Water4All
Water security for the planet

European Partnership

REPORT ON 1st 360° WATER EXPERIENCE TOUR FOR BACHELOR STUDENTS

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The practices in Training programmes, and other Capacity building programmes, were discussed with Water4All partners in the Pillar C and Task C.3 meetings. The contribution of the partners was invaluable, the partners are herewith acknowledged for their contribution.

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LIST OF ABBREVIATIONS AND ACRONYMS

AdTA	Águas do Tejo Atlântico
APE	Aqua Publica Europea
BRGM	Bureau de Recherches Géologiques et Minières
CHMI	Czech Hydro-Meteorological Institute
CIV-Water	Centrum voor Innovatief Vakmanschap Water
CV	Curriculum Vitae
CREA	CREA Hydro&Energy – cluster of companies, research institutions and universities
EU	European Union
FCE VUT	Faculty of Civil Engineering of Brno University of Technology
ISPRA	Istituto Superiore per la Protezione e la Ricerca Ambientale
LNEC	Laboratório Nacional de Engenharia Civil
MENDELU	Mendel University in Brno
NBS	Nature Based Solutions
SRIA	Strategic Research and Innovation Agenda
UEvora	Universidade de Évora
VITO	Vlaamse Instelling voor Technologisch Onderzoek
Water4All	Horizon Europe Partnership on Water security for the planet
Wetsus	Research institute - European centre of excellence for sustainable water technology
WOLL	Water Oriented Living Lab

ABSTRACT

The Water4All Partnership – Water Security for the Planet is a funding programme that supports scientific research in freshwater. Its goal is to address water-related challenges posed by climate change, contribute to the achievement of the United Nations Sustainable Development Goals, and enhance the European Union's competitiveness and growth. The programme is co-funded by the European Union under the Horizon Europe programme.

Water4All is structured around five operational pillars that span the entire research and innovation chain. It supports a wide range of multinational and cross-sectoral activities. Pillar C, which focuses on the Science–Policy–End-Users Interface, consists of four tasks. Task C.3, titled "Fostering Capacity Development of All Actors", aims to strengthen the skills and capabilities of the water research and innovation community through PhD schemes, mobility programmes, and vocational training. A key objective of Task C.3 is to support knowledge transfer and promote the uptake of research outcomes and innovative practices in the water sector. Among its subtasks, Subtask C.3.2.b focuses on the "Engagement and Inspiration of Generation Z towards Water Challenges and Solutions."

This report presents the outcomes of the 360° Water Experience Tour for bachelor students from across Europe. The 360° Water Experience Tour aims to inspire the next generation of water professionals by connecting them with experts, fostering collaboration, and encouraging careers focused on water sustainability, with the tour topic covered by the Water4All SRIA. It is a way to inspire students by showing the challenges and opportunities within the water sector. The activity consisted of: 1) A workshop on a water challenge; 2) A campus or facility tour, including a visit to a living lab; 3) A laboratory experience; 4) A visit to a company in the water sector.

Following the presentation of the Water4All 360° Water Experience Tour, this report focuses on the first 360° Water Experience Tour organised in Netherlands and includes an overview of the participant profiles for the first 360° Water Experience Tour. Two other Tours has then been organised tour in the Czech Republic and in Portugal.

Positive feedbacks from the participants confirmed that the Water4All 360° Water Experience Tour has been a success and contributed to the long-term engagement and capacity building in water sector by investing in early-stage talent development.

REPORT ON 1st 360° WATER EXPERIENCE TOUR FOR BACHELOR STUDENTS, INCL. DETAILED PROGRAMME, NUMBER AND ORIGIN OF STUDENT AND SURVEY

Introduction

The Water4All Partnership -Water Security for the Planet[1]- is a funding programme for scientific research in freshwater. It aims to tackle water challenges to face climate change, help to achieve the United Nations' Sustainable Development Goals and boost the EU's competitiveness and growth. It is co-funded by the European Union within the frame of the Horizon Europe programme. Launched in June 2022, Water4All brings together a wide and cohesive group of 90 partners from 33 countries in the European Union and beyond and is implementing a wide portfolio of multi-national and cross-sectoral activities, from physical and biological sciences to human and social science.

Water4All is built around five operational Pillars (A to E[2]), covering a comprehensive range of actions, from funding research and innovation projects, aligning strategic priorities among participating members, and supporting the Science-Policy-End-users interface, to demonstrating and testing innovative solutions, fostering networks, building capacity, and promoting international cooperation.

Pillar C focuses on the Science–Policy–End-Users Interface and is structured around four tasks. The main objective of Pillar C is to facilitate knowledge transfer and support the uptake of research outcomes and innovative practices across the water sector. Within this context, Task C.3, "Fostering Capacity Development of All Actors," plays a central role. It aims to strengthen the capabilities of the water research and innovation community through the implementation of PhD programmes, mobility schemes, and vocational training.

During Phase 1, Task C.3 developed four subtasks mainly dedicated to education and training of professionals (researchers including PhD students, water practitioners and policy makers):

- C3.1. Dedicated PhD Schemes Pilot Alignment and Implementation
- C3.2. Vocational Training and Skills Development Programmes
- C3.3. Mobility Schemes
- C3.4. Capacity Building on Systemic Thinking and System Analysis

In Phase 2, a significant new element was introduced through Subtask C.3.2b: "Engagement and Inspiration of Generation Z towards Water Challenges and Solutions." This subtask reflects the growing need to actively involve younger generations in the water sector by increasing awareness, fostering interest, and empowering them to become future change-makers. Engaging Generation Z is essential, as they represent not only the next generation of researchers and professionals but also the citizens and leaders who will inherit the responsibility of addressing increasingly complex global water challenges. Subtask C.3.2b includes two complementary approaches[3], where the topics are aligned with the Water4All Strategic Research and Innovation Agenda (SRIA)[4]:

[1] Water4All Partnership - Water Security for the Planet - https://www.water4all-partnership.eu/
[2] Water4All Partnership five action pillars - https://www.water4all-partnership.eu/five-operational-pillars
[3] Inspirational activities for water young generation - https://www.water4all-partnership.eu/joint-activities/inspirational-activities-water-young-generation
[4] Water4All SRIA - https://www.water4all-partnership.eu/publication/strategic-research-and-innovation-agenda

- Development and dissemination of educational toolkits for high school students across Europe
- The 360° Water Experience Tour, targeting bachelor students from across Europe.

This report focuses on the second approach, the 360° Water Experience Tour, while the first approach is addressed in Milestone MS133 – Educational Toolkits, which will be presented at the Water4All Governing Board Meeting in November 2025.

Water4All 360° Water Experience Tour

The Water4All 360° Water Experience Tour is an exciting initiative designed for bachelor students, funded by the Water4All Partnership. The term of 360° is aimed to give participants a full view of the water sector and challenges from different angles. This immersive program offers students a unique opportunity to explore cutting-edge water technology, sustainability practices, and innovative solutions in the water sector. Through hands-on experiences, educational workshops, and interactive tours of leading water facilities, students will gain valuable insights into the challenges and opportunities within the water sector. The 360° Tour aims to inspire the next generation of water professionals by connecting them with experts, fostering collaboration, and encouraging careers focused on water sustainability, with the tour topic covered by the Water4All SRIA. It is a way to inspire students by showing the bigger picture and the many roles they could play in solving water challenges.

The tour activities include a dynamic range of experiences such as:

- **Immersive Learning:** The students will engage in site visits, expert-led sessions, workshops, and a real-life water technology challenge. They will deepen their knowledge in various water tech areas.
- **Unique Insights:** The students will gain exclusive access to innovative water technologies, sustainable practices, and research projects. They will explore real-life case studies and stay updated on water treatment advancements.
- **Networking:** The students will connect with renowned academics, industry experts, and fellow European students, with the aim that they can expand professional network and exchange ideas.
- **Career Opportunities:** They will interact with leading water technology companies. In this opportunity, they may discover internships, research collaborations, and other career opportunities.

The tours are free of charge for the bachelor students participants, with accommodation and flight tickets to the tour locations fully funded for the students, ensuring accessibility and enabling participants to focus on learning and networking without financial barriers.

The Water4All Partnership enables the partners involved in Subtask C3.2b: **WETSUS, LNEC**, CIV-WATER, ISPRA, APE, VITO, BRGM, **CREA**, and **UEvora**, to organize a series of 360° Water Experience Tours across Europe. Information about these activities is also available to other interested parties within the partnership and the general audience.

1. Series of Water4All 360° Water Experience Tour

As part of the Water4All Partnership, a series of 360° Water Experience Tours is planned for 2025 across three different European countries. Each tour focuses on a distinct water-related theme covered in Water4All SRIA and reflecting regional challenges and expertise. These tours aim to provide bachelor students from across Europe with a comprehensive, on-the-ground learning experience about water issues, innovative solutions, and local best practices. The diversity in geographical locations and themes allows participants to explore the wide variety of water challenges faced across Europe as shown in **Figure 1**.

- **Smart water value** (17 – 21 March 2025) tour in the Netherlands, organised by Wetsus.
- **Water in landscape** (25 – 28 August 2025) tour in the Czech Republic, organised by CREA.
- **Urban water smartness in Lisbon & Regional water management in Alentejo** (1 – 5 September 2025) tour in Portugal, jointly organised by LNEC and UEvora.

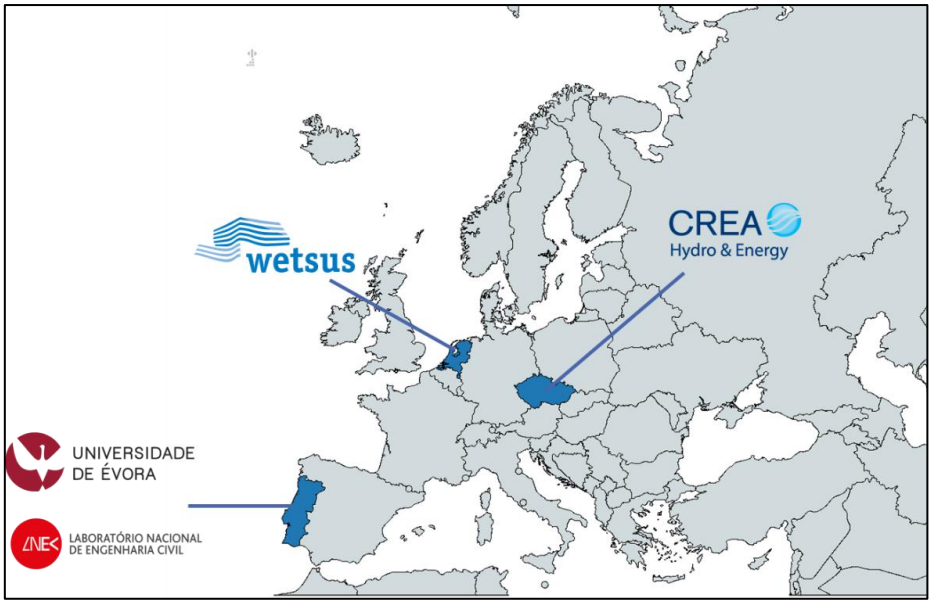


***Figure 1**. The map of the location of the series of Water4All 360° Water Experience Tours.*

2. Tour application open calls and selection process

The partnership has opened the call broadly to all interested bachelor students across Europe. Information about the tours is available on a dedicated webpage on the Water4All website: https://www.water4all-partnership.eu/vocational-training-tours . This page provides links to the individual websites for each tour, with further details outlined in **Table 1.** Additionally, social media advertisements have been and continue to be shared via the Water4All's LinkedIn profile to raise awareness about the activity, create interests, and reach a broader audience of potential applicants.

***Table 1.** The list of the tours and the application period for the open calls.*

Tour topic	Water4All SRIA theme covered in the tour	Organiser(s)	Tour date	Application period	Dedicated webpage
Smart water value	I. Water for circular economy: smart water value IV. Water and health	Wetsus	17 – 21 March 2025	10 October – 1 December 2025	https://www.wetsus.nl/360-watertech-experience-application-2024/
Water in landscape	III. Water for the future: sustainable water management V. Infrastructure for water	CREA	25 – 28 August 2025	10 February – 15 May 2025	http://www.creacz.com/index.php/en/water4all-360-water-experience-tour-for-bachelor-students/
Urban water smartness in Lisbon & Regional water management in Alentejo	II. Water for ecosystem and biodiversity III. Water for the future: sustainable water management	LNEC and UEvora	1 – 5 September 2025	15 May – 6 June 2025	https://events.lnec.pt/water4all-360tour/

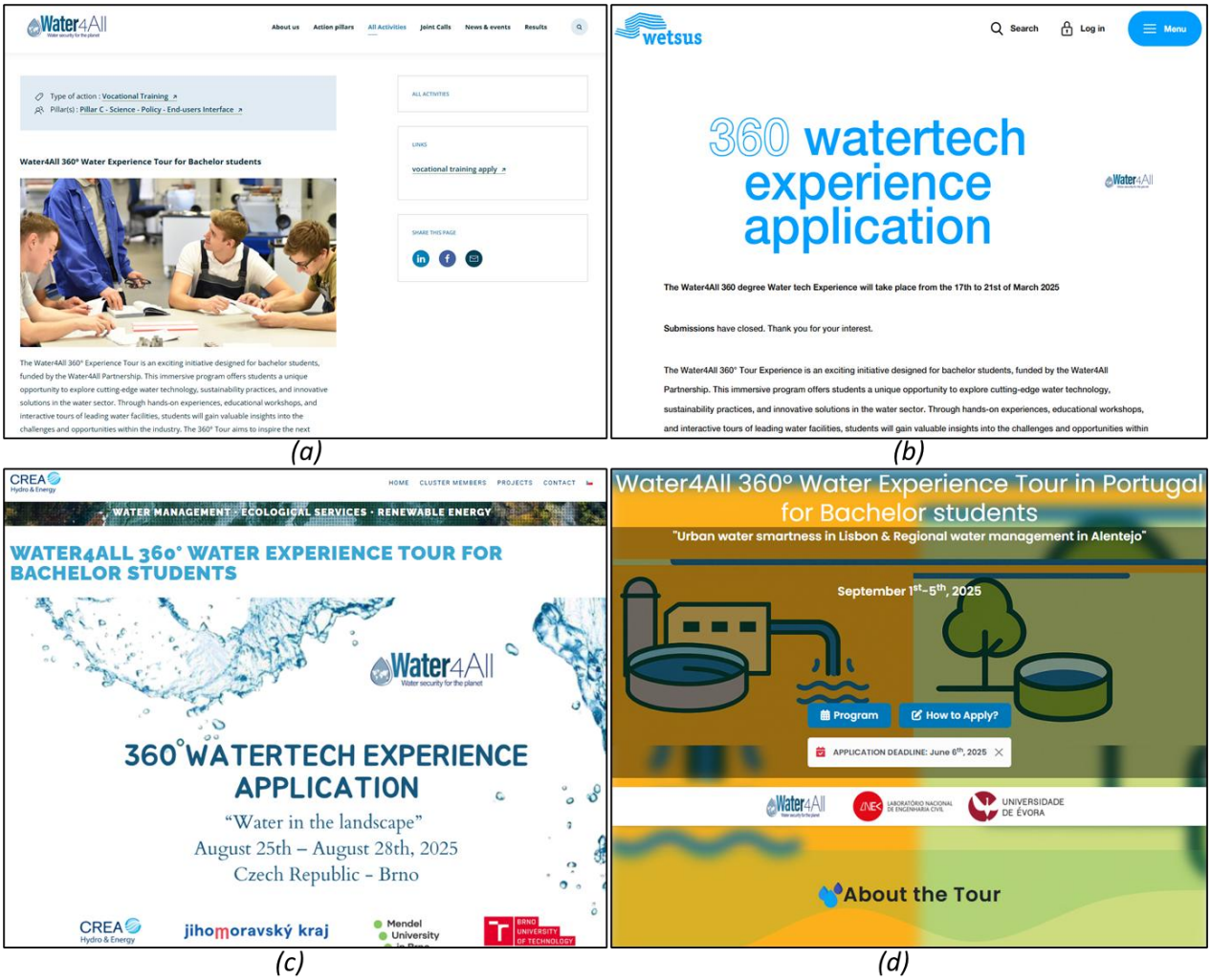


***Figure 2**. The dedicated webpage regarding the tour: (a) Water4All Partnership website; (b) Dedicated tour website organised by Wetsus; (c) Dedicated tour website organised by CREA; and (d) Dedicated tour website jointly organised by LNEC and UEvora.*

The requirements for bachelor students to apply for the tour are described below:

1. Second- or third-year bachelor's degree students (BSc) in (process) engineering, chemical engineering, environmental technology, environmental science and related fields at universities within the EU.
2. All the activities will be in English language, so ensure the clarity, the bachelor student shall have an English minimum level of B2 "confident English speaker".
3. Submit their application (CV, grades transcript and a motivation letter) by the link provided below for each 360° Water Experience Tours.

This information was published on the webpages of each Tour listed in **Table 1**, as well as on the Water4All website.

After the call deadline, the submitted applications, including the candidate's CV, grade transcript, and motivation letter, were assessed for each tour by the organisation responsible for that tour. Applicants were evaluated based on predefined guidelines, including whether they met the eligibility requirements, demonstrated motivation for the tour and their studies (as reflected in the motivation letter), and showed satisfactory academic performance (based on the grade transcript). English proficiency and communication skills were assessed based on the motivation letter. Their personal development potential was also assessed based on their CVs.

Within one month after the deadline, all candidates, both selected and non-selected, were contacted by email by the responsible organisation. If the number of applications exceeded 50 (the maximum number of participants that could be accommodated per tour), candidates were shortlisted based on merit, and the top 50 applicants were invited to join the tour. If fewer than 50 applications were received, candidates were selected based on meeting the minimum requirements outlined above.

During the open call and throughout the selection process, interested candidates could contact the designated contact person listed on the webpage if they required further clarification or information.

3. Activities of the 360° Water Experience Tour

The 360° Water Experience Tour must consist of at least the following activities to ensure a fully immersive learning experience. Together, these activities allow students to engage with water-related challenges through direct interaction with researchers, research facilities, living labs, and industry (end-users), thereby linking theory to practice and exposing students to real-world applications and career pathways in the water sector.

1) A workshop on a water challenge
   This workshop introduced students to a real and current water-related challenge. The challenge differed from one tour to another, depending the topic of the tour (**Table 1**). Students worked in groups to analyse the challenge, discuss possible solutions, and present their ideas. Through this collaborative and interactive approach, students gained insight into problem-solving strategies, interdisciplinary teamwork, and the societal relevance of water research.
2) A campus or facility tour, including a visit to a living lab
   This activity familiarised students with research environments and infrastructure. Visiting a living lab allows students to see how innovations are tested and applied in real-world conditions.
3) A laboratory experience
   The laboratory session provided exposure to example of laboratory research, experimental techniques, and get to know some analytical methods water research. This helped students better understand how scientific concepts are translated into measurable results.
4) A visit to a company in the water sector
   This visit connected students with industry stakeholders and/or end-users, provided insight on commercially or operationally water technologies and potential career opportunities within the water sector.

The Tour is followed by a survey to collect the feedbacks of participants and improve the concept.

1st Edition of Water4All 360° Water Experience Tour – the Netherlands

This report focuses on the first edition of the Water4All 360° Water Experience Tour, which took place in Leeuwarden, the Netherlands, and was organised by Wetsus from 17–21 March 2025. The report outlines the open application process, participant selection, participant profiles, tour activities, and the feedback collected from participants.

The reports on the second and third tours, Water in the Landscape by CREA, and Urban Water Smartness in Lisbon and Regional Water Management in Alentejo by LNEC and UEvora, are presented in Annexes 1 and 2, respectively.

1. Open application

The application was open from 10 October - 1 December 2024, and by the deadline, a total of 75 applications were received from bachelor students representing 10 European countries: Albania, Czech Republic, Denmark, Estonia, Germany, Italy, Lithuania, Poland, Portugal, and Spain. This broad geographic distribution demonstrates strong interest of the generation Z from across the European Union and associated countries.

2. Selection process

Out of the 75 applications received, a selection process was carried out based on the applicants' submitted documents. Each application was required to include a resume or CV, academic transcript, and a motivation letter.

The requirement for the candidates are:

- The candidate is in their second- or third-year bachelor's student in (process) engineering, chemical engineering, environmental technology, environmental science, or a related field.
- The candidate must be an EU citizen.
- As all activities are conducted in English, candidates must have a minimum English proficiency of B2 level ("confident English speaker").

A total of 50 candidates were selected for the 360° tour. They were evaluated on:

- Their motivation to join the tour and learn about water challenges.
- Their academic performance, based on their transcripts.
- Their personal development potential, reflected in their CVs.

The selection committee consisted of four members from Wetsus: An assistant professor from the University of Groningen with a background in biotechnology, two research coordinators at Wetsus with expertise in soil and micropollutants, and a master's programme coordinator. Each candidate was scored and ranked according to these criteria. To minimise bias, each assessor reviewed at least two candidates independently. However, on the day of the tour, we received one cancellation from selected candidates who were unable to attend due to personal reasons. As a result, a total of 49 participants joined the tour in person in Leeuwarden.

3. Profile of the participants

Of the 49 participants selected for and joined the 1st 360° Water Experience Tour, 67% were female and 33% were male. This gender distribution reflects a strong representation of women in Science, Technology, Engineering, and Mathematics or STEM-related fields among the applicants, which aligns with broader EU goals for promoting gender balance in research and innovation. The country of origin of the selected participants is detailed in **Table 2.**

***Table 2**. 1st edition 360° Water Experience Tour numbers of participants and represented universities.*

Number of / Country	Participants by				Represented universities
	Nationality	University country	Female gender (F)	Male gender (M)	
Albania	3	3	3	-	1
Czech Republic	3	3	2	1	1
Estonia	6	6	6	-	2
Finland	-	1	-	-	1
Italy	17	17	8	9	2
Lithuania	4	4	3	1	1
Poland	7	6	4	3	1
Portugal	7	7	6	1	1
Spain	2	2	1	1	1
Total	8 countries	9 countries	33 F	16 M	13 universities

– Not applicable

4. Activities of Water4All 360° Water Experience Tour

The tour consisted of four main components and the detailed programme of the tour is outlined in **Appendix 1** of this report:

Campus or facility tour and visit to a living lab: Meet the water experts, introduction to the Leeuwarden WaterCampus, and water technology tour

The participants visited the WaterCampus living lab[5] as part of the water technology city tour in Leeuwarden, widely known as the capital of water technology[6]. The city fosters collaboration and innovation in the water sector, serving as a hub where researchers and businesses come together to address pressing water challenges. These labs focus on the water-energy-food nexus, circular reuse, and smart resource management, supporting developments across all technology readiness levels in an open and dynamic environment.

Additionally, the participants were introduced to the Water4All Partnership and attended expert presentations on current water challenges (**Figure 3**). They were inspired by a wide range of scientific projects presented, from pipe inspection robots and nitrogen recovery from urine to innovative solutions like cloud factories aimed at inducing rainfall in arid regions. The participants received a crash course in water technology, with a particular focus on micropollutants and microplastics, gaining insights into smart and innovative approaches to address these pressing issues.

[5] Water4All Atlas of Water Oriented Living Labs: https://www.water4all-partnership.eu/publication/water4all-atlas-water-oriented-living-labs

[6] Leeuwarden as the capital of water technology: http://vestigeninfriesland.nl/en/industries/water-technology/

(a) (b)

***Figure 3**. Welcoming presentations and videos by: (a) Wetsus and (b) Water4All Partnership.*

Workshop on a water challenge: Smart technologies for micropollutant and microplastic removal, and the value of water reuse and circularity

The participants were tasked with addressing a water challenge focused on microplastic and micropollutant contamination, as well as water recycling. They were given two and half days to work on the challenge. The aim was to raise their awareness of the urgent issues surrounding freshwater quality and availability. They were encouraged to apply both their academic knowledge and insights gained during the tour, through expert presentations, lab visits, and field excursions, to develop innovative solutions. More details on the Water Challenge are available in **Appendix 2** of this report.

To foster collaboration and enhance their teamwork skills, students were divided into eight groups of 5-6 participants. On the final day of the tour, each group presented their proposed solutions to a panel of experts (**Figure 4**). The winning team, "**Water Lettuce**," proposed a nature-based solution (NBS) that used plants to remove microplastics and micropollutants from wastewater, specifically targeting polypropylene contamination from a plastic recycling facility. Their creative and thoughtful presentation concluded with a poem that earned extra points for originality and received a standing ovation from the audience. The challenge provided a valuable opportunity for participants to work together, exchange diverse perspectives, and reflect on innovative approaches to solving real-world water issues.

(a) (b)

***Figure 4**. The water challenge: (a) One of the presentations and (b) the winning team.*

Laboratory experience: Visit to the Wetsus laboratory and research facilities

The participants were invited to visit the research facilities at Wetsus, where researchers from Wetsus provided guided explanations throughout the tour (**Figure 5**). The visit included demonstrations of analytical tools used to measure water contaminants, as well as experimental setups developed by Wetsus researchers. This experience was designed to inspire the participants by exposing them to real-world water technology research and giving them insight into how innovative solutions are developed and tested.

***Figure 5**. A guided laboratory tour for the participants.*

Company visit in the water sector: Tour of the *Puurwaterfabriek* water reuse facility in the Netherlands

The participants had the opportunity to visit *Puurwaterfabriek* (**Figure 6**), a water reuse facility that treats secondary effluent from a nearby wastewater treatment plant to produce ultrapure water (full-scale) and drinking water (pilot-scale). The facility is operated by NieuWater[7], a company within the Wetsus and WaterCampus network, where ongoing research is conducted to optimise plant performance. This visit highlighted the strong collaboration between research institutions and industry, showcasing how scientific innovation can drive practical solutions in real-world settings. It aimed to inspire the younger generation to engage in these types of innovations and to consider future careers in water technology and sustainability.

(a) *(b)*

***Figure 6**. Visitation to the Puurwaterfabriek: (a) A presentation by the expert about the plant and (b) facility tour by the director of NieuWater.*

[7] More information regarding NieuWater: https://nwtr.nl/

The participants gained valuable insights into how advanced treatment facilities operate, the challenges posed by nutrient and micropollutants contaminants, and the multi-step processes required to purify treated wastewater to specific standards. A highlight of the visit was seeing the innovative biological carbon-granule purification system, which helps explain the plant's exceptionally low membrane replacement rate and remarkably clean tanks, which once a puzzle even to experts. This experience inspired the young generation to apply their knowledge and skills to tackle water challenges, showing how collaboration between research and industry can drive innovative solutions for a sustainable future.

5. Feedback and survey

Upon completion of the tour, students were asked to share their experiences and reflections. Below are some of the feedback highlights that capture the impact of the 360° Water Experience Tour, particularly in their interest and motivation around water-related challenges in real life situation and their future careers:

- "*The experience was an amazing adventure, and I feel truly appreciated for the work that I do by being invited here*." – S1
- "*I liked the expert presentations and the lab tour the most. In general, it was an amazing experience*." – S2
- "*Highlights: lab tour and excursions – because I had the opportunity to see in real life what I usually study in class*." – S3
- "*In the end, it turned out to be an incredible experience – both in connecting with people and in helping me better understand my passions and intentions for the future."* – S4
- "*Overall, it was an amazing experience. I feel more motivated in my studies and in solving real-world water problems. I also feel my research and teamwork skills improved significantly, especially through developing ideas with people from slightly different perspectives."* – S5

Notably, 54% of participants indicated they are considering pursuing a Master's degree, while 26% expressed interest in continuing on to a PhD, specifically in water-related fields. These responses highlight how early engagement in real-world water challenges can inspire the next generation of professionals to contribute to solving Europe's most pressing water issues.

6. Dissemination after the tour

With support from the Water4All communication team, a newsletter article was prepared to highlight the 1st 360° Water Experience Tour and capture the atmosphere of the event. The article provides an overview of the tour's objectives, activities, and participant experiences. It was published online on 30 March 2025 and is available at the following link: https://www.water4all-partnership.eu/news/360deg-experience-tour-water4all-first-students-training-edition (**Figure 7**). Additionally, the information of the tour has been spread via Water4All social media channels. At last, to enable dynamic outreach, three short videos describing the tour have been produced and are available on the Water4All YouTube channel:

- Video 1: https://youtu.be/4P9mSAE0Oqg
- Video 2: https://youtu.be/1L4q3IEKLao
- Video 3: https://youtu.be/Z-g1Bo1KkSE

***Figure 7**. A piece of newsletter for the 1st 360° Water Experience Tour*

Conclusions

The Water4All 360° Water Experience Tours have shown to be successful and inspiring initiatives aimed at engaging Generation Z in addressing pressing water challenges. In the 1st edition of the tour *Smart Water Value* in the Netherlands, it was offering a hands-on, immersive programme: water challenge on micropollutants and water circularity, laboratory visits, facility tours, and company excursions, the tour provided the selected bachelor students with a comprehensive view of real-life water issues and innovative solutions. This approach not only increased their awareness of the complexities of the water sector but also inspired their future careers by showing how science, technology, and policy work together to achieve sustainable water management. In the 2nd edition of the tour, *Water in the Landscape* in the Czech Republic, students were introduced to hydrological processes and the water cycle in open landscapes. This provided them with an understanding of how the water cycle functions and how it can be affected by climate change. In the 3rd edition of the tour, *Urban Water Smartness in Lisbon and Regional Water Management in Alentejo*, bachelor students gained in-depth knowledge of innovative water technologies, sustainable water management practices, and applied research in both urban and regional contexts. Through site visits, expert-led sessions, workshops, and practical water technology challenges, students explored advanced solutions and ongoing projects related to water treatment, water reuse, and resource management.

The Tours also fostered meaningful interaction with researchers, technicians, and academics, as well as representatives from leading organizations in the water sector. These interactions provided valuable opportunities for professional networking, potential internships, research collaborations, and future career development.

The Water4All 360° Water Experience Tours directly contribute to capacity building, knowledge transfer and the engagement of early career professionals, thereby advancing the following Water4All operational and specific objectives:

1. *Operational Objective 6: Foster capacity development and life-long training of water policy-makers, stakeholders, and civil society*
   The tours engaged 106 bachelor students from 20 EU and 1 non-EU nationalities, promoting cross-cultural learning and fostering the development of future water professionals.
   Participants reported renewed motivation, deeper interest in water research, and clearer career plans, with over half considering a Master's degree and a quarter aspiring to a PhD. These outcomes highlight the value of investing in early-stage talent development and building long-term engagement in the water sector.

2. *Operational Objective 5: Enhance talent development of water R&I professionals*
   Through workshops, lab sessions, and company visits, students gained hands-on experience with real-world water challenges, research approaches, and innovative solutions. Interacting with researchers and industry professionals inspired students and fostered interest in future careers in the water sector.

3. *Specific Objective 4: Increase citizens' awareness and engagement for inclusive water governance*
   106 Bachelor students participated in tours that included a minimum of 4 activities: workshops on 3 different water-related challenges, 4 campus and facility tours, 3 living lab visits, 3 laboratory experiences (covering water treatment, hydrology measurements, and exposure to different water technology projects), and visits to 4 companies in the water sector. The students were exposed to these activities, enhancing their awareness of water issues and the societal relevance of water research.

In conclusion, the initiative represents a successful model for advancing Water4All's educational and engagement priorities under Horizon Europe, while fostering the next generation of water professionals and civil society. This success may also inspire future editions of the programme across Europe.

Appendix 1: Full programme of the 1st Edition of Water4All 360° Water Experience Tour – the Netherlands

Monday 17 March

19:00hrs **Welcome dinner at Lazy Lemon, Ruiterskwartier 135a, Leeuwarden**

We arranged a 'welcome dinner' to get to know each other; **don't forget to bring your gift with you (for gift exchange)!**

It takes a 10 minutes' walk from the hostel to the restaurant.

Tuesday 18 March

09:30hrs	Welcome at Wetsus, Oostergoweg 9, 8911 MA LEEUWARDEN
10:00hrs	Wetsus introduction
10:45hrs	Kick-off 360° Water Experience
12:00hrs	Labtour/break
12:25hrs	Lunch
13:25hrs	Presentations or meet the experts
14:10hrs	Work on 360° Water Experience challenge (room 2.02 and 3.02)
17:00hrs	Wrap up moment

Wednesday 19 March

08.00hrs	Travel to NieuWater
09.30hrs	Excursion NieuWater
12.00hrs	Travel to Wetsus
13:30hrs	Lunch
13:30hrs	Work on 360° Water Experience challenge (room 1.02 and 3.02)
17.00hrs	Wrap up moment
18:00hrs	Drink and Petanque at "Boel"

Thursday 20 March

09:00hrs	Water tech city tour
12:00hrs	Lunch at Proeflokaal Wouters
13.00hrs	Back to Wetsus
13:30hrs	Work on 360° Water Experience challenge (room 2.02 and 3.02)
15:45hrs	Poster and pitches
17:00hrs	Award + participations certificates
17.45hrs	Drinks & bites (end of the program)

Friday 21 March

Flight back

Appendix 2: The Water Challenge _ Recycling water, recycling plastic: towards a circular future

By KM Smiech, Wetsus

Introduction
Welcome to the **360° Water Challenge**, hosted by Wetsus in collaboration with regional stakeholders. In this challenge, **your creativity and problem-solving skills** will be put to the test as you tackle a critical issue: **how can plastic recycling companies improve water management while reducing pollution?**

The pressure on freshwater resources is growing, and at the same time, regulations are tightening to limit emissions of pollutants such as **microplastics**. The plastic recycling industry is at a turning point—it must **find innovative ways to close water cycles**, reduce environmental impact, and ensure long-term sustainability.

This challenge is your chance to engage with a **real-world problem** and contribute to solutions that **make a difference**. By combining your **expertise, creativity, and teamwork**, you will help shape the future of water management in plastic recycling and pave the way for a cleaner, more sustainable industry.

Problem Description
For decades, plastic was seen as a cheap, convenient material we could use without consequence. But today, we're facing the reality of its impact—micro- and macroplastics have been found everywhere: in our rivers and oceans, in the air we breathe, the food we eat, and even inside our bodies.

In response, governments worldwide are tightening regulations to control plastic pollution. The European Union, for example, now requires plastic bottles to contain at least 25% recycled plastic by 2025 and 30% by 2030. New rules also push for smarter packaging design—clearer labeling, attached lids to reduce litter, and an ambitious goal to increase overall plastic recycling rates from 25% to 55% by 2030.

This shift is forcing producers and recyclers to rethink how they handle plastic waste. While progress is being made, one major challenge remains: **what happens to the water used in recycling?**

Every plastic recycling plant relies on water to wash away contaminants—removing organic matter, chemicals, inks, and plastic particles. The result? Highly polluted wastewater that is often only partially treated before being discharged to municipal wastewater treatment plants. Many recyclers use Dissolved Air Flotation (DAF) to remove solids, neutralize pH, and capture some microplastics. But as environmental regulations tighten, treatment costs are rising. Worse still, most municipal plants **aren't designed to remove microplastics**, meaning these tiny pollutants still end up in surface waters.

We need to get ahead of the problem. Instead of waiting for stricter laws to force action, we must **find innovative ways to close the water cycle in plastic recycling**—reducing both microplastic emissions and freshwater consumption. This is where you come in. Your challenge?

Design solutions that make plastic recycling cleaner, more efficient, and more sustainable.

Your Challenge

How can we improve water circulation in a **plastic recycling plant**, minimize **microplastic and nutrient emissions**, and reduce **freshwater consumption**?

We want you to **focus** on **polypropylene recyclers**, as their processes generate some of the most challenging wastewater streams, making treatment and reuse particularly difficult.

To tackle this challenge, you can consider the following questions:

- **Understanding the problem**
  - What is the typical composition and volume of wastewater produced by a polypropylene recycling plant?
  - What current water treatment practices do these plants use, and what challenges do they face?
- **Exploring solutions**
  - What wastewater treatment technologies—both established and emerging—can effectively remove these contaminants? What are their strengths and limitations?
  - If you were to design a wastewater treatment system for a polypropylene recycling plant, what would it look like?

Use your **creativity, research skills, and technical knowledge** to propose innovative solutions that make plastic recycling cleaner and more sustainable!

Challenge Format & Expectations

You will work in **groups of five** over **three afternoons** to develop **innovative solutions** that help answer the main research question. The scope of your project is up to you—you can focus on one or more of the sub-questions provided or define your own research angle. This will shape the topic of your group work and serve as the **title of your poster and pitch**.

At the end of the challenge, each team will have **5 minutes** to pitch their ideas or designs to a **jury of experts** from the field of **water technology**. Your pitch will be supported by digital visuals to communicate your key findings and insights.

This challenge is all about **interdisciplinary thinking and creative problem-solving**, emphasizing **practical, actionable solutions**. We can't wait to see your ideas take shape and the **positive impact they could have beyond this week's 360° Water Experience!**

ANNEX 1:
2ND EDITION OF WATER4ALL 360° WATER EXPERIENCE TOUR – CZECH REPUBLIC

This Annex focuses on the second edition of the Water4All 360° Water Experience Tour, which took place in **Brno, the Czech Republic, and was organised by CREA from 25–29 August 2025**. The report outlines the open application process, participant selection, participant profiles, tour activities, and the feedback collected from participants.

A1.1 Open application

The application was due by April 30th 2025, and by the deadline, a total of 26 applications were received from bachelor students representing 7 European countries: Czechia, Estonia, Italy, Poland, Portugal, Spain and Ukraine. This broad geographic distribution demonstrates strong interest of the generation Z from across the European Union and associated countries.

A1.2 Selection process

Out of the 26 applications received, 2 declined later. From the rest of the 24 students, all were complying with the application requirements and they were selected to participate in the Tour. To overcome the challenging situation in Ukraine, to help Ukrainian students to be able to participate and to inform participants from other countries about the damages of Ukrainian water sector, CREA decided and got approval from the task coordinators to bring one academic from Ukraine as a lecturer – speaker.

A1.3 Profile of the participants

Of the 24 student participants and an academic selected for the 360° Water Experience Tour, 48% were male and 52% were female. This gender distribution reflects an equal representation of women in Science, Technology, Engineering, and Mathematics or STEM-related fields among the applicants, which aligns with broader EU goals for promoting gender balance in research and innovation. The country of origin of the selected participants is detailed in **Table A1.1.**

Table A1.1*. 2nd edition 360° Water Experience Tour numbers of participants and represented universities.*

Number of / Country	Participants by				Represented universities
	Nationality	University country	Female gender (F)	Male gender (M)	
Czech Republic	3	3	2	1	1
Estonia	1	1	1	-	1
Poland	1	1	-	1	1
Portugal	5	5	5	-	1
Spain	3	3	2	1	1
Ukraine	12	12	3	9	1
Total	6 countries	6 countries	13 F	12 M	6 universities

– Not applicable, *

A1.4 Activities of Water4All 360° Water Experience Tour

The tour consisted of five main components: the workshop, the facility tour, the laboratory experience, a company visit and an additional seminar on Post-war Water Sector Reconstruction in Ukraine. The detailed programme of the tour is outlined in Appendix A.1 of Annex 1.

Introduction and initial lectures: Water Cluster & Living Labs and a Living lab experience: Water in the Forest
In the initial part of the 360° Water Experience Tour, the participants were introduced to the Water4All Partnership, and especially to the Task C.3.2, and attended expert presentations on current water challenges from the cluster CREA and MENDELU University. The students were inspired by a wide range of scientific projects , from digitalization in water sector to innovative and nature-based solutions for keeping water in the countryside. The participants received a crash course on how water works in the landscape. Specifically, they learned how the water cycle works in the forest and were encouraged to focus more closely on the effects of climate change (**Figure A1.1**).

(a) *(b)*

***Figure A1.1**. Welcoming presentations and videos by: (a) Water4All Partnership and (b) MENDELU.*

The Water in the Forest living lab was explained by its founder and academic leader Prof. Pert Kupec. He also outlined the main ideas of the living lab that is participating in the Water4All partnership Pillar D and the main water challenges it is helping to solve.

In the afternoon, the students experienced the real living reality of the water in the forest. The participants visited the Water in the Forest living lab as part of the Mendel university in Brno. These labs focus on the water in the forest, the research in this field and practical usage and data collecting.

The students could see, touch and measure many instruments and experimental processes that are installed in the woods near Brno and the protected area of Moravian Karst that is owned and operated by Mendel University (**Figure A1.2**).

They visited the forest area around Brno where a hydrological station monitors streamflow using water level and height sensors. During the fieldtrip, they also observed a small reservoir used to manage water levels similar to a dam, and other innovative water retention technologies that help regulate flow and reduce runoff.

On that day the students received the data, regarding the year-round average daily temperature, precipitation and flow. To gain a better understanding of the numbers, one group investigated local news outlets for relevant events that occurred around the time of most movement inside the data.

(a) (b)

***Figure A1.2**. The Water in the Forest living lab: (a) One of the instruments and (b) the control system.*

Laboratory experience: Hydrological Laboratory of Brno University of Technology

On the 27th of August, the students visited the Faculty of Civil Engineering of Brno University of Technology (FCE VUT) in Brno, where they explored several hydraulic laboratories and a meteorological station. During the visit, they were introduced to different experimental setups and instrumentation used in water engineering studies. They also carried out practical exercises, which included taking measurements and performing calculations with a propeller device to better understand flow dynamics (**Figure A1.3**).

(a) (b)

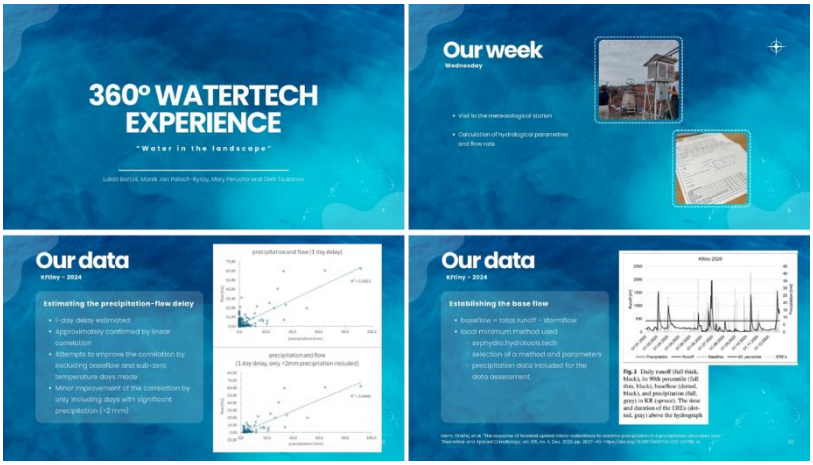
***Figure A1.3.** A guided laboratory tour for the participants: (a) Dam model and (b) evaporation measurement*

Workshop on a water challenge: How water interacts with the landscape throughout the seasonal changes and access weather patterns

By examining key hydrometeorological variables, the participants were tasked to identify trends and correlations that help to illustrate the dynamics of the local water cycle. This work contributed to a broader international activity focused on understanding water in the landscape through real-world data.

To foster collaboration and enhance their teamwork skills, students were divided into groups of 3-5 participants and were assigned tasks one week before. More information on the challenge is available in Appendix A.2 of Annex 1.

On the final day of the tour, each group presented their proposed solutions to a panel of experts (**Figure A1.4**).



(a)

(b)

***Figure A1.4**. Water Challenge: (a) Examples of presentation slides of the participants for the project and (b) Final student presentations.*

Company visit in the water sector: Czech Hydrometeorological Institute

Another part of the program was a visit to the Brno branch of the Czech Hydrometeorological Institute (CHMI), the central public institution of the Czech Republic responsible for air quality, hydrology, water quality, climatology, and meteorology. The program included four thematic presentations: The first was on climate change and also included an extensive debate with participants, the second was on floods and their prediction, the third was on weather and weather forecasting, and the last was on the water cycle in small river basins (**Figure A1.5**). Participants were also able to view a small exhibition in the corridors of the CHMI. This experience inspired the young generation to apply their knowledge and skills to tackle water challenges, showing how collaboration between research and industry can drive innovative solutions for a sustainable future.

***Figure A1.5**. A presentation by the expert about water in the landscape*

Meet the water experts - Seminar: Post-war Water Sector Reconstruction in Ukraine

On the last working day of the tour, not only the students but also the academic staff of MENDELU and experts of CREA were given a view of the war damages to water infrastructure in Ukraine and the needs of its reconstruction by Prof. Ievgenii Gerasimov of National University of Water and Environmental Engineering in Rivne. It is a big challenge for water professionals from the country expecting also some help from colleagues across Europe. As every challenge, it brings new opportunities for innovations and interested experts and companies from many countries.

A1.5 Feedback and survey

In addition to discussions with participants during breaks between programs or free time, each group was asked to answer the following questions as part of their project: what they did, what they saw, and what they learned.

A1.6 Dissemination after the tour

A newsletter was prepared to highlight the 2nd 360° Water Experience Tour and capture the atmosphere of the event. The article provides an overview of the tour's objectives, activities, and participant experiences.

Appendix A.1: Full programme of the 2nd Edition of Water4All 360° Water Experience Tour – Czech Republic

Monday 25 August

Arrival of the participants

17:30	Meeting and welcome
18:00	Dinner
Evening	Personal time

Tuesday 26 August

8:00	Breakfast
9:00	Transfer to MENDELU
10:00	Opening and Program overview
10:45	Water4All, CREA and MENDELU presentations
12:00	Work assignment and living lab intro
12:45	Lunch break
13:45	Transfer to the living lab
16:30	Living lab session
17:45	Return to the academy
18:00	Dinner

Wednesday 27 August

8:30	Breakfast
9:00	Transfer to FCE VUT
12:00	Hydraulic lab intro + demos
13:30	Lunch + transfer to MENDELU
17:00	Project work/consultations
18:00	Dinner

Thursday 28 August

8:30	Breakfast + lunch-pack pick-up
9:00	Transfer to CHMI
11:00	CHMI presentation + excursion
13:00	Lunch + return to MENDELU
14:30	Post-war Water Sector Reconstruction in Ukraine *by. Prof.* Gerasimov
16:30	Student project presentations
17:00	Closing of the seminar & summer school
18:00	Dinner

Friday 29 August

8:30	Breakfast

Individual Participant departures

Appendix A.2: The Water Challenge_ How water interacts with the landscape throughout the seasonal changes and access weather patterns

By examining key hydrometeorological variables, the participants were tasked to identify trends and correlations that help to illustrate the dynamics of the local water cycle. This work contributes to a broader international activity focused on understanding water in the landscape through real-world data. Participants received assignments with measured climate data and flow data from MENDELU Living Lab in Křtiny. The data was grouped into thematic units: year-round data for rough analysis, data from hydrological extremes, data from dry episodes, and data with intraday trends of measured variables. Specifically, they learned how the water cycle works in the forest and were encouraged to focus more closely on the effects of climate change. From the moment they were assigned their task, they had a whole week to work on it, and other parts of the program were designed to help them - to provide them with the necessary knowledge or develop the knowledge they had already acquired - through expert presentations, lab visits and field excursions.

To foster collaboration and enhance their teamwork skills, students were divided into groups of 3-5 participants. On the final day of the tour, each group presented their proposed solutions to a panel of experts. Part of the project was also evaluating the past week by describing what they did, what they saw, and what they learned.

Project assignment
Project – first part

- form international groups of four people
- each group must have electronic device with Excel and PowerPoint
- take over the data

Project – second part

- describe what you did, what you saw and what you learned
- use photos and pictures

Project – third part

- processing of received data
- graphs and commentary
- presentation

Your task
Examine the data you have collected, process and analyze it as needed, and then use all your knowledge to describe the events that are observable from the data. Do not be afraid of silly ideas; even a bad premise can lead to the good result. Use your creativity, research skills, and technical knowledge to propose what others might have overlooked! How you process the data or what way you choose to think about it is entirely up to you. You can address the problem as a whole, but you can also focus on just a small part that interests you the most. Just tell us something about that in the end.

ANNEX 2:
3RD EDITION WATER4ALL 360° WATER EXPERIENCE TOUR – PORTUGAL

This Annex focuses on the third edition of the Water4All 360° Water Experience Tour, which took place in **Lisbon and Évora, Portugal, and was co-organised by LNEC and UÉvora from 1–5 September 2025.** The report outlines the open application process, participant selection, participant profiles, tour activities, and the feedback collected from participants.

A2.1 Open application

The application period was open from 15 May to 20 June 2025, and by the deadline, a total of 57 applications were received from bachelor's students representing 27 universities across 10 European countries (Czech Republic, Italy, Latvia, the Netherlands, Norway, Poland, Portugal, Spain, and Switzerland), one university from India and two from Brazil (non-eligible candidates). This broad geographic distribution demonstrates the strong interest of Generation Z from across the European Union, associated countries, and beyond.

A2.2 Selection process

Out of the 57 applications received a selection process was carried out based on the applicants' submitted documents. Among the applications received, 42 fulfilled the eligibility criteria, and 35 candidates were subsequently selected for the 360° tour.

The selection committee consisted of four members, two researchers from LNEC and two researchers from university of Évora, with expertise in water quality, water treatment, and water management. Each candidate was evaluated and ranked according to the defined selection criteria.

Of the 35 candidates selected for the 360° Water Experience Tour, three withdrew prior to the event. One young European water professional was invited by LNEC to join the group of 32 selected participants, as an observer.

A2.3 Profile of the participants

A total of 33 participants (including a young professional guest) from diverse scientific and geographical backgrounds took part in the event. **Table A2.1** presents the distribution of the participants by nationality, country where they are studying, gender and the number of represented universities**.**

59% of the participants were female and 44% male. This gender distribution indicates a strong representation of women in Science, Technology, Engineering, and related fields, consistent with the EU's commitment to promoting gender balance in research and innovation. 17 nationalities were represented as well as 19 universities from 9 European countries. The participant heterogeneity fostered strong interdisciplinary and intercultural exchange.

***Table A2.1**. 3rd edition 360° Water Experience Tour numbers of participants and represented universities.*

Number of / Country	participants by nationality	university country	female gender (F)	male gender (M)	represented universities
Croatia	1	–	–	–	–
Czech Republic	4	5	2	3	2
Denmark	1	–	–	–	–
Greece	1	–	–	–	–
Indonesia	1	–	–	–	–
Italy	1	5	4	1	3
Latvia	1	1	–	1	1
Netherlands	1	2	2	–	1
Norway	5	5	4	1	4
Poland	1	1	–	1	1
Portugal	6	6	3	3	5
Rwanda	1	–	–	–	–
Slovakia	1	–	–	–	–
Spain	5	5	2	3	1
Switzerland	1	2	1	1	1
Uganda	1	–	–	–	–
Zimbabwe	1	–	–	–	–
Totals	17 countries	9 countries	19 F	14 M	19 universities

– not applicable

A2.4 Activities of Water4All 360° Water Experience Tour

The Water4All 360° Water Experience Tour – Portugal edition was organised to provide participants with an immersive understanding of urban and regional water management in Portugal, focusing on smart water solutions in Lisbon and integrated resource management in Alentejo. The programme combined technical visits, lectures, laboratory sessions, and networking activities, involving a research institution, a university, a municipality, and several water operators. The detailed programme of the tour is outlined in Appendix B of Annex 2.

Participating bachelor students gained insight into innovative water technologies, sustainable management practices, and applied research across different contexts. Through site visits, expert sessions, and practical challenges, they explored advanced solutions for water treatment, reuse, and resource management.

The tour also promoted interaction with researchers, academics, and professionals from leading organisations in the water sector, creating opportunities for networking, internships, and future collaboration in line with the Water4All Partnership's objectives of capacity building and knowledge exchange.

Campus or facility tour and visit to a living lab

The 360° Water Experience Tour was initiated on **1 September** at the National Laboratory for Civil Engineering (**LNEC**) in Lisbon. The event was formally opened by Dr. Helena Alegre, Head of the Hydraulics and Environment Department at LNEC, who extended a welcome to all participants.

The opening session included an overview of the European Partnership Water4All, highlighting its overarching objective of strengthening water security and advancing sustainable water management through enhanced cooperation between the scientific community, policymakers, and industry stakeholders (**Figure A2.1**). The vision and objectives of the organisers for the Water4All – 360º Water Experience Tour in Portugal were also

presented to the participants. In addition, a presentation on LNEC's institutional framework and principal areas of activity was delivered, underscoring its pivotal role in research, development, and innovation within the water and environmental sectors. The research domains of the Hydraulics and Environment Department were introduced, with particular attention given to activities related to freshwater systems and urban water management.

Figure A2.1. *Welcoming to LNEC and presenting the Water4All Partnership.*

Maria João Rosa, Head of the Urban Water Unit, introduced the Unit's strategic approach and research and innovation areas, with particular emphasis on water treatment and water reuse. The Water-Oriented Living Labs (WOLLs) concept within the Water4All Partnership was presented as an exemplary collaborative environment where research and innovation are tested in real-world settings to develop practical and sustainable water solutions. The Lisbon WOLL was briefly highlighted as one such case (**Figure A2.2**).

Figure A2.2. *Presenting the Lisbon Water-Oriented Living Labs (WOLLs) within Water4All.*

Subsequently, Lourenço Mendes and Marta Rodrigues delivered a presentation on LNEC's water research infrastructures in Hydraulic Engineering, demonstrating advanced modelling capabilities for dams, channels, and coastal structures through both physical and numerical approaches. This presentation served as an introduction to the following technical visits.

Participants visited the Water Resources and Hydraulic Structures Unit, guided by Lourenço Mendes and Prateek Singh, and the Ports and Maritime Structures Unit, led by Rute Lemos and Rui Reis (**Figure A2.3**)**.** These visits provided direct exposure to large-scale physical models and illustrated their application in research and technical studies.

Figure A2.3. *Guide visits to LNEC's Water research infrastructures.*

After lunch at the LNEC canteen, participants attended a series of lectures on water and wastewater treatment, water reuse, and the management of urban wastewater impacts on receiving waters (**Figure A2.4**).

Drawing on LNEC's research and innovation projects, Maria João Rosa presented an integrated overview of (waste)water treatment and reuse, addressing emerging challenges such as Contaminants of Emerging Concern (CECs)—including pharmaceuticals, microplastics, PFAS, and personal care products—as well as the need for climate resilience, circular economy integration, and the use of alternative water sources such as reuse and desalination. The lecture also emphasised energy efficiency, decarbonisation, and compliance with the revised EU Drinking Water Directive (2020) and the Urban Wastewater Treatment Directive (2024).

Further, LNEC's R&D initiatives were presented, including projects on CEC control, Direct Potable Reuse (DPR) for craft beer production, risk management in reclaimed water, and a Smart Water Allocation Tool Set for digital management of reclaimed water distribution networks.

Marta Rodrigues complemented this with a presentation on the application of numerical modelling to assess and manage the impacts of urban wastewater discharges on receiving waters, illustrated by examples from ongoing LNEC projects.

Figure A2.4. *Lessons on (waste)water treatment, water reuse and managing the impacts of urban wastewater discharges on receiving waters.*

The day concluded with an introduction to the Water Quality and Treatment Laboratory (UQTA), where the laboratory activities were outlined. These sessions provided participants with a comprehensive overview of LNEC's research scope, highlighting the importance of strategic planning, advanced technologies, and academic collaboration—supported by PhD and MSc opportunities at LNEC and within the Water4All Partnership—to promote sustainable and resilient water systems.

On **2 September** morning, the focus shifted to **urban water reuse and discharge**. Participants visited the FA Beirolas (**Figure A2.5**), an Urban Wastewater Treatment Facility operated by Águas do Tejo Atlântico (AdTA), where they were welcomed by Marcos Baptista (AdTA) and Pedro Teixeira (Lisbon Municipality).

Figure A2.5. *Visit to FA Beirolas, presentation of the Lisbon WOLL, and guided visit to Parque Tejo–Trancão.*

Pedro Teixeira introduced the Lisbon Water-Oriented Living Lab (WOLL), one of the 21 WOLLs featured in the Water4All Atlas, outlining the municipality's integrated green–blue infrastructure strategy for addressing climate change challenges such as droughts and floods while maintaining a high quality of life in a growing

urban context. Ongoing municipal initiatives were presented, including actions to improve water efficiency, reduce the water–energy–phosphorus footprint, expand green spaces, promote resource-efficient housing, and advance safe urban water reuse. Other strategic priorities were also mentioned, including data-driven policymaking, investment in innovation, and the creation of collaborative environments connecting end users and practitioners, in line with the principles of "Value in Water" and "Value of Water."

Company visit in the water sector

Following this, Marcos Baptista presented an overview of AdTA company and the FA Beirolas facility's role in water reclamation and reuse. Participants took part in a guided visit of the treatment plant, observing operational processes and reuse infrastructure.

The group then visited Parque Tejo–Trancão, where they examined the irrigation of green spaces using reclaimed water produced by FA Beirolas, followed by a visit to the treated effluent discharge point in the Tagus Estuary.

Laboratory experience

After returning to LNEC for lunch, the afternoon was dedicated to a hands-on laboratory session at the UQTA facilities. Working in groups, students conducted laboratory tests to explore and understand the physical and chemical processes involved in water treatment—such as coagulation, flocculation, sedimentation, filtration, adsorption, and membrane processes – testing the Water4All-Educational Toolkits created by LNEC (**Figure A2.6**).

***Figure A2.6**. Hands-on session at UQTA facility - laboratory experiments to explore and understand water treatment processes.*

The session concluded with group presentations and discussions of the lab experimental results, consolidating theoretical knowledge through practice and enhancing teamwork and problem-solving skills (**Figure A2.7**).

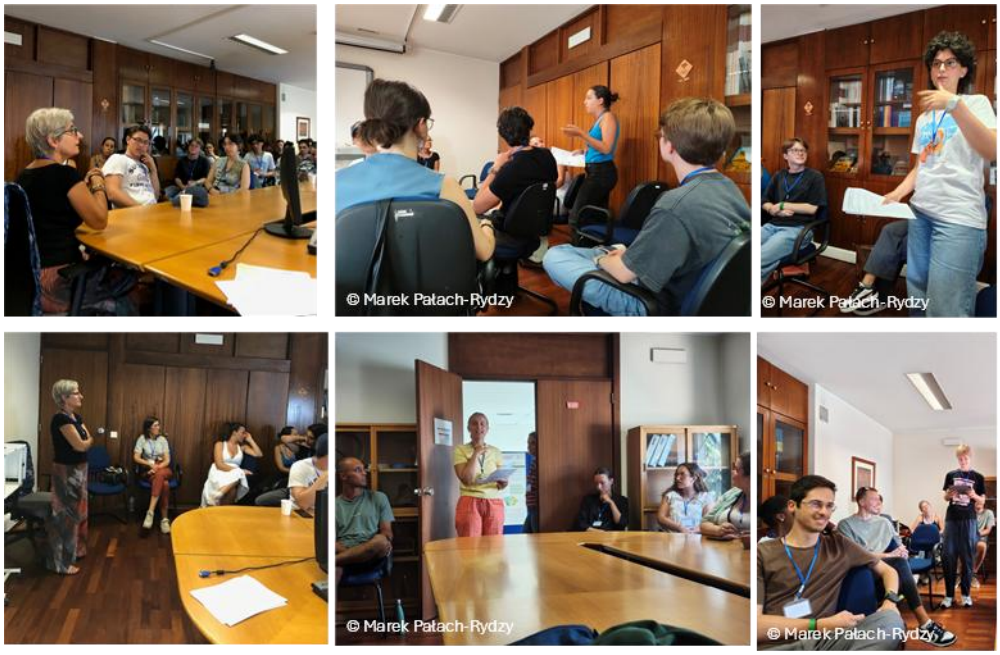


Figure A2.7. *Group presentations and discussions of the laboratory experimental results.*

The day closed with a wrap-up session led by Helena Alegre, Maria João Rosa, Marta Rodrigues, and Elsa Mesquita, summarising the key outcomes and lessons learned and marking the conclusion of the Lisbon component of the tour (**Figure A2.8**).

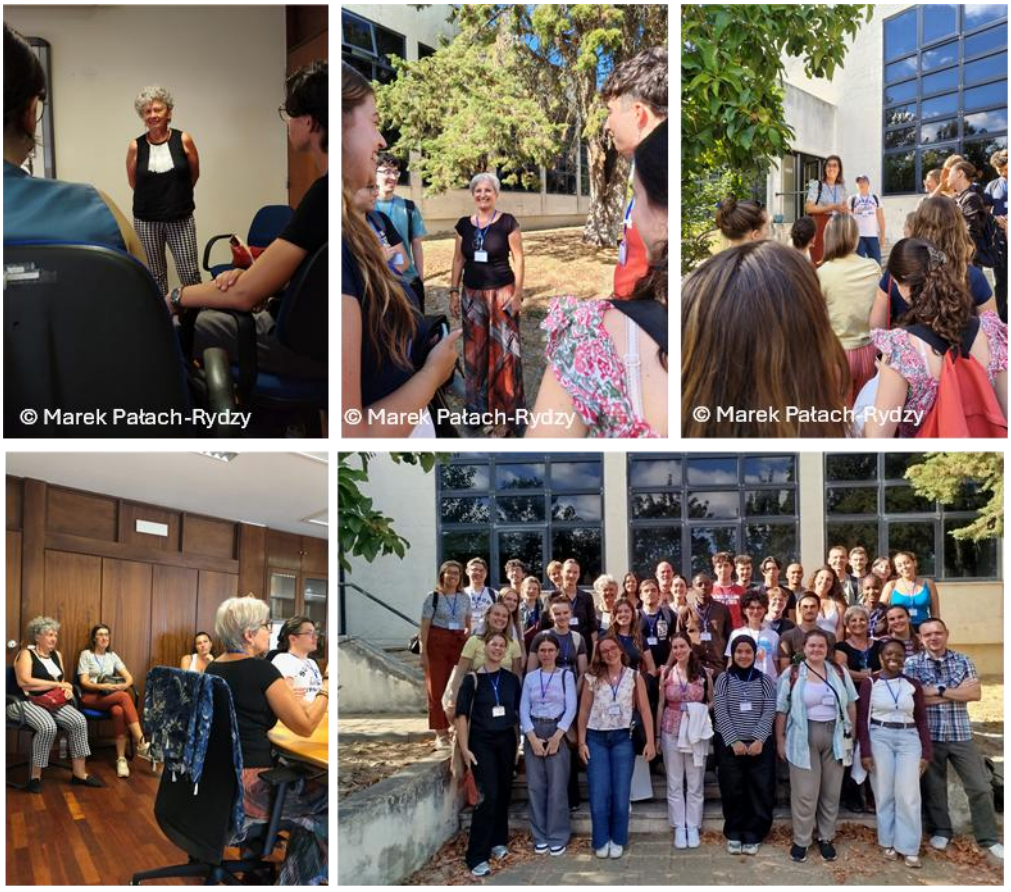


Figure A2.8. *Wrap-up session of the Lisbon component of the 360° Water Experience Tour.*

Workshop on a water challenge:

From **3 to 5 September**, the programme continued in Évora, hosted by the **University of Évora** (UÉvora) and coordinated by Ana Mendes (**Figure A2.9**). Participants attended the Scientific Conference "People and Nature: Research and Sustainability" and the Climate Change, Cultural and Natural Heritage Workshop, which promoted interdisciplinary dialogue on sustainable water and heritage management.

Field visits included the Alqueva Dam, serving as a case study of large-scale water management and regional development. Participants worked in groups to explore challenges such as climate-resilient water management, water safety, ecosystem protection, governance, and reuse, developing and presenting practical solutions during pitch sessions.

Participation in the Water4All session provided further insight into European research frameworks supporting Sustainable Development Goal 6 (Clean Water and Sanitation), while Round Table IV – Youth for Sustainability and Human Rights underscored the importance of youth engagement in advancing sustainability, climate resilience, and human rights within the global water agenda.

Figure A2.9. *360° Water experience Tour - Regional Water Management in Alentejo.*

The programme concluded on **6 September**, with participants returning to **Lisbon** and to their respective cities in Europe.

A2.5 Feedback and survey

A post-event survey was conducted following the Water4All 360° Water Experience Tour, held in Lisbon and Évora, Portugal, from 1–5 September 2025, with the purpose of assessing participants' satisfaction, learning outcomes, and perceptions of the program's organizational quality and relevance to their academic and professional development. A total of 28 valid responses were received and analyzed.

The quantitative data revealed consistently positive feedback across all indicators. The clarity of information provided before the event received 85.7% positive ratings, and 89.3% of participants expressed satisfaction with the travel and logistical arrangements. In terms of learning outcomes, 42.9% of respondents reported prior familiarity with water challenges, and 71.4% stated that their knowledge of these challenges had increased through participation in the program. The relevance of the Water4All Partnership was particularly appreciated (92.9% positive), while 100% of respondents indicated that they would recommend the program to others. The hands-on activities were also highly valued (92.6% positive), confirming their role in strengthening the experiential learning dimension of the tour.

Overall, these results confirm that the Water4All 360° Tour achieved its immediate objectives of learning, engagement, and knowledge exchange. The very high recommendation rate and strong perceived relevance demonstrate that the program met participant expectations and contributed meaningfully to their academic and professional development.

Qualitative feedback reinforced these findings, highlighting three main strengths: the quality of learning and practical exposure, the interdisciplinary networking opportunities, and the high level of organizational and facilitator support. Participants particularly valued the technical visits, laboratory demonstrations, and sessions on wastewater reuse. Facilitators were frequently commended for their professionalism, clarity, and care. One participant wrote: "This week has been an invaluable experience — both for the knowledge gained and the friendships made." Another commented: "The first part in Lisbon was amazing, intriguing, and practically educational."

Many participants also emphasized the welcoming and inclusive atmosphere created by the organizers: "Even when I arrived late, I was welcomed warmly," noted one respondent, while another highlighted that "everyone encouraged dialogue and questions… the coffee breaks were a great opportunity to connect with others." Several comments praised the openness and enthusiasm of the LNEC team: "The LNEC people were always open to discussion and very friendly." Others reflected on the broader value of collaboration across disciplines and cultures: "It's important to unite young professionals from different sides of the water sector — this event does exactly that."

Participants also recognized the cultural and social dimensions of the experience, with remarks such as: "It was a lot of fun exploring Portuguese culture, making friends, learning new things, and seeing other perspectives within the water community." Another reflection summarizes the event's impact aptly: "This week has been an invaluable experience — both for the knowledge gained and the mind-broadening experience of meeting people from so many countries."

The Water4All 360° Water Experience Tour contributed directly to capacity building, knowledge transfer, and early-career engagement, advancing the Water4All Partnership's strategic objectives—particularly Objective 2 (knowledge exchange and training), Objective 3 (multi-actor collaboration), and Objective 4 (awareness raising on European water challenges). Measured learning gains (71% positive) and high perceived relevance

(93%) demonstrate a clear and quantifiable contribution to education and skills development in sustainable water management at the European level.

In conclusion, the Water4All 360° Water Experience Tour in Portugal effectively fulfilled its goals of practical learning, cross-sectoral networking, and knowledge exchange. The strong positive feedback, both quantitative and qualitative, confirms its impact on participants' skills, understanding, and motivation to engage in sustainable water research and practice. The initiative thus represents a successful model for advancing Water4All's educational and engagement priorities under Horizon Europe, while fostering the next generation of professionals dedicated to resilient and sustainable water systems in Europe.

A2.6 Dissemination after the tour

Following the Water4All 360° Water Experience Tour, news articles about the event were published on the institutional websites of two LNEC and AdTA

- Águas do Tejo Atlântico – *Water4All 360° Water Experience Tour passou pela Tejo Atlântico*
- LNEC – *Portugal acolheu a Water4All 360° Water Experience Tour*

Appendix B: Full programme of the 3rd Edition Water4All 360° Water Experience Tour – Portugal

Program

Water4All 360° Water Experience Tour

Urban water smartness in Lisbon & Regional water management in Alentejo

September 1st - 5th, 2025 | Portugal, Lisbon & Évora

September 1st **Water Experience at LNEC – National Laboratory for Civil Engineering**

09:00 Congress Center - Room 2

Welcome to LNEC Kick-off 360º Water Experience Tour – Portugal edition
Helena Alegre, Maria Joao Rosa (LNEC)

Introduction to visiting LNEC's water Research Infrastructures
Lourenço Mendes, Marta Rodrigues (LNEC)

Housekeeping 360 Water Experience Tour details
Elsa Mesquita (LNEC)

10:30 Coffee break

11:00 Hydraulics and Environmental Department

Visits to water Research Infrastructures at

- Water Resources and Hydraulic Structures Unit
  Lourenço Mendes, João Fernandes, Prateek Singh (LNEC)
- Ports and Maritime Structures Unit
  Rute Lemos (LNEC)

12:00 Canteen Lunch break

13:45 Congress Centre - Room 2

Lecture on water and wastewater treatment and water reuse. Presentation of selected results from LNEC's R&I projects
Maria João Rosa, Elsa Mesquita

Managing the impacts of urban wastewater discharges on receiving waters. Presentation of selected results from LNEC's R&I projects
Marta Rodrigues

16:00 Coffee break

16:30 Congress Centre - Room 2

Water Quality and Treatment Laboratory (UQTA) presentation
Elsa Mesquita (LNEC)

17:30 Free time

September 2nd **Water Experience in urban water reuse**

08:50 - 09:15 Gare do Oriente station Meeting point for travelling to FA Beirolas

09:30 FA Beirolas

Lisbon WoLL presentation
Pedro Teixeira (CMLisboa)

FA Beirolas presentation
Marcos Baptista (AdTA)

Site visit to FA Beirolas
WWTP Technician (AdTA)

Parque Tejo -Trancão

Visit to a green park irrigated with reclaimed produced by FA Beirolas
Pedro Teixeira (CMLisboa), Marcos Baptista (AdTA)

Site visit to the FA Beirolas treated effluent discharge location in the Tagus Estuary
Marta Rodrigues (LNEC), Marcos Baptista (AdTA)

12:30 Return to LNEC

13:30 Canteen of LNEC Lunch break

14:45 Urban Water Unit – Water treatment and quality laboratory (UQTA)

Lab Experience at UQTA - Demonstration and hands-on lab tests of water treatment processes – group work
Elsa Mesquita, Daniela Perpétua, Vítor Napier, Joana Soares (LNEC)

16:30 Urban Water Unit – meeting room

Pitch session and discussion of lab tests results
Maria João Rosa, Elsa Mesquita (LNEC)

17:00 Wrap-up of the 360 Water Experience Tour in Lisbon
Helena Alegre, Maria João Rosa, Marta Rodrigues, Elsa Mesquita (LNEC)

17:30 Free time

September 3rd **Water Experience at UÉvora – University of Évora**

09:00 Travel from Lisbon to Évora

11:30 Évora University - classroom

Welcome to UÉvora - 360º Water Experience Tour challenge details
Ana Mendes (UÉvora)

12:30 Lunch break

14:00 Évora University – auditorium

Participation in the *Climate Change, Cultural and Natural Heritage* workshop

18:00 Free time

September 4th **Water Experience in water management**

09:00 Alqueva dam

Study visits to Alqueva dam operator – case study
Ana Mendes (UÉvora),

13:00 Lunch break

16:00 Évora University - auditorium

Participation in the *Research networking and contribution to sustainable development goal 6 – Clean Water and Sanitation – Water4All* session

18:00 Free time

September 5th **Water Experience in water management**

09:00 Évora University - classroom

Group work time
Ana Mendes (UÉvora)

11:30 Évora University - classroom

Pitch session
Ana Mendes (UÉvora)

12:30 Lunch break

14:00 Free time for city tour

16:30 Évora University - auditorium

Participation in the *Round Table IV Youth for Sustainability and Human Rights*

18:00 Free time

September 6th **Departure**

9:00 Travel from Évora to Lisbon airport

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