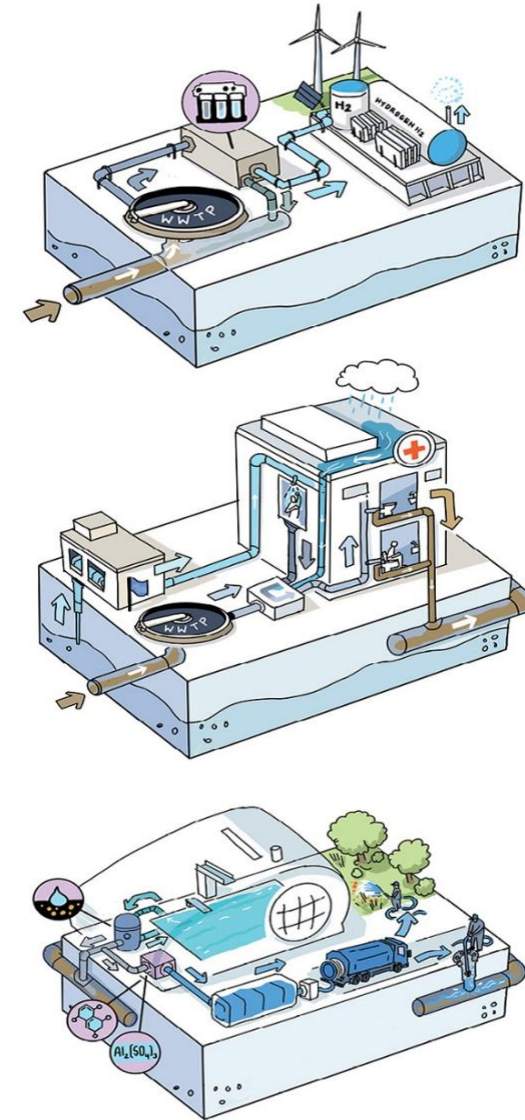
## Removing regulatory & institutional obstacles: Wishes

- The necessary **paradigm change** in local water supply from **cost-efficiency** (“affordable supply”) towards **climate-resilience implies** that **local & regional authorities** become **drivers** of the change process
- Financially **supporting municipalities / local authorities** that give their utilities the mission to **prioritise resilience** over cost efficiency - incl. funding for the costly initial investments in recycling infrastructure
- Enabling local water companies to **incentivise water recycling** by
  - **Allowing** local water companies to charge **different prices for different qualities** of water
  - If applicable: **Removing** strict **ties of production & consumer costs**
- Encouraging & supporting the **integration** of local **wastewater companies and local drinking water companies** – to enable integrated local strategies across the three main pillars of water recycling



## Recast EU Water Reuse Regulation (> 2028): Inputs & wishes

- Developing the WRR towards a coherent EU-wide **guiding framework** for **using water of different qualities** that
  - Gives **implementers** a clear **orientation** for related measures
  - Facilitates their **communication with authorities**
  - Promotes the (sense of) **security** on the side of **consumers**
- **Better tailoring** it to the demands & potentials of **humid regions** by:
  - Adding **further utilisations** (beyond agricultural), e.g. urban irrigation, toilet flushing, canal flushing, groundwater recharge etc.
  - Adding **further water sources** (beyond municipal wastewater) including all three main pillars of water recycling in humid regions
- Maintaining the **risk-based approach** but simplifying it where possible (e.g. implementation guidelines for widespread use cases)
- **Limiting member-state opt outs** through stricter justification criteria



## Further dialogue on water recycling: Inputs & wishes

- **Water recycling is ready to get started** more broadly also in the BSR, **but** there still **a lot** to improve - and **to learn** from each other
- Knowledge **exchange & peer learning** within the **professional community** among local implementers, policy makers from different levels, R&D institutions **must be continued** – also **internationally**
- At the same time, **climate change** has turned **water management & water recycling** from an expert task into a **political & strategic issue**
- This calls for **involving also non-experts** (incl. local decision-makers, general public / citizen) **into the dialogue** on setting the priorities at different levels – local, regional, national, international
- For this we need an **easier-to-understand communication & more unified terminology** that “clears out” the (precise but very complex) “expert speak” shaped by different professional circles over the years





**Thank you very much  
for your attention!**

**[eurobalt.org/waterrecyclingtoolbox](http://eurobalt.org/waterrecyclingtoolbox)**