EXTERNAL NEWSLETTER NUMBER 4

Content

Greetings from the project leader

The success of the project depends on the activation of stakeholders. We have a lot to do in this area because water reuse is not popular in the Baltic Sea Region. In addition, water recovered from wastewater does not have a good connotation. We are debunking myths. We have devoted a lot of time to researching the effectiveness of disinfection. The operators and scientists have conducted many studies and gathered a lot of interesting experiences. We will be happy to share the results. We have verified the necessity and feasibility of various solutions in different places in the BSR.

In addition, we have developed an IT tool that allows each operator of a wastewater treatment plant or a municipality to assess the possibility of implementing water recovery solutions. The tool will be available on the project website soon.

In the second half of the year, we invite you to local stakeholder meetings. All partners are involved in workshops, conferences, and local exchange of knowledge and experiences.

If you would like to participate in a meeting with a partner of our project or have an idea for a meeting or workshop in any place in the BSR, please contact us by e-mail: **sekretariat@igwp.org.pl**

Wishing you a wonderful summer,
Klara Ramm

Visit ReNutriWater Website

Project partners

Insights from the sustainable water solutions survey

The ReNutriWater partner **Šiauliai Chamber of Commerce, Industry and Crafts** has spearheaded a comprehensive survey initiative about sustainable water solutions, aimed at broadening the reach of water reuse education, particularly for groups that are only beginning their journey in sustainable water management.

The survey was designed to gather insights from key groups, including municipalities, small and medium-sized enterprises and organizations, in order to better target future initiatives and promote collaboration across sectors.

Key findings show that while awareness of water reuse is growing, financial, technical and regulatory barriers remain. Nevertheless, there is a clear willingness to collaborate and innovate. Regional and international partnerships will be key to unlocking the full potential of water reuse in the future.

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ReNutriWater research advances water reuse for industry with efficient coagulation methods

New research from **Warsaw University of Technology** shows that treated municipal wastewater can be safely reused in industry using smarter, low-chemical methods. By comparing two types of coagulation processes, the study found that surface coagulation cleans water just as effectively as traditional methods while using fewer chemicals and helping protect pipes and equipment. These findings support more sustainable, cost-effective water reuse — an important step toward tackling water scarcity.

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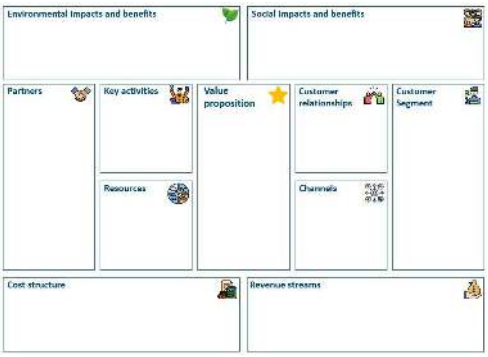
Practical business models for advancing water reuse

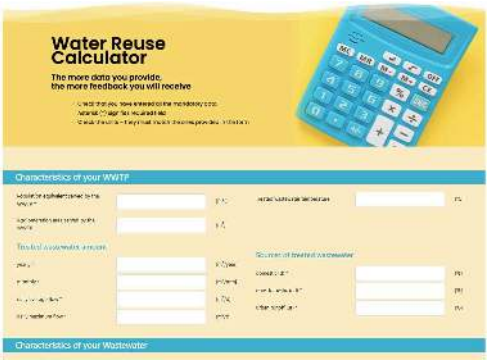
The ReNutriWater project has developed seven hands-on business models to support the reuse of treated wastewater in agriculture, industry, and urban green areas. Developed under the lead of the **Mineral and Energy Economy Research Institute of the Polish Academy of Sciences**, these models are based on an extended Business Model Canvas (BMC) that also takes environmental and social impacts into account, focusing on sustainability alongside profitability.

The models were created through direct collaboration with managers from seven pilot wastewater treatment plants. By conducting in-depth interviews, the project gathered real-world insights into operational challenges, economic considerations, and regulatory hurdles. This allowed the team to develop both site-specific models and general frameworks that can be applied to similar facilities elsewhere.



One key finding is that reclaimed water offers a viable, cost-effective alternative for non-potable uses like irrigation and industrial processes. It can reduce dependence on freshwater, improve resource efficiency, and contribute to circular economy goals. However, the project also identified several barriers, including strict regulations, high investment costs, technical requirements, and public skepticism about safety.

To address these, ReNutriWater designed tailored strategies and implementation roadmaps for different regional contexts: rural, urban, and industrial. The resulting business models are practical tools that wastewater treatment plants can use to plan and implement water reuse in a way that delivers environmental benefits, local economic value, and social acceptance.



Smart IT tool for sustainable water reuse

The ReNutriWater project is developing WaterSafe, an innovative IT tool that supports decision-making in the reuse of treated wastewater. As water scarcity intensifies and the need for sustainable solutions grows, digital tools like WaterSafe offer practical ways to promote circular economy principles in the water sector.

By integrating regulatory knowledge, technical insights, and an interactive calculator, WaterSafe helps users navigate the complex landscape of water reuse. It draws on key EU regulations, offers guidance on suitable treatment technologies, and provides tailored recommendations based on real-life case studies. Although it does not replace expert legal or engineering advice, the tool serves as a valuable foundation for informed planning and resource-efficient decisions.

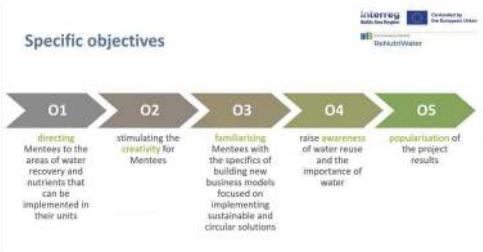
WaterSafe incorporates widely used technologies such as sand filtration, activated carbon, ion exchange, membrane bioreactors (MBR), nano-filtration, reverse osmosis, ozonation, UV treatment, and chlorination. Its development has been informed by a comprehensive review of existing IT tools in the water sector, and the tool has been tested through pilot studies conducted by project partners to ensure its relevance and usability.

With WaterSafe, ReNutriWater bridges the gap between research and practical application, empowering stakeholders to adopt safe, efficient, and climate-conscious water reuse practices.

Safe Water Mentoring Programme in full flow – Spring 2025 update

After launching earlier this year, the **Safe Water Mentoring Programme**, part of the ReNutriWater project, has successfully kicked off and is already making great progress. Over the past few months, mentors and mentees have come together to explore, challenge, and advance new ideas in sustainable water reuse.

The programme began with a virtual inauguration where participants got to know one another and gained an overview of the programme's goals. The session was opened by highlighting the importance of water reuse in creating circular, nutrient-preserving solutions through business model development process, which is a key part of the programme as well as it has been in the ReNutriWater project.



From there, the programme moved into targeted workshops and one-on-one mentoring sessions. In April, a dedicated workshop focused on risk management in the water recovery sector. Discussions explored real-world challenges such as water quality monitoring, permitting processes, and regulatory gaps, particularly from our pioneering mentees in Lithuania, who are breaking new ground with innovative reuse applications.

Recently in June, the programme featured two workshops. The first introduced the WaterSafe IT Tool, a digital decision-support tool developed within ReNutriWater. Participants tested its features, offered valuable feedback, and helped shape its final development. The tool integrates regulations, treatment technologies, and cost-benefit calculators to support practical water reuse planning. It is scheduled for release in late summer 2025.

The second workshop summarized the progress made, addressed the challenges faced, and highlighted the successful exchange of knowledge. Importantly, the knowledge sharing has been mutual between mentors and mentees, fostering a two-way learning process rather than a one-sided transfer.

Throughout the spring, our mentees have been refining their personalized Action Plans and working closely with mentors to tailor strategies for their specific needs. Summary of the action plans for implementing water reuse solutions will be published in the autumn 2025. The energy, insight, and ambition shown by all involved highlight just how powerful collaboration can be in driving environmental innovation, especially when exploring the many diverse and promising applications of reclaimed water, through not only scientific but also practical knowledge sharing.

Consortium meeting in southern Poland in May 2025

From May 14–16, the ReNutriWater consortium met in Polańczyk, Poland, for a productive three-day meeting focused on sustainable solutions for nutrient recovery and water reuse.

The event featured technical site visits to modern membrane bioreactor (MBR) wastewater treatment plants in Berezka and Wołkowyja, offering participants hands-on insights into decentralized treatment technologies. Working sessions advanced key project outputs, including the WaterSafe IT tool, the project handbook, business models, and communication strategies. A risk assessment exercise also helped shape the next steps.

Local engagement was highlighted by the presence of Solina's Mayor, **Adam Piątkowski**, and coverage by TV Podkarpacie, reflecting the strong community support for sustainable water management.

Participants left the scenic Bieszczady region energized and aligned, ready to move forward with the final phase of the project.

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Reclaimed water pilot installation presented in Warsaw

On April 24, 2025, a stakeholder meeting was held at the Południe Wastewater Treatment Plant in Warsaw, Poland, as part of the ReNutriWater project. The event was hosted by **Warsaw Waterworks** and brought together water companies, industry, city services, and experts to discuss the reuse of treated wastewater in an urban context.

The main focus was a pilot installation that converts treated wastewater into a valuable water resource. Applications for this reclaimed water range from cleaning city streets to cooling industrial equipment, reducing reliance on freshwater sources.

The meeting included expert presentations, a tour of the new recovery installation, and a case study from Hydrosfera Józefów Ltd., which successfully uses treated water to irrigate green spaces. The event demonstrated how technological solutions and cross-sector collaboration can help close water cycles and create a more sustainable, resilient water management system in cities.

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ReNutriWater visits Nosedo wastewater treatment plant in Milan

This spring, the ReNutriWater team visited Milan's **Nosedo wastewater treatment plant**, a leading example of how treated wastewater can be safely and effectively reused for agricultural irrigation.

The visit included insightful presentations covering the broader context of water reuse in the region. One of the key takeaways from the visit was understanding the broader conditions that have enabled the success of Milan's water reuse model. These include the consistent delivery of high-quality water thanks to efficient processes and daily quality control, the year-round availability of this cost-effective resource, and the added value it brings to agriculture by improving crop yields and reducing the need for synthetic fertilizers.

The excursion highlighted how a well-organized collaboration between the treatment plant operator and the farmers' organization can yield mutual benefits. This long-standing partnership not only supports sustainable agriculture but also demonstrates how reclaimed water can become a reliable and nourishing resource for local farming and residents. A valuable lesson for the ReNutriWater project and future initiatives.

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ReNutriWater workshop engages participants in discussions on reclaimed water use

In February, as part of Savonia International Staff Week, ReNutriWater partners **Savonia** and **Centrum Balticum** jointly organized a ReNutriWater Workshop, an interactive session which provided participants with insights into the key targets and preliminary results of the project.

The workshop's discussion addressed participants' perceptions of reclaimed water use and evolved into a broader conversation about public acceptance of using reclaimed water in food production, as well as the obstacles to adopting it in different communities.

Many participants were eager to learn more following the workshop, reflecting a growing interest in the potential of water reuse among stakeholders.

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