Science Communication as a means for societal engagement: a case study for an EU research project on chemical pollution

Chrysoula Papacharalampou (H2O People)

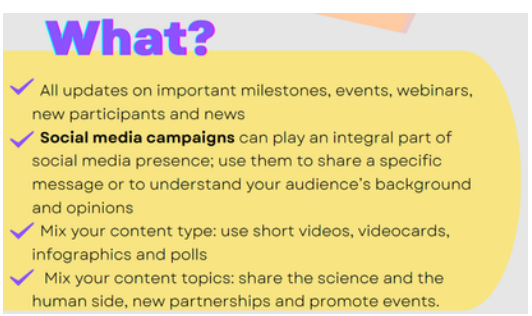
Duration 09 2023 to 11 2023 EJWP 5

Participants:
Victoria Collier - Welsh Water
Marianna Mertzanis - H2O People
Chrysa Efstratiou - HCMR
Sabrine Chamam – ENIG
Henna Sundqvist - VTT

Project Description

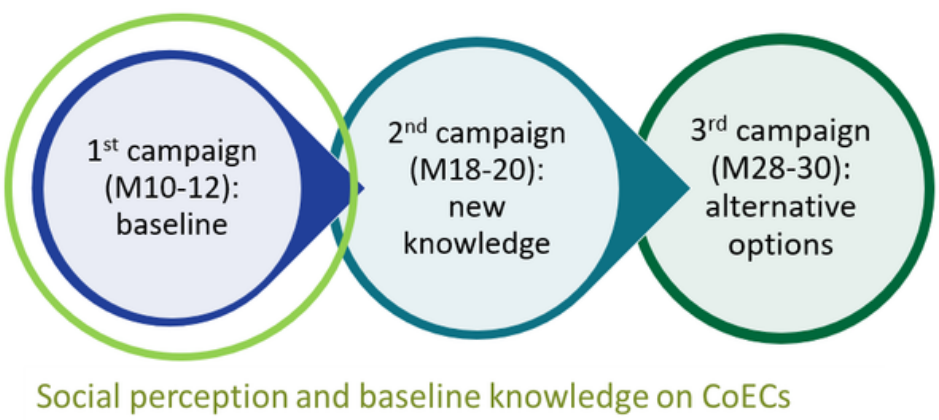
The scope of the project is to address the challenge of sustainable and lasting societal impact deriving from EU-funded research. More specifically, the project has developed a blueprint for influencing shot- and mid-term behaviour through science communication in iMERMAID project.

Assignments and constrains 5 Key questions for Social Media Use in Science Communication



Results

- **Social Media campaing - iMERMAID project**



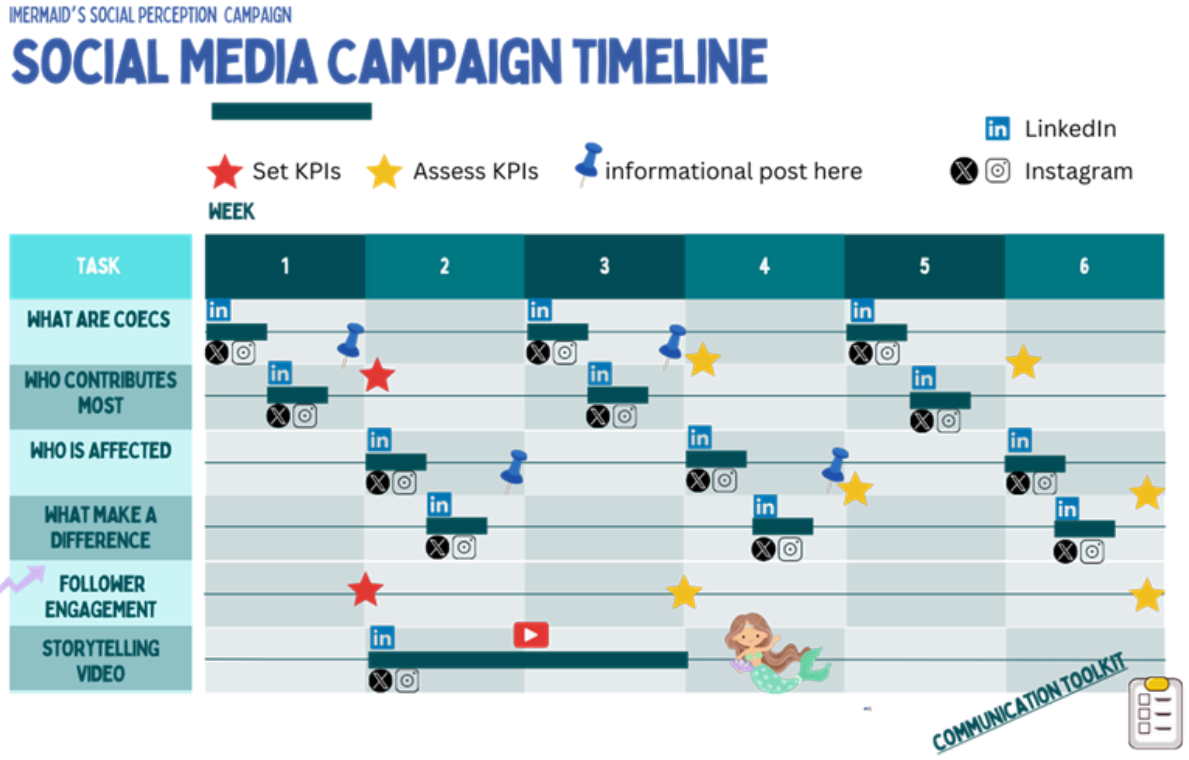
- **Maximize impact through collaboration**

Creation of a Cluster among related projects

- Example of post example

4 KEY Questions:
•What are CoECs?
•Who Contributes (most)?
•Who is affected?
•What can make a difference?

- **Social media campaign Timeline - iMERMAID**



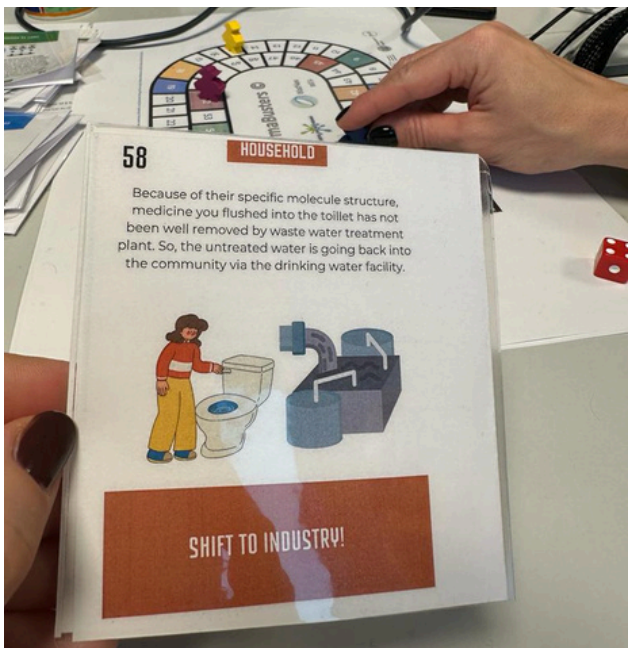
Background study on replacing and minimising the use of Chemicals of emerging concern

Henna Sundqvist (VTT)

Duration 09 2024 to 11 2024 EJWP 5 & 6

Monitoring the lifecycle of pharmaceuticals in the environment

Participants:
Victoria Collier - Welsh Water
Leo Mensel – ECSA
Chrysa Efstratiou - HCMR
Sabrine Chamam – ENIG



Project Description

Chemicals of emerging concern (CEC) are a vast group of versatile chemicals that can be potentially harmful to living organisms. There is an increasing pressure to reduce the usage of these chemicals and their migration into water ways. Replacement of CEC is identified to reduce the negative impacts of these chemicals.
The Horizon Europe iMERMAID project focuses on developing innovative solutions for Mediterranean ecosystem remediation via monitoring and decontamination from chemical pollution. This project aims at integrating, coordinating, and synergizing innovative preventive, monitoring, and remediation solutions. As part of the project, there is a need to study how certain chemicals could be replaced.
EJWP5 group contributed this joint initiative by helping to identify alternatives to contaminants of emerging concern.

Approach

The assignment was a background study on how to replace or /and reduce consumption of following compounds of emerging concern
- PESTICIDES: Carbofuran
- PHARMACEUTICALS: Ibuprofen
- OTHER CHEMICALS: Bisphenol A and Benzotriazole,

which are relevant to iMERMAID project use cases. The aim was to identify how these compounds can be substituted or their consumptions reduced in their main areas of application.

Results

The project produced
1) presentation at CM iMERMAID Espoo, Finland, June 2024
2) Presentation material in ppt-format
3) a concise report synthetizing the findings.
The results were used in iMermaid project

Resources

- Literature research (scientific articles, grey data, like reports etc.)
- Other documents provided by VTT
- Contacts within iMermaid/ H2O people/ VTT/ personal and professional connections
- Stakeholder interviews, e.g., experts in iMERMAID project

Engaging Public Authorities in Innovative Water Monitoring and Remediation Efforts

Ellie Shtereva (F6S)

Duration 05 2024 to 09 2024 EJWP 6

Participants:

Chrysa Efstratiou (HCMR)
Esther Gomez (Socamex)
Veronica Piuri (Softwater)
Victoria Collier (Welsh Water)

Objectives

- Identify Barriers.
- Develop Engagement Strategies.
- Evaluate Success
- Create a list of relevant public authorities for the iMERMAID Open Calls.

Project Description

Water quality is a critical component of public health, environmental sustainability, and economic development.
In recent years, the presence of contaminants of emerging concern (CoEC) in water bodies has garnered increasing attention: pharmaceuticals, personal care products, industrial chemicals, and microplastics.

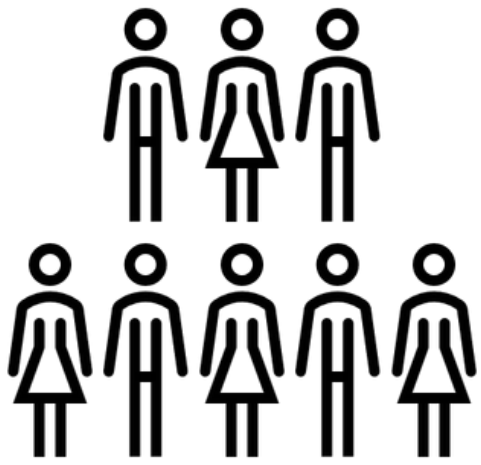
Addressing these challenges requires innovative approaches to water monitoring and remediation, necessitating the active participation of public authorities.
Engaging public authorities is paramount to ensure the successful implementation and sustainability of these initiatives: Public authorities play a crucial role in policymaking, regulation, funding, and the facilitation of stakeholder collaboration, making their involvement indispensable.

This report aims to explore the barriers hindering the engagement of public authorities in innovative water monitoring and remediation efforts and to identify successful channels for attracting their participation.

Approach

Public authorities have a critical role in water management, and there are multiple benefits of their active participation in innovation initiatives, including:

1. Regulation and enforcement of water quality
2. Infrastructure development.
3. Public health assurance
4. Environmental protection
5. In some European countries, management of water cycle is done through public-private partnerships, and this duality will favour the mobilisation of large investments and the implementation of technologies and innovations in water treatment for the removal of CoECs.



By working collaboratively public authorities can directly influence and protect their local environments in improving water quality.

Conclusions

To enhance the effectiveness of grant programs and ensure broader participation, it is recommended to implement a "**Localized Outreach and Tailored Communication**" approach. This strategy involves creating communication materials in local languages, advertising the grant opportunity through locally relevant channels, and providing application guidelines and support documents that are easily understood by the target audience.
Organizing **community workshops**, information sessions, and Q&A forums in the local language will help clarify the grant's purpose, eligibility criteria, and application process, making the program more accessible. Engaging local leaders or past grant recipients to share their experiences and mentor new applicants can further boost participation and understanding within the community.
Establishing **continuous feedback loops** to ensure the cultural relevance of outreach materials, along with providing ongoing communication in the local language, will maintain trust and transparency throughout the application process. This approach is expected to lead to higher quality applications, greater inclusivity, and ultimately, more successful grant outcomes by fostering trust and accessibility among all potential applicants.
To ensure greater participation and alignment of public entities with the objectives of funding calls, it is essential to address the significant barriers they face: Local-level organization, often within insular communities, combined with a lack of experience and training among public administration staff, hinders their ability to meet the technical requirements of funding opportunities. Additionally, the reliance on private subcontractors, who are excluded from applying for these funds, further complicates access to cascade funding.
This project highlights that there is an opportunity to move away from current communication and grant funding distribution methods that may be resulting in limited public authority participation with innovation initiatives. A move from structured and uniform communication and support to more people focused, adaptable and community specific methods would drive further understanding and empowerment followed by collaboration and sustainability.

How to meaningfully engage citizens in aquatic sciences?

Leo Mensel (ECSA)

Duration 07 2024 to 09 2024 EJWP 6

Participants:

Leo Mensel (ECSA)
David De Miguel (ITCL)
Eleni Christoforou (CMMI)
Sabrine Chamam (ENIG)
(Contributor: Victoria Collier)

Main Points

- ECSA-led project exploring how to embed citizen science in aquatic research across organizations.
- Combined expert Masterclasses and internal assessments to identify opportunities and barriers.
- Enhanced awareness and provided tools for future citizen science initiatives in the water sector.

Project Description

Participants were invited to use their different backgrounds and interests to brainstorm ways to foster citizen science within their projects and organisations. Examples for potential findings can be:

- Assessing the interest and motivation to incorporate citizens from a scientists' perspective and analysing ways to improve it
- Finding entry points for citizen science
- Developing a water-related citizen science project
- Best-practice examples and why they have been successful

Approach

In order to better address the challenge, ECSA organised 4 Masterclasses on citizen science throughout the project duration. The classes were held online and invited practitioners from the citizen science community to introduce different approaches and strategies in administering citizen science projects.

Resources

In addition to the Masterclasses, participants could make use of various resources in order to learn more about citizen science and its applications in the water sector.
The "holy grail" for citizen science resources is the ESC platform. Here, participants are able to browse through past and ongoing projects, open access literature, as well as online courses to get inspired.

Results

Participants sent out questionaires in their respective organisation to map the understanding of and interest in applying citizen science in their work.

The questionnaire was developed and first disseminated by Victoria Collier, who also added the results of her organssation (Dwr Cymru – Welsh Water) to the findings.

Working groups

Societal Actions for influencing perception on toxic pollution

Chrysoula Paracharalampou (H2O People)

Duration 09 2024 to 11 2024 EJWP 6

Participants:
Leo Mensel (ECSA)
Sabrine Chamam (ENIG)
Eleni Christoforou (CMMI)
Lisa Volkova (NTUU)
Daniela Filipa de Silva Fonseca (F6S)
Chrysa Kostopoulou (APCL)
Imen Ellefi (Opalia Recordati)
Chrysa Efstatiou (HCMR)

Main Points

- Successful 2nd iMermaid project social media campaign
- Educational experience on the creation of social media campaigns and SWOT analysis
- Informative SWOT analysis on the implementation plan and needs of each Use Case for the implementation of the schooling project

Project Description

Part 1: Create the 2nd social media campaign as part of the iMermaid project's WP1: Social Actions for the reduction of chemical pollution.

Part 2: Perform a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis aiming to assess and report on how the schooling Project, developed within the iMermaid project, can be linked to each of the iMERMAID cases.

Approach

Part 1: Create a set of questions to collect simplified expert input to feed into iMERMAID's 2nd social media campaign.

Part 2: Interview with the Use Case leaders regarding a localised engagement and implementation plan for the iMERMAID schooling project to be applied into a SWOT analysis.

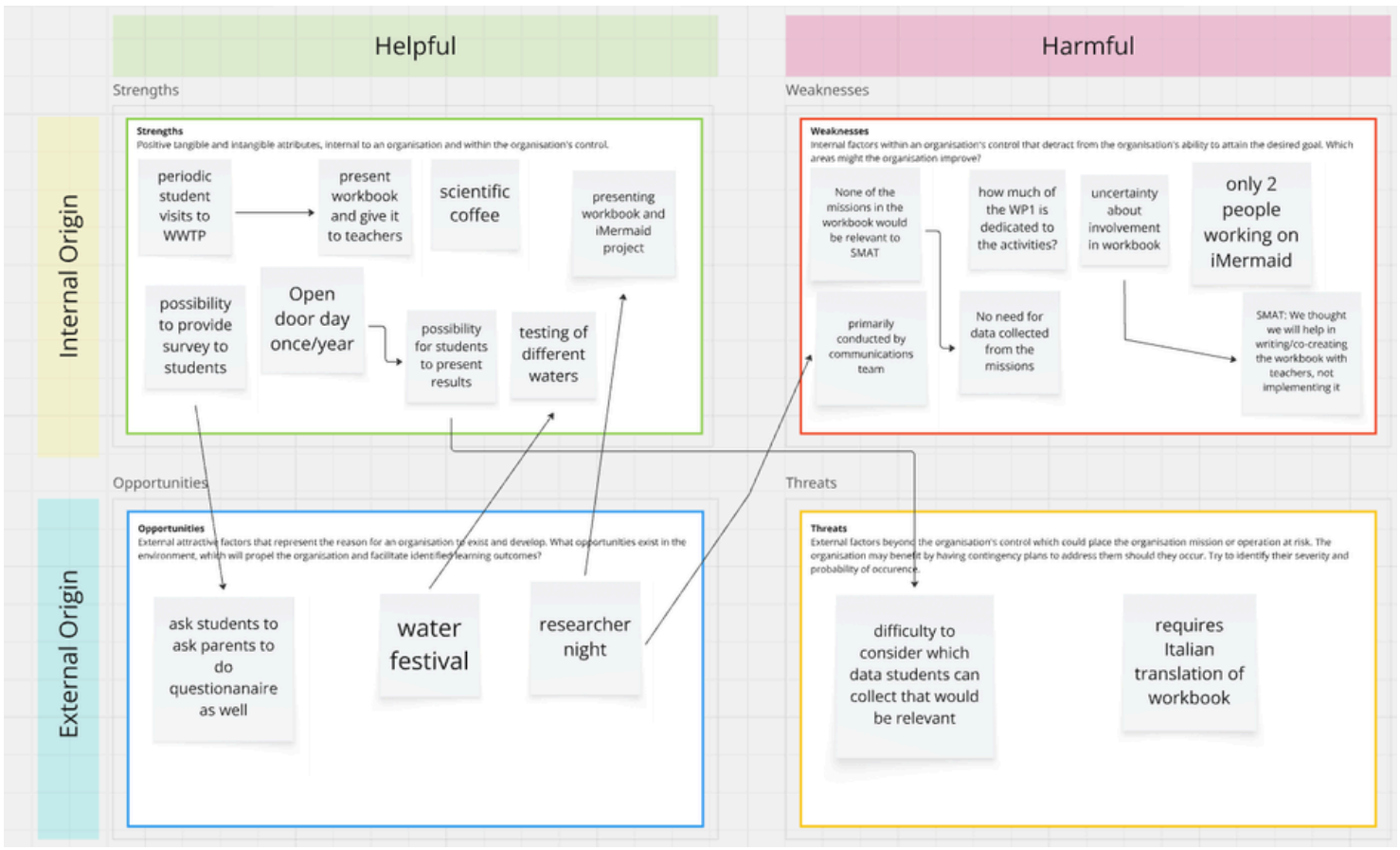
Resources

- Folder to familiarise with content and format of social media campaign #1, iMERMAID Societal Impact Toolkit, iMERMAID schooling workbook
- Communication with the iMERMAID project partners, especially those involved in the use cases.
- Support from the H2O People team
- Miro Board with the SWOT format to be filled out

Results

Social media campaign: LinkedIn and Twitter stats

Total Impressions: 8,104
Total Likes: 350
Total Reposts/Retweets: 57
Total Clicks on the Post/Link: 267
Total Answers to Polls: 30
Total video views: 633



SWOT analysis

Requirements Report for the Development of the Comprehensive Digital Twin for the WWTP

David De Miguel (ITCL)

Duration 09 2024 to 11 2024 EJWP 6

Participants:

David De Miguel (ITCL)
Esther Gomez (Socamex)
Sirine Slim (Opalia)
Veronica Piuri (Softwater)
Daniela Filipa (F6S)
Maria Zafeiropoulou (APCL)
Victoria Collier (Welsh Water)

Main Points

- Strategic contribution to the IMERMAID project through the creation of a requirements report for a wastewater treatment plant digital twin
- Detailed identification of key processes, operational variables, and performance indicators
- Informative benchmarking between use cases within the IMERMAID project

Project Description

The project aims to create a detailed document that will serve as the foundation for developing a digital twin of a wastewater treatment plant. It will define the scope, identify key performance indicators (KPIs), determine critical metrics, and outline data integration and modeling strategies.

This will provide the IMERMAID project with a clear and structured roadmap, ensuring that all technical, operational, and strategic aspects are thoroughly addressed.

Approach

- Literature review and analysis of existing practices in digital twins and wastewater treatment.
- Structured documentation of plant processes, variables, and performance indicators.
- Internal discussions and interviews with stakeholders to understand operational priorities.
- Conceptual benchmarking based on the Imermaid use cases.

Resources

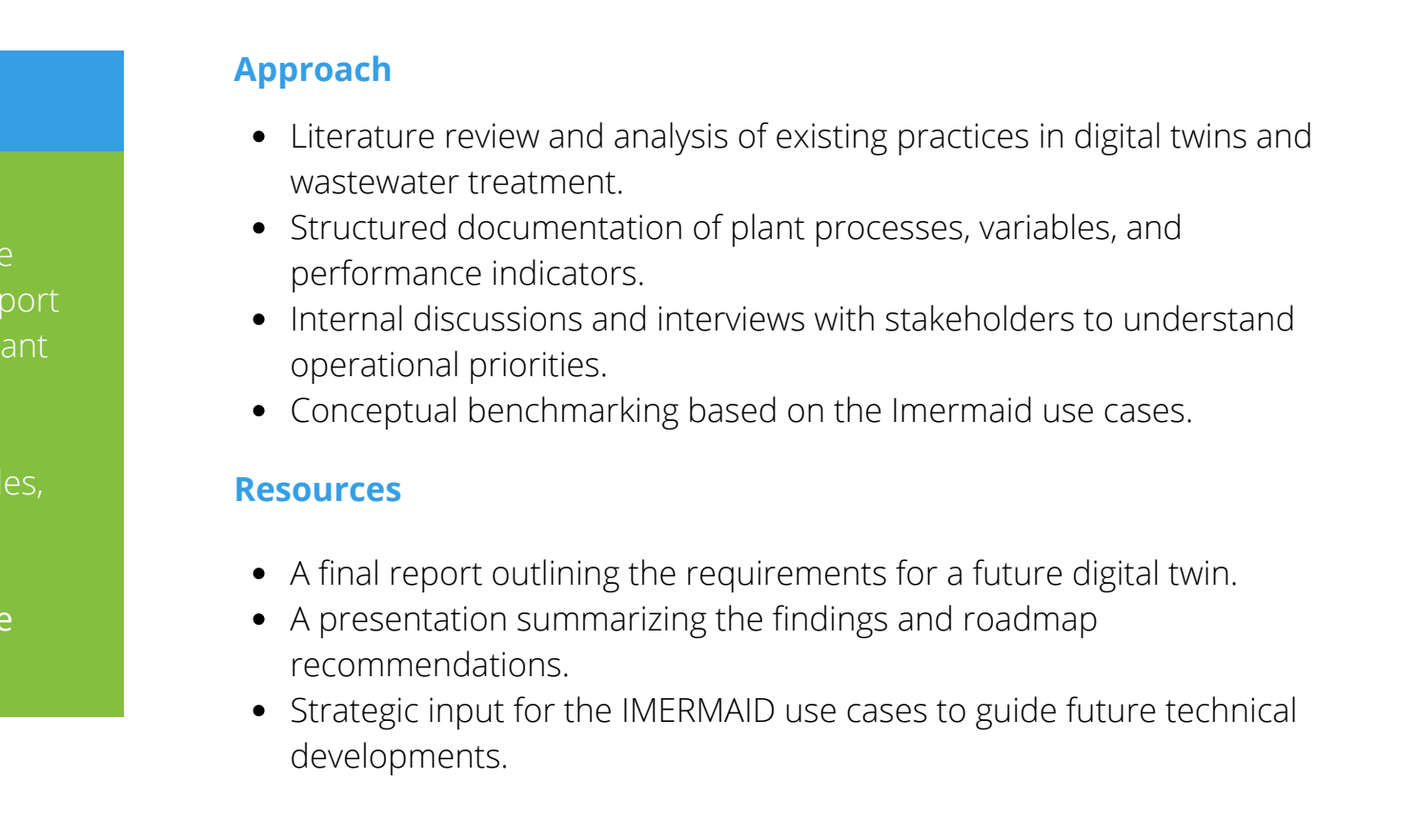
- A final report outlining the requirements for a future digital twin.
- A presentation summarizing the findings and roadmap recommendations.
- Strategic input for the IMERMAID use cases to guide future technical developments.

Results

A final report outlining the requirements for a future digital twin.

A presentation summarizing the findings and roadmap recommendations.

Strategic input for the IMERMAID use cases to guide future technical developments.



Guiding Pharmaceutical Industries Towards Effective Wastewater Treatment Solution

Sirine Slim (OPALIA RECORDATI)

Duration 11 2024 to 03 2025 EJWP 6

Participants:

Chrysa Kostopoulou (APCL)
Daniela Filipa (F6S)
David de Miguel (ITCL)
Sirine Slim (OPALIA)
Veronica Piuri (SOFTWATER)

Main Points

CREATE GUIDE REPORT FOR PHARMA COMPANIES

- Assist companies in selecting the most appropriate WW treatment process based on their effluent characteristics
- Improve the efficiency of treatment processes
- Reduce environmental impact of pharma wastewater
- Ensure compliance with environmental regulations

Project Description

Pharmaceutical wastewater presents a significant environmental challenge due to its complex composition, which includes active pharmaceutical ingredients (APIs), heavy metals, solvents, and other persistent contaminants. These substances pose risks to public/human health and to aquatic ecosystems, making effective treatment strategies a critical priority for the industry.
This project focuses on guiding pharmaceutical industries towards the adoption of more efficient and sustainable wastewater treatment options/solutions. Through an in-depth assessment of pharmaceutical effluents, current treatment technologies and regulatory requirements.

ACTION PLAN FOR OPTIMIZING BIOLOGICAL TREATMENT EFFICIENCY

- **Optimization of aeration and Oxygen transfer**

Installation of a Dissolved Oxygen Sensor: Continuously monitor dissolved oxygen levels to optimize aeration based on biological demand, ensuring efficient oxygen transfer and reducing energy consumption and enhancing biological activity.
Regular Diffuser Maintenance: Prevent clogging or fouling of diffusers, which can lead to uneven aeration and reduced efficiency.

- **Prevention of Biofilm Clogging and Improvement of WW homogeneity**

Adjust Airflow Rates: Ensure aeration intensity is sufficient for mixing but not excessive enough to damage biofilm structure
Supplement with Mechanical Mixing (if needed): In cases where air diffusers alone do not provide uniform mixing, low-speed mechanical mixers or recirculation pumps can be considered.

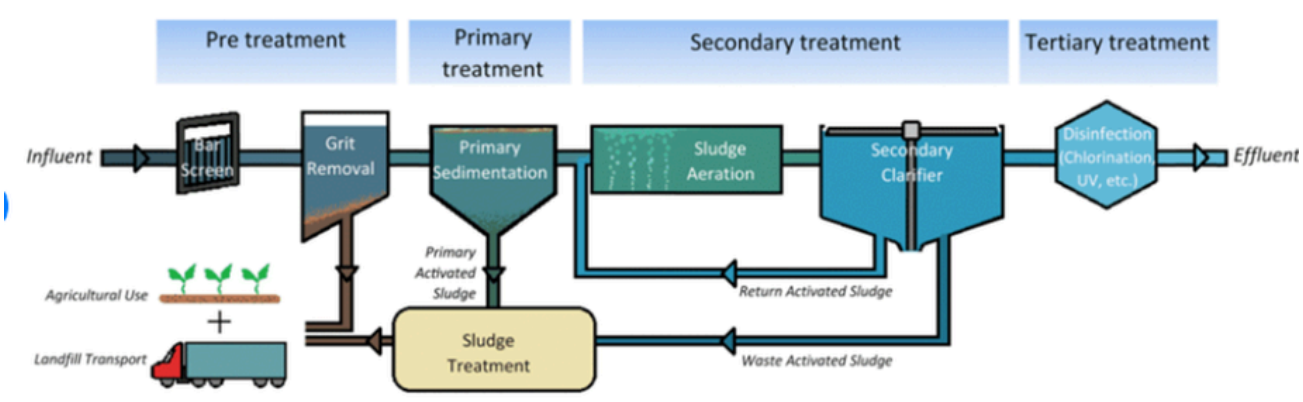
- **Enhancement of Denitrification processes**

Controlled Mixing: Ensure adequate mixing while preventing oxygen intrusion to sustain denitrifying bacterial activity.Maintain strictly anaerobic conditions to optimize nitrate (NO_3^-) reduction to gaseous nitrogen.

- **Monitoring and Adjustement of pH to optimize biological activity**

Continuous pH Monitoring: Maintain an optimal environment for biofilm bacteria by installing inline pH sensors for real-time monitoring.
pH Regulation: Define and maintain an optimal pH range (6.5 - 8.5) to ensure stable biological activity

- **Implementation of a complementary treatment process in combination with Biological Treament**



Conclusions

The Opalia project underscores the urgent need for effective wastewater treatment solutions in the pharmaceutical industry. Through this study, key challenges in the pharmaceutical wastewater composition were identified, together with regulatory requirements and treatment efficiency. While conventional biological treatments are widely used, they often fall short in removing pharmaceutical residues and heavy metals. Advanced treatments such as oxidation processes, membrane filtration and adsorption techniques offer promising results but require careful integration to balance efficiency and cost.
To ensure a sustainable wastewater management system, Opalia might adopt a multi-layered approach, where biological treatments are combined with more advanced physico-chemical processes. In this vein, effluent quality might be improved, while reducing operational inefficiencies.
By implementing effective wastewater treatments, the pharmaceutical agencies and Opalia in particular can reduce its environmental footprint, strengthen compliance, and contribute to overall efforts in safeguarding water resources and ecosystem health.

European Wastewater Treatment Benchmarking & Best Practices

Victoria Collier (Welsh Water - DWR Cymru)

November 2024 - March 2025

Participants:

Esther Gomez (Socamex)
Eleni Christoforou (CMMI)
Leo Mensel (ECSA)

Main Points

- Benchmarking performance across European wastewater treatment systems.
- Identifying gaps and opportunities for improvement in pollution, CSOs, compliance, and customer engagement.
- Leveraging best practices to enhance DCWW's operational standards and environmental impact.

Project Description

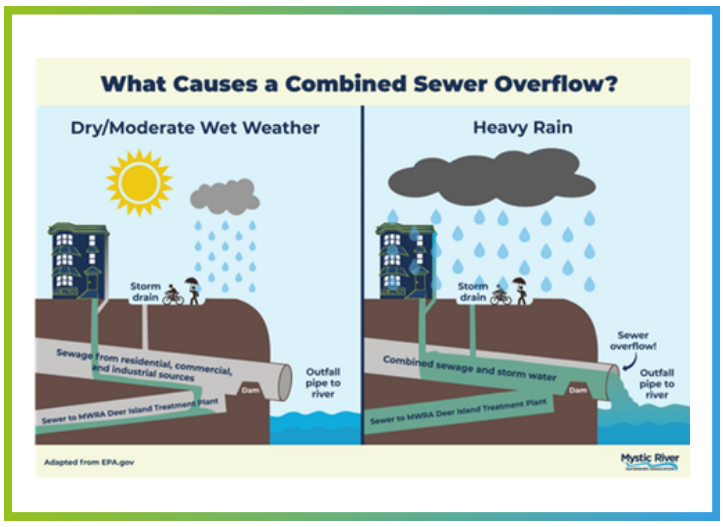
ENVisage2030 is a Waste Transformation initiative within DCWW aimed at enhancing wastewater treatment performance in Wales. The project targets the improvement of pollution performance, combined storm overflow spill reduction, wastewater treatment works (WwTW) compliance, and customer/regulator perception. Through benchmarking and research, the project seeks to assess performance across Europe and identify best practices for innovation and improvement in wastewater treatment. The goal is to achieve a 4-star environmental performance rating, exceeding regulatory expectations and improving public trust.

Approach

The approach involves benchmarking wastewater treatment practices across Europe, with a focus on pollution control, storm overflow management, compliance, and customer perception. The project utilizes extensive research, interviews, and data analysis from countries such as Spain, Greece, Cyprus, and Tunisia. Collaborations with local authorities and the use of advanced technology (e.g., IoT for smart monitoring) are key components of the strategy. Information sharing and the adoption of best practices from European counterparts will directly inform DCWW's operational improvements.

Resources

Key resources include data from European wastewater treatment authorities, professional connections, and expert input. Additionally, the project employs IoT technology, smart sensors, and public datasets to inform improvements. The project team leverages international research, cross-country comparisons, and stakeholder engagements to gather insights.



Results

The project provides a comprehensive benchmarking of wastewater performance across Europe. It highlights the gaps in pollution control, storm overflow management, and compliance in various regions, while showcasing best practices in water reuse and operational transparency. The project also reveals a need for better data recording, reporting systems, and customer engagement, particularly in countries like Tunisia and Spain. Improvements are expected in pollution control and customer satisfaction as a result of these insights.

Conclusion

ENVisage2030 provides valuable insights into the challenges and successes of wastewater treatment across Europe and Tunisia. By focusing on benchmarking and data-driven improvements, the project helps DCWW understand how it compares to others in managing pollution, storm overflows, and treatment compliance. The research has revealed the importance of transparent reporting, better stormwater management, and public education. Best practices identified, such as water reuse initiatives and innovative treatment technologies, offer potential solutions for DCWW's future development. Collaboration with international experts and the implementation of proactive strategies are essential for DCWW to achieve its 4-star environmental rating. This project underscores the importance of cross-border knowledge sharing and continuous innovation to meet rising environmental standards in the wastewater treatment sector.

From Training to Transformation
Measuring the impact of EJWP projects

EJWP/ Naomi Timmer

November 2025 - May 2026

Participants:

Eleni Christoforou (CMMI)
Esther Gomez (AQLARA)
David De Miguel (ITCL)
Maria Zafeiropoulou (APCL)
Rodrigo Sedano (ITCL)
Victoria Collier (Welsh Water)

Main Points

- People → Projects → Impact
- From learning to transformation
- Making impact visible
- Beyond projects: building legacy

Results

- Clear positioning of EJWP within iMERMAID
- Impact strategy & execution plan
- Increased visibility of project results
- Foundation for long-term impact

Outputs

🎯 Framework
📊 KPI Mapping
🖼️ Poster Templates
📚 Best Practices
📈 Impact Indicators

Added Value

iMERMAID → Stronger societal impact visibility
EJWP → From learning to impact model
Participants → Leadership & real-world impact
Sector → Human capital drives innovation

MEMORY LANE

Project Description

Strengthening the impact and afterlife of EJWP projects within iMERMAID by linking capacity building, project outcomes, and societal impact into one structured approach.

Approach

Analyse
EJWP projects within iMERMAID

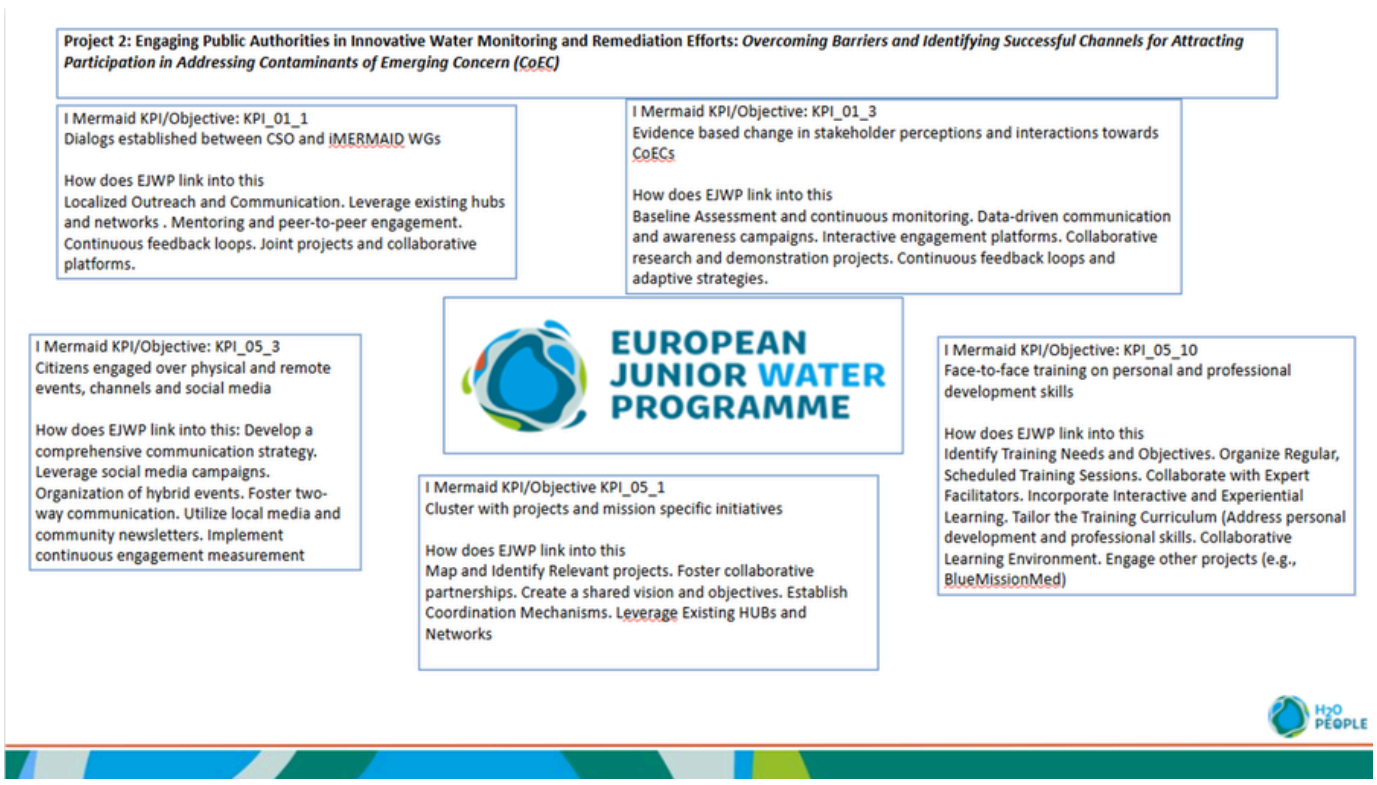
🎯 **Map KPIs**
iMERMAID alignment

🧩 **Co-create**
Impact framework

🛠️ **Standardise**
Poster formats

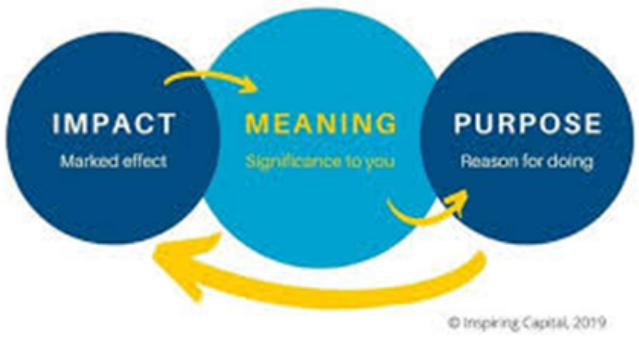
📣 **Disseminate**
Outputs & stories

🔄 **Validate**
Stakeholder feedback



Lessons Learned

- Impact must be designed
- People drive impact
- Align early with KPIs
- Use standard formats
- Engage continuously
- Tell clear stories
- Plan afterlife



Capacity building as a driver for innovation and impact

Environmental Data Exploration for iMERMAID Demo Sites

Veronica Piuri (SoftWater)

June 2025 - August 2025

Participants:

David De Miguel (ITCL)
Eleni Christoforou (CMMI)
Giasmin Cecconi (SMAT)
Leo Mensel (ECSA)
Veronica Piuri (SoftWater)
Victoria Collier (Welsh Water)

Main Points

- Provides contextual knowledge tailored to the geography, hydrology, and socio-economic conditions of each demo site.
- Delivers reliable, well-documented datasets and information that strengthen the project's scientific and practical foundations.
- Translates data into accessible visualizations and knowledge that support decision-making and stakeholder communication.

Project Description

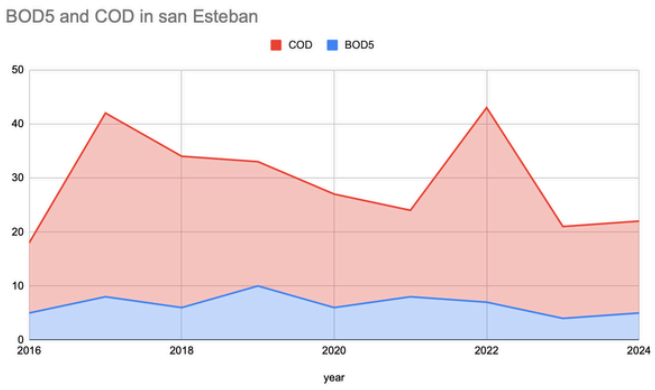
The iWIRE platform, developed within iMERMAID, provides interactive dashboards that visualize key data on water quality, climate indicators, and remediation impacts. However, the value of these dashboards—and the project at large— can by enanched by integrating additional context-specific environmental information relevant to each site. This project aims to support that goal by identifying local and regional environmental challenges and collecting significant, reliable data that can either be integrated into the dashboards or, if not, contribute to iMERMAID's overall knowledge base.

Approach

The approach involves reviewing the profiles of the five iMermaid use cases, including their geography, hydrology, socio-economic context, and existing environmental issues. Building on this understanding, relevant environmental criticalities are identified using reliable online sources. Particular emphasis is placed on challenges that are measurable, data-rich, and closely aligned with project objectives. The data are systematically collected and compiled in a structured Excel file, ensuring that each dataset is accompanied by clear metadata. Some selected datasets are translated into visualization to facilitate their integration into the iWIRE dashboards.

Resources

Key data resources include open environmental data repositories, such as those of the European Environment Agency (EEA), the Copernicus Land Monitoring Service for satellite-based land cover and land use information, FAO's AQUASTAT for global water and agriculture statistics, and the UN Environment Data Explorer for international environmental indicators. In terms of tools, Excel or Google Sheets are used to systematically compile datasets and document them with clear metadata.



Results

Organized Excel files with structured environmental data for each demo site

Knowledge summaries highlighting key environmental challenges, collected data, and their relevance for the project.

Suggestions for integrating suitable datasets into the iWIRE dashboards.

Conclusion

The project demonstrates that combining site-specific knowledge with well-documented datasets can significantly enhance the value of the iMERMAID demo sites. By identifying key environmental challenges—particularly climate change, population growth, and the presence of pollutants—and sourcing reliable, open-access data, it builds a solid foundation of credible information tailored to local contexts. The integration of selected datasets into the iWIRE dashboards ensures that this knowledge is not only preserved but also transformed into accessible insights that support communication, stakeholder engagement, and informed decision-making across the Mediterranean case studies.

Teachers' Handbook

Youth educational and engagement to prevent chemical pollution in the Mediterranean Sea

Naomi Timmer (H2O People)

September 2025 - November 2025

Participants:

Giasmin Cecconi (SMAT)
Rodrigo Serdano (ITCL)
David De Miguel (ITCL)
Eleni Christoforou (CMMI)
Esther Gomez (SOCAMEX)
Chrysa Kostopoulou (APCL)

Main Points

- Provision of a clear, practical and accessible support to Teachers' Handbook to accompany the iMermaid workbook
- Facilitation of iMermaid Schooling project

Project Description

After the presentation of the iMermaid Schooling Workbook to teachers, it was noted that further introduction, context and clarification on the topic of chemical pollution was required for the successful implementation of the mission in the classrooms. Hence, the EJWP team developed a teachers' handbook to provide guidelines to educators with clear, practical, and accessible support.

Approach & Result

The team was allocated 2-4 missions each where they prepared detailed explanation of the mission's objectives, introduction to the environmental problems in order to provide the appropriate context, the scientific or social concepts behind it, and its relevance to broader educational goals. Step-by-step instructions, examples of execution, and, in some cases, suggestions for adapting the activities to different ages, class sizes, or available resources were also provided where appropriate.
In addition, the guidelines provide recommendations, sample results or expected outcomes, and discussion prompts to encourage reflection among students. By combining theoretical understanding with concrete examples and ready-to-use classroom materials, these guidelines are intended to make the missions more engaging, easier to manage, and more impactful for both teachers and students.

Conclusion

The final outcome is a comprehensive guide which can be used by teachers and educators to implement all the mission described in the iMermaid Schooling workbook with the table of content and examples of Missions 2 and 14.

Resources

The main resources used for the achievement of this project was the iMermaid workbook which contained all the missions and essential information to build on. This was supplemented by the knowledge of the team and online search.

Table of contents

Mission 2 - Taking a closer look at water

Introduction to the environmental problem to be addressed:

This mission focuses on understanding water quality through visual observation.
Water is essential for all living organisms, but its quality is affected by many natural and human-related factors. Pollution from agriculture (fertilisers and pesticides), domestic sewage, and industrial waste can lead to nutrient over-enrichment (eutrophication), altering water colour, smell, and clarity.

When excess nutrients like nitrogen and phosphorus enter rivers or lakes, algae grow rapidly, consuming oxygen and blocking sunlight. This process makes water green or brownish and leads to the death of aquatic life. In contrast, clear water with visible aquatic plants and active fauna often indicates a healthy ecosystem.

However, not all clear water is clean, some pollutants are invisible, such as heavy metals or chemical residues. Thus, observation is only the first step in assessing environmental health, encouraging curiosity about what lies behind what we see.

The mission helps students connect everyday observation with chemical and ecological understanding, empowering them to become active observers of environmental change in their communities.

Support material for mission implementation:

Suggested steps:

1. Choose 2-3 local water bodies (river, pond, fountain or sea)
2. Students take photos and notes on:
   a. Colour (clear, greenish, brown)
   b. Smell (none, earthy, sewage-like)
   c. Visible life (fish, algae, plants)
   d. Surrounding environment (factories, farms, nature, animals)
3. Upload their observations to the iMERMAID platform with the photo and a short comment.

Example:

Observation site	Water Colour	Smell	Visible Life	Nearby activity	Possible pollution source
Town stream	Greenish	Mild sewage smell	few fish, algae on rocks	Houses nearby	Domestic Wastewater
Lake Park	Clear Blue	No smell	Ducks, plants	Recreational use	None visble
Industrial canal	Brown	Chemical odour	No visible life	Factory 50m away	Industrial discharge

4. Classroom discussion
   a. What visual signs indicate possible eutrophication?
   b. What other pollutants might not be visible?
   c. How might weather (rain, drought) change water appearance?
   d. Optionally, upload results to the iMERMAID platform and share with another school or local community group.

Mission 14 – Show the world

Introduction to the environmental problem to be addressed:

The pollution of the Mediterranean Sea by chemicals, plastics, and untreated wastewater threatens biodiversity and human well-being. Yet, unlike visible litter, most contaminants cannot be seen. This invisibility makes it difficult for people to relate to the issue or feel responsible for it.

Art and storytelling can make the unseen visible. By creating a graphic novel or illustrated story, students explore how human activities influence water quality and marine life, while showing that positive change is possible through awareness and cooperation.

This mission encourages participants to translate scientific understanding into creative expression — giving the ocean a voice and helping others "see" the problem.

Support material for mission implementation:

Preparation:
Show examples of environmental comics or illustrations to inspire students.
Discuss how images can tell scientific stories and express environmental problems.

Materials:

- Paper, pencils, markers, or digital tablets.
- Optional: free design tools (Canva, StoryboardThat)
- Reference photos or data from previous missions.

Implementation:
Students create a short illustrated story or comic inspired by chemical pollution, water protection, or marine life.
Teachers help connect artistic expression with real facts learned in earlier missions.

Sharing:
Completed works can be displayed in school corridors, local exhibitions, or uploaded to the iMERMAID website.
They can also be presented during the iMERMAID Forum (Mission 16).

How sustainable are you? International survey on the sustainable use of chemicals and the reuse of treated wastewater

Giasmin Cecconi (SMAT)

November 2025 - May 2026

Participants:

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Main Points

- Actions to safeguard water quality
- Perception of reuse of wastewater
- Domestic water consumption –awareness and possible measures toreduce it

Project Description

The project aims to implement Mission "How sustainable are you?" trough the definition of a list of questions and answers that will compose a questionnaire that will be shared among the Countries of the project team members.
The questionnaire will be structured in three sections that will focus in three different topics:
Actions to safeguard water quality: section that allows to assess the impact of citizens' daily activities on water quality.
Reuse of wastewater: section that allows to assesses citizens' perceptions of the various uses of treated wastewater.
Domestic water consumption – awareness and possible measures to reduce it: section that allows for the assessment of citizens' perceptions and opinions on water consumption in homes and possible measures to reduce it.

Conclusion

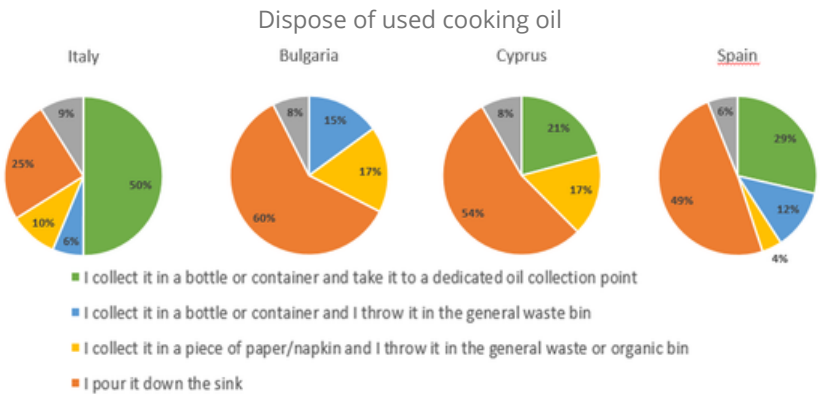
The final outcome is a comprehensive report in which the results are presented in detail. The report will include:

- An evaluation of whether citizens' daily activities vary across countries with respect to water quality protection.
- An assessment of whether citizens' perceptions differ between countries regarding the reuse of treated wastewater.
- An analysis of how citizens' perceptions vary across countries in relation to water consumption and the actions they can take at home to reduce it.
- Additionally, the report aims to raise awareness about the importance of safeguarding water quality through everyday actions.

Approach & Result

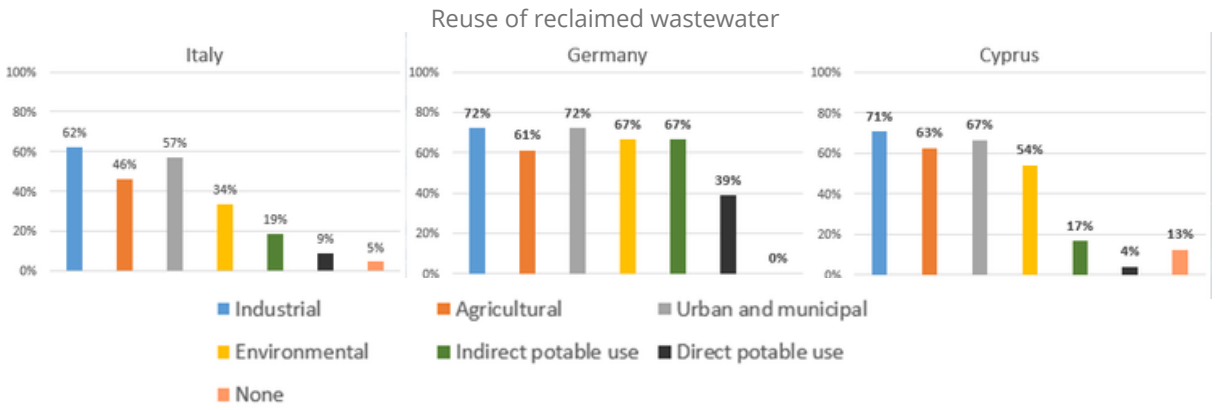
Crucial in engaging citizens in filling the questionnaire is the definition of the best dissemination channels and the related dissemination material.
Through the defined dissemination channels, a total of 1370 responses have been received from 23 different Countries.
The main achievements of the project are:

- Need of informative campaigns about how to dispose of used cooking oil particularly in Bulgaria, Cyprus and Spain



Which Country do you live in?	Number of responses
Italy	1068
UK	116
Spain	49
Bulgaria	40
Cyprus	24
Germany	18
Portugal	18
Other	37
Total	**1370**

- More attention should be paid to turning off the water while showering
- Raise awareness about the environmental impact of ingredients of household, detergents, soaps,...
- Promote and disseminate the concept of "Water Footprint"
- Promote the use of tap water, specifically in Italy, raising trust toward drinking water supply system
- High acceptance of non-potable applications of reclaimed wastewater
- Low acceptance of potable applications of reclaimed wastewater linked to perceived health risks and lack of familiarity: need ofinformative campaign about what reclaimed water is and how it is treated.



- Preferred domestic water-saving measures: rainwater collection systems and water savin devices

How to Create Impact with Who You Are

EJWP/ Naomi Timmer

November 2025 - May 2026

Participants:

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Main Points

- Personal development becomes more effective when treated as a project with ownership and structure
- Personal drivers are a powerful lever for sustainable motivation and impact
- Small, consistent actions outperform large, abstract goals
- Peer learning accelerates reflection, accountability, and implementation
- Rest, reflection, and prioritisation are essential for long-term impact

Results

- Increased self-awareness and clarity on personal drivers
- Stronger sense of ownership over personal and professional growth
- Improved ability to prioritise what truly matters
- Greater balance between ambition, rest, and reflection
- Practical translation of values and drivers into daily action

Project Description

This EJWP project explored how personal development can be reframed as a structured project to create individual and collective impact within the water sector. Participants translated their personal drivers, ambitions, and learning goals into concrete Personal Development Plans (PDPs) and implemented them using project-based and peer-supported methodologies.
The project focused on strengthening self-awareness, ownership, prioritisation, and sustainable growth, while connecting personal leadership development to professional practice and sector challenges.

Approach & Result

The project was implemented in four interconnected phases:

1. Reflection & Design (Nov 2025 – Jan 2026) Identifying personal drivers, strengths, needs, and long-term goals (2–5 years).
2. Implementation Planning (Jan – Feb 2026) Translating PDPs into realistic action plans, treating personal growth as a project.
3. Implementation (Feb – May 2026) Applying PDPs in daily practice with peer support and reflection.
4. Reporting & Communication (Apr – May 2026) Reflecting on learning outcomes, impact, and lessons learned.

Key methodologies included:

- Peer coaching and InterVision (gossip methodology)
- Guided reflection on personal drivers
- Goal-setting and prioritisation tools
- Social learning and collective feedback moments

Lessons Learned

- Development requires ownership and commitment
- What you give time and resources to will grow
- Focusing on what is important vs. urgent improves impact
- Turning vague ambitions into specific goals makes change tangible
- Peer coaching strengthens continuity and accountability

Outputs & Added Value

- Personal Development Plans (private)
- Implementation plans and reflections (private)
- Public project presentation & poster
- Strengthened EJWP learning community
- Enhanced culture of reflection, leadership, and shared ownership