Interreg Baltic Sea Region

Co-funded by the European Union

GA-MA Consulting

Region Kalmar län

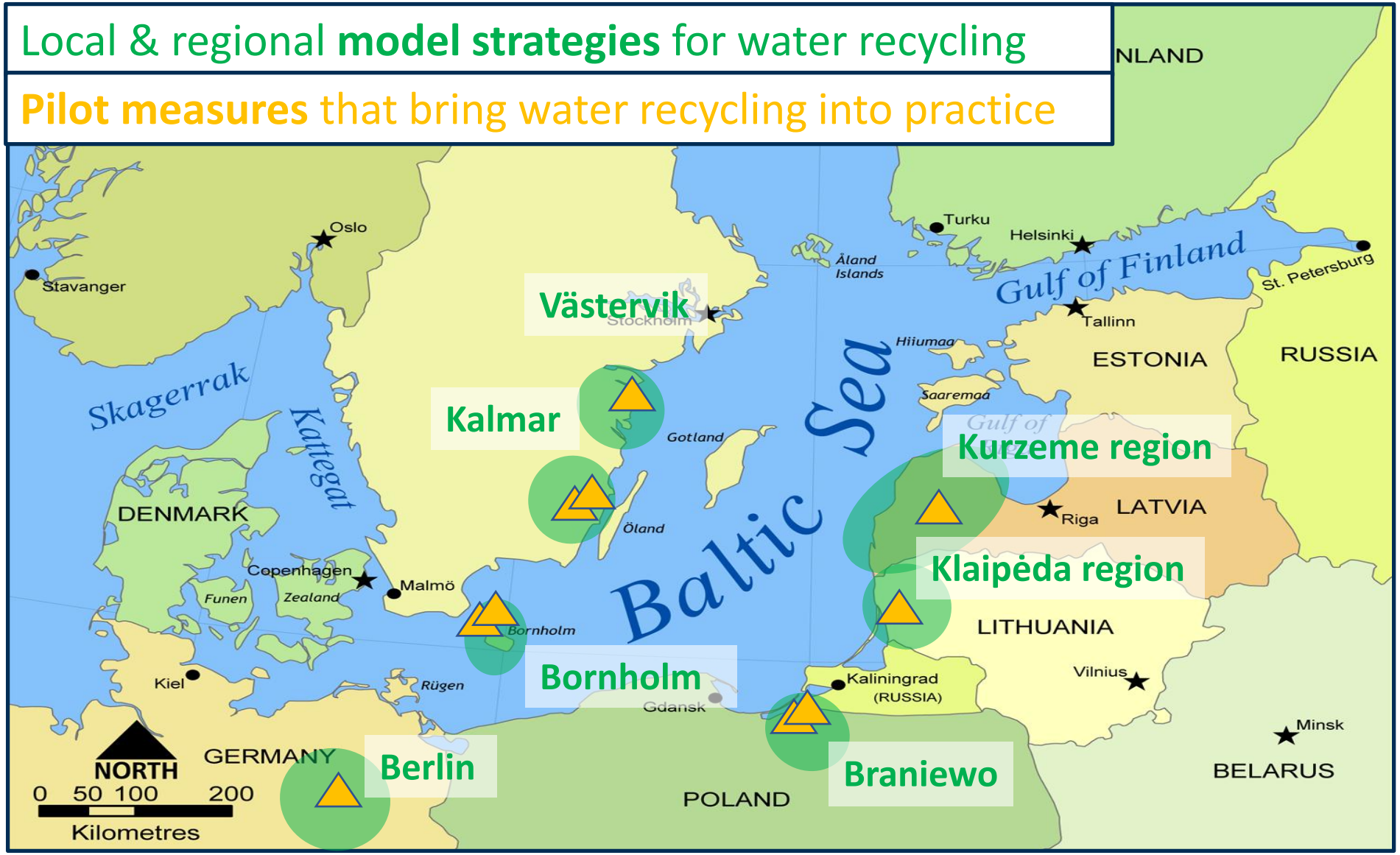
SUSTAINABLE WATERS
WaterMan

Rolling out water recycling in the BSR

Recommendations & lessons learnt from the WaterMan project

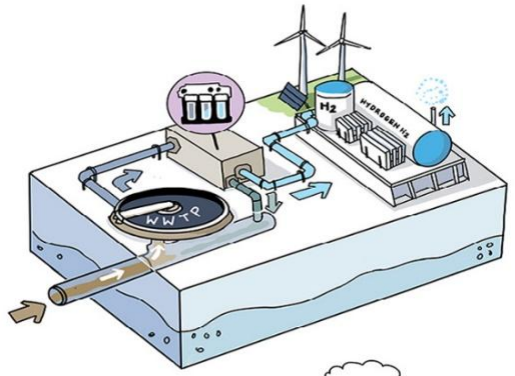
Local & regional **model strategies** for water recycling

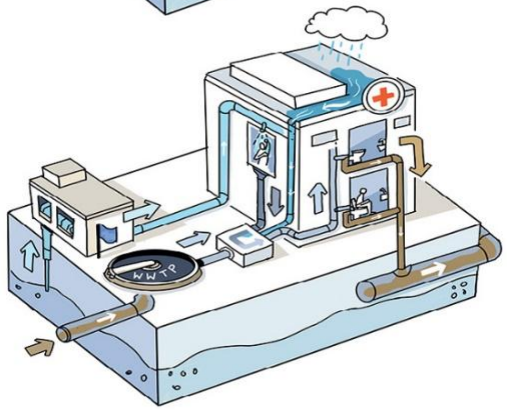
Pilot measures that bring water recycling into practice

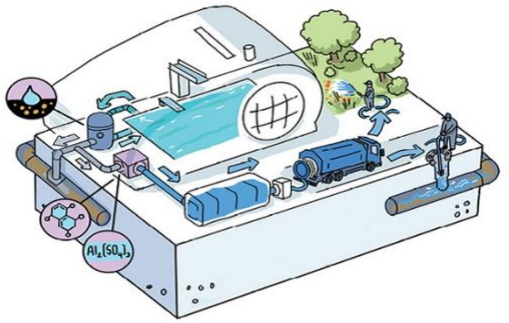


Origin & nature of the following recommendations:

- **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

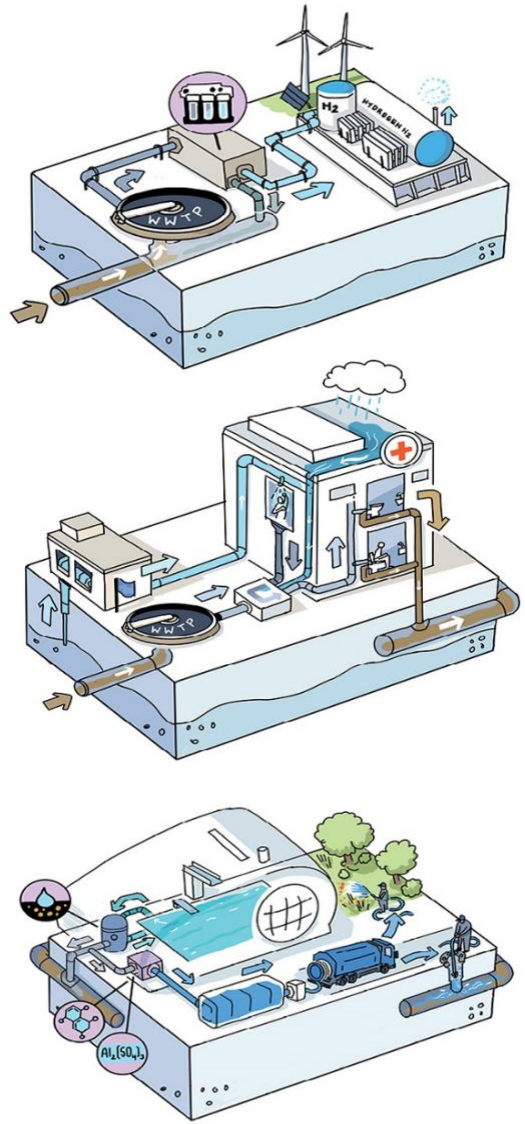
- Can build on **three main pillars** that should be examined with **equal attention** to make local water supply climate resilient:
  - Retention & recirculation of **rainwater** (> low threshold)
  - **Recycling loops** within households & industry (> low to high threshold)
  - Reuse of **municipal 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 by 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
- The motto is: **Just get started** – **with** focus on **the obvious & doable**!
- The **best first step** (with immediate effect): Concrete **action plans** driven **by willing** local actors that **bring low-threshold measures into practice**
- Later on / ideal: **Systematic analysis & identification** of potentials both on the **demand** & **supply side**, along with climate change projections
- 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
- First choice: **Low-hanging fruits** that bring **immediate & visible effects** at low effort (> proved to be game changers in terms of local awareness and thus door openers for further measures & strategic approaches)
- Consolidating choice: **Tailored solutions** for the **specific local situation** that address main strategic potentials and ensure long-lasting effects
- 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)



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

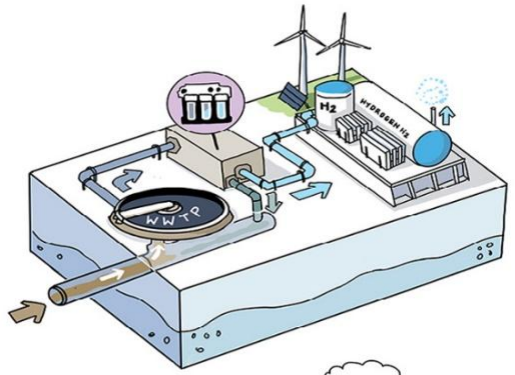
- Safeguarding **financial support** not only for research & innovation, but in particular **for the rollout** of real-world & **on-scale water recycling measures** that are based on field-tested and validated solutions
- Supporting the **piloting & step-by-step refinement** of **locally-adapted solutions** 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”

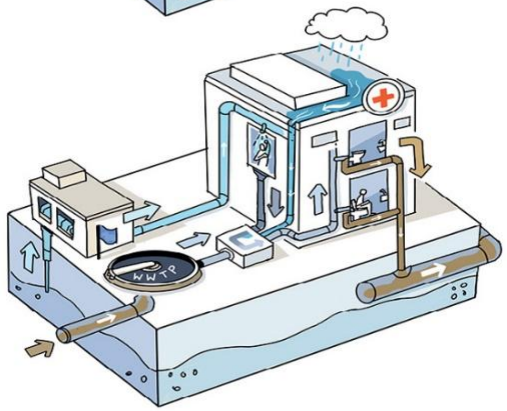
Removing regulatory & institutional obstacles: Wishes

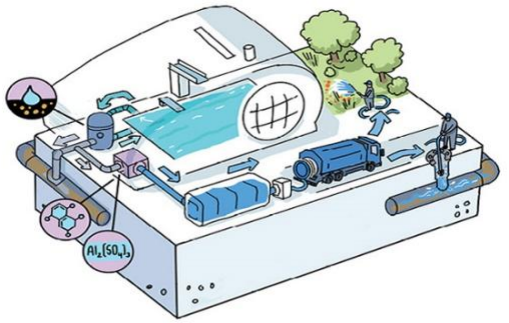
- The necessary **paradigm change in** local water supply from **cost-efficiency** ("affordable supply") towards **climate-resilience implies** that **local & regional authorities** become **drivers** of the change process
- Financially **supporting municipalities / local authorities** that give their 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 EU Water Reuse Regulation 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. concrete 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 – as well as **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

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Thank you very much for your attention!

eurobalt.org/waterrecyclingtoolbox