

# Water Europe

## Policy Report

# Water Innovation Europe 2024





# ABOUT THIS REPORT

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## Water Innovation Europe 2024

For the first time, the European Environment Agency has recognised water as a cross-sectoral challenge in the first [Climate Risk Assessment Report](#), calling for a comprehensive approach towards Water-Smart management. At the same time, the [Letta report](#) emphasises that utilities need investment to ensure water services. Similarly, nearly 70% of companies responding to a [CDP survey](#) acknowledged the business risks associated with water challenges.

During the previous mandate, the EU advanced with the Green Deal, initiating a paradigm shift towards a green, resilient, and digitalised Europe. Despite positive developments in the EU legislation, water-related risks have been underestimated and managed without a holistic perspective. Europe must go further!

As we enter the Commission's new mandate, there is now momentum to raise water as a high-level topic. The Commission Work Programme for 2024 has committed to adopt an initiative on water resilience which is still pending. At the same time, the EU Green Week took place under

the banner “Towards a water resilient Europe” as part of the #WaterWiseEU campaign that aims to stimulate an EU-wide conversation around water both today and in the future.

Alongside the European Economic and Social Committee, we strongly advocate for an EU Blue Deal. One that opens a second chapter in the European Green Deal paving the way for a Water-Smart Strategy which will put water – the main natural resource of our society, economy, and environment – as a top priority.

Water Innovation Europe 2024 took place on 17-19th June 2024 and was hosted by Water Europe and sponsored by IANIC. This report summarises the multi-stakeholder discussions held during the event regarding the need for a European Water-Smart strategy to secure and sustain water sources in Europe and beyond. The different sessions brought together experts from research, policy, business, and EU institutions to exchange on the challenges and opportunities that need to be embedded in such a strategy for the next EU Commission mandate for 2024-2029.

## MAIN RECOMMENDATIONS

- ▶ Creating a Water-Smart Society in Europe requires a joint effort. Both the ambition of the Green Deal and for increased EU Competitiveness can coexist and even thrive in the new mandate.
- ▶ There is a lack of awareness about water's importance, particularly its socio-economic value. Actions on governance and implementation, such as Water-Oriented Living Labs, are key instruments in addressing quantitative and qualitative water challenges and ensuring full adherence to existing legislation.
- ▶ Proper pricing and dedicated funding are essential to providing the proper drivers for behavioural change and action, as well as for making the necessary investments to secure water for all uses and users. The blue transition will prioritise water, while the entire society and economy must adopt water-smart approaches to achieve water resilience.
- ▶ We need risk-based indicators to assess droughts and a comprehensive risk framework with a clear timeline. All legislation should be water-smart and supported by a comprehensive long-term water management plan.
- ▶ Water risks are outpacing mitigation efforts. Sustainable water use should be defined, water targets set, and successful results communicated, shifting the view of wastewater from waste management to resource production in urban, industrial and rural areas.
- ▶ Solutions such as water reuse should be extended, hybrid grey-green infrastructure, digital tools deployed to improve water efficiency and resilience for farmers and other economic sectors.

## A Water-Smart Europe Towards a Competitive and Green Europe

This year's edition of Water Innovation Europe (WIE) 2024 is all about recognising the crucial role of water in strengthening European economic competitiveness and the urgent requirement for investments to prevent economic downturns due to water crises. After the success of last year's WIE, our message remains clear: we need to raise awareness on the value of water, take actions towards a Water-Smart Society, with the clear political accountability.

Labelled as an EU Green Week Event, WIE 2024 kicked off its landmark event by addressing the socio-economic value of water including the first elements of the coming Water Europe Report on the socio-economic value of water. Following the joint letter of 30 organizations calling for the release of the Water Resilience Initiative and the EU Blue Deal of the European Economic and Social Committee, we discussed the related risks and opportunities for different economic actors.

The socio-economic value of water is increasingly recognised by decisionmakers. It is reflected in the [political guidelines for the next European Commission \(2024-2029\)](#) and in the call by [21 Member-States](#) for the EU Commission to make water a “top priority”. The strengthening of Europe's water security is indispensable for the well-functioning of our food, industrial, societal and economic systems.

At the heart of the ambition for a competitive and strategic autonomous European Union, we rely on industries which are highly water and energy intensive. This includes, but is not limited to, semiconductors, carbon capture and storage, hydrogen, and EV batteries. It should be questioned, therefore, whether a discussion on competitiveness or the just transition can take place without putting this finite resource at the centre of deliberations.

We have already stressed water's strategic importance in our [Manifesto](#). It is worth looking into two concrete examples:

- Hydrogen: Each kilogramme of hydrogen requires 9kg of ultrapure water.
- Semiconductors: The amount of water required per square centimetre of memory chip can reach 21 litres.

We need to understand that this is not a fight between the economy and nature. It needs to be, and is, a joint effort. We must work at all levels, and with all sectors, to achieve water security, sustainability and resilience.

To realise a Water-Smart Society, the EU must embody the principle of “more for less” in its approach, as reiterated by the UN Water Report 2024. We need to develop skills and implement holistic approaches in all European policies, including investments and funding opportunities. We need an European Water-Smart plan.

WIE fosters exactly that inter-sectoral dialogue, from policymakers to technology developers, aiming at debating and collaboration on current and future common challenges relating to water-systems. This year, WIE 2024 aimed to promote innovative solutions which are key to sustaining and advancing European competitiveness, support cross-border and international cooperation, unlock circular water solutions as well as accelerate the implementation of those solutions as the ones deployed through Water-Oriented Living Labs.

Briefly, this event is a unique opportunity to collaborate, debate, and discuss with a pan-European audience, actively contributing to a Water-Smart Society. We created it to address the water sector's fragmentation and conservative tendencies in discussions between challenge owners and solution providers. We believe the entire value chain is part of the solution, breaking out of our siloes. I look forward to meeting you at WIE 2025.

**Durk Krol**  
**Executive Director**  
**Water Europe**

# Agenda



# Towards a Water-Smart Strategy

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# WATER-SMART VISION

Seven years after the release of its first Water Vision for a Water-Smart Society, Water Europe has now published a new updated version that is sharper, more policy-oriented and built on the latest scientific and technological developments.

## The Water Europe vision for a Water-Smart Society

This Water Europe Vision document charts the path toward society's better use, valorisation and stewardship of our water resource. It highlights the development of resilient and sustainable solutions to address our key water challenges. It also describes how these challenges can be transformed into opportunities for developing and deploying new European technologies, solutions, businesses and governance models for the Water-Smart Society of the future. It projects a future of water security, sustainability and resilience for all societal functions, and of full environmental protection. It is a vision in which all relevant stakeholders are involved in the sustainable governance of our water system. Although the vision is focused on the situation in Europe, many of its features are relevant to realising Water-Smart Societies all over the world.



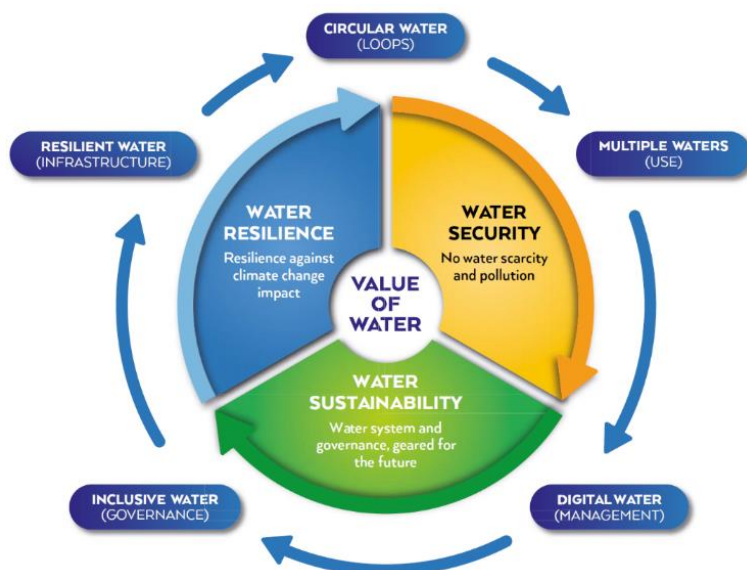
A Water-Smart Society is one in which the value of water is recognised and realised to ensure water security, sustainability, and resilience; all available water sources are managed so that water scarcity and pollution are avoided; water and resource loops are largely closed to foster a circular economy and optimal resource efficiency; the water system is resilient against the impact of climate and demographic change; and all relevant stakeholders are engaged in guaranteeing sustainable water governance.

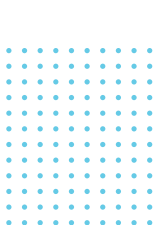


## The Water-Smart Society model

To build a Water-Smart Society, Water Europe has developed a model, consisting of one core value, three key objectives that need to be achieved to realise the core value, and five specific innovation concepts crucial to realising the objectives.

The model indicates how the innovation concepts and key objectives are interrelated, generating a 'flying wheel' effect that drives the process towards the Water-Smart Society.





## One core value

**The Value of Water** is at the heart of Water Europe's vision for a Water-Smart Society. This core value reflects the centrality of water as a human right and its fundamental role in our society.

## Three key objectives

**Water Security:** safeguarding sustainable access to sufficient quantities of affordable and fit-for-purpose water.

**Water Sustainability:** ensuring water infrastructure, management and use that are economically and environmentally sustainable.

**Water Resilience:** achieving long-term resilience, so that natural and anthropogenic water systems can withstand unexpected disruptive events.

## Five Innovation concepts

1. **Circular Water:** circular water system that minimises water losses, captures and exploits the value in water, and fosters water security, sustainability and resilience.
2. **Multiple Waters:** incorporate a wide range of water sources and qualities (groundwater and surface water, rainwater, brackish water, brine, grey water, black water, recycled water) into a water-secure, resilient and sustainable water system.
3. **Digital Water:** exploit the benefits of the extreme interconnectivity of people, devices and processes, and create capillary networks capable of monitoring the water system, starting at its multiple sources through to the individual end user, thus generating continuous flows of valuable data for innovative decision-support systems at different governance levels.
4. **Inclusive Water:** establish a water system whose governance balances the interests of all stakeholders in its design, management and maintenance.
5. **Resilient Water:** create a resilient and reliable hybrid grey and green water system, designed to withstand severe external and internal shocks – such as climate-change induced floods and droughts – without compromising essential functions.

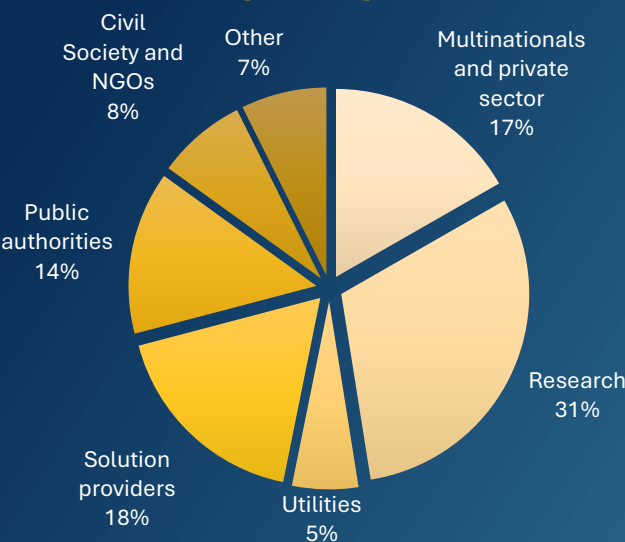
## Transitioning to a Water-Smart Society

Water Europe envisions a significant transformation of the current European water sector. The innovation concepts outlined above, along with measurable objectives and key impact parameters for water security, sustainability and resilience, will drive decision-makers to realise this transition and build new water-smart economies. This will be enabled primarily by innovative governance models, new technologies created within inclusive, open innovation environments, such as innovation-enhancing Water-Oriented Living Labs (WOLLs), and by a transformed and updated water infrastructure serving the Water-Smart Society.

Overall, the Water Europe water vision aims at the implementation of a set of innovations which will result in a 50% reduction in the demand pressure exerted on our groundwater and surface water resources, thereby eliminating water scarcity in Europe. By 2030, the transition to a Water-Smart Society will be in full swing, driven by visionary front-running industries, cities lead in laying out the migration paths towards the Water-Smart Society of the future.

# WIE 2024 KEY FIGURES

## Participants per sector

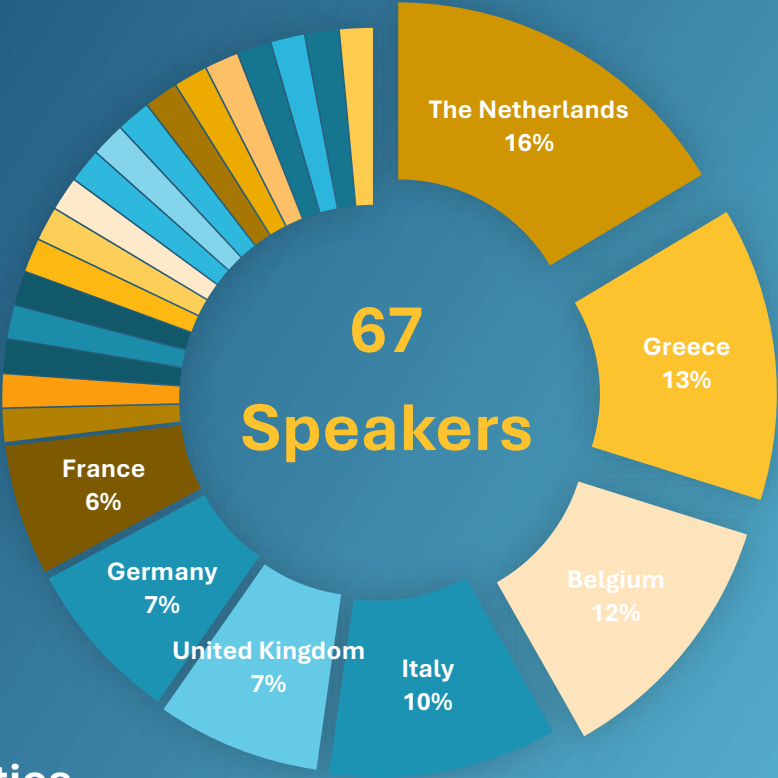


The 2024 edition saw an increase of **63% participants** in comparison with the 2023 edition. Participants came from all around Europe and from the different segments of the value chain. This year, the research and innovation sector **was strongly represented**.

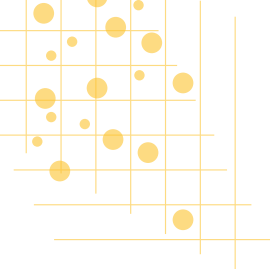
WIE 2024 programme included **4 sessions, 2 dinners, 6 side events, 1 exhibition area**, and the organisation of 12 working groups meetings.

Water Innovation Europe is a landmark event for the innovative water sector to network and exchange knowledge and best practices, while discussing the current policy dossiers.

- Canada
- Argentina
- Colombia
- Taiwan
- Zimbabwe
- Ethiopia
- South Africa
- Romenia
- Spain
- Cyprus
- Poland
- Bulgaria
- Croatia
- United States of America
- Denmark
- Sweden
- Lithuania
- Portugal



## Speakers nationalities



# THE REGIONAL VIEW

## Water Resilience – Vision of the Local and Regional Authorities

Universal access to water and sanitation is unfortunately an unguaranteed right in the world, including in Europe. This is a constraint for EU decarbonisation, our economic growth and our strategical autonomy. Before these challenges, I am convinced that local and regional authorities have a role to play. In this perspective, I am honoured to carry an opinion to the European Committee of the Regions. In this opinion, we call the European Union to make water a strategical priority for the next mandate (2024 – 2029).

We also call the EU to work altogether with local and regional levels as well as with all the implicated actors in water management and sewage in order to implement an European and holistic water strategy. In this opinion for which I am the rapporteur, we formulate 10 recommendations.

First of all, integrate water-related goals in every Union's policy. Namely, for instance, the Common Agricultural Policy, tourism or transport-related policies.

Also, it requires to assess the legislation in force in order to see if new measures are necessary to conciliate both different users' needs and water-availability, meaning current availability but also regarding the availability to come.

Thirdly, reinforce the water's multiscale governance in adopting a "One Water" approach in which all stakeholders in a specific region, in a specific basin are gathering around the same table.

It is also necessary to include a water and soil approach in every single EU policy, because permitting water and soil to lead the country planning allow ecosystems to be more resilient and so less vulnerable.

It will imply also to strengthen the Local and Regional Authorities' financial support as well as facilitating the access to the relevant funds in order to allow them to launch the big investments ahead of us.

The enhancement of the important "Polluter-Pays" principle implementation to tackle pollution has to be addressed.

Adopting an Union's water-efficiency principle as it is already the case regarding the energy efficiency also constitute a major challenge. The goal here is to favour an efficient water-reuse and water savings for agricultural, industrial and obviously domestical ends.

Eighth recommendation: to reinforce data-transparency and data-sharing. That is applicable for policymakers but also for the users who need a maximum of transparent information.

Support research and innovation also needs to be encouraged concerning

water sector as well as supporting every partnership in this domain.

Eventually, of course, and this is the tenth recommendation we are formulating, international cooperation has to be reinforced in order to realise the Sustainability Developments goals, notably the SDG6 dedicated to water and sewage. In this domain as well as all other goals, Local and Regional authorities detain a role to play.

So, as you can see, in this strategical domain being water, Regional and Local authorities intend to be heard in the years to come and we will push for the European Union and the European Commission make water a strategical priority in every one of their policies for the next mandate (2024 – 2029)

▲▼  
The Goal is to favour an efficient water-reuse and water savings for agricultural, industrial and domestic ends.  
▲▼

**Speech of Andrea Viola during WIE 2024 (video)**

**Member of the European Committee of Regions & rapporteur for the opinion**

*"Towards a resilient water management to fight climate crisis within an EU Blue Deal"*

# UN WATER REPORT 2024

The [UN Water Report 2024](#) presented by the editor-in-chief of the UN World Water Development Report, Richard Connor, (UNESCO, World Water Assessment Programme), draws attention to the complex and interlinked relationships between sustainable water management, prosperity and peace. It describes how progress in one dimension can have positive, often essential, repercussions on others dimensions.

Nowadays, freshwater use has been growing by just under 1% per year. This means 2.2 billion people do not have access to drinking water, one quarter of the world

population lives in areas of water stress, and in lower income countries most untreated water is being released in water courses. Slow progress has been made towards SDG 6, with none of its targets on track to being achieved. This is especially highlights deficiencies in monitoring and reporting.

This report follows an analysis of the link between water, prosperity and peace, thematic (agriculture, human settlements, industry, etc), regional perspectives and response options (governance, capacity development, financing, etc). Its main findings can be summarised as such:

## Water, prosperity and peace:

- ▶ Safe, accessible and well-functioning water supply and sanitation systems foster prosperity through quality of life, with individual and community dividends reflected in education and a healthy workforce
- ▶ Cooperation over water resources has generated positive and peaceful outcomes.
- ▶ While water is not a prevalent 'trigger' of conflict, it is becoming a victim of warfare.
- ▶ There is no clear relationship between a country's per capita gross domestic product (GDP) and its water availability. However, in low- and lower-middle-income countries, an estimated 70–80% of jobs are water-dependent, as agriculture and intensive industries rely heavily on water
- ▶ Investments in water, sanitation and hygiene (WASH) services has been shown to provide significant positive returns

Richard Connor, UN editor-in-chief of the UN World Water Development Report



## Thematic perspectives:

- ▶ *Human settlements*: Damage to water infrastructure increases the amount of time women and girls/children – primary collectors of water – are exposed to the threat of violence. At the same time, water deficits can be linked to 10% of the increase in migration worldwide and can provoke tensions between communities
- ▶ *Industry*: Decoupling water from industrial productivity can improve water availability and quality, as wastewater can provide a sustainable source of energy, nutrients and by-products
- ▶ *Environment*: Over-exploitation of provisioning ecosystem services has impaired the capacity of ecosystems to regulate climate and water
- ▶ *Transboundary cooperation*: Water Diplomacy and International Water Law can help solve disputes and contribute to regional stability

## Response options:

- ▶ *Governance*: Water governance involves collective, multi-level action over water allocation and reallocation
- ▶ *Transboundary cooperation*: Awareness and support of joint transboundary aquifer management is increasing
- ▶ *Education and capacity development*: Citizen science represents an opportunity for both data collection and public participation
- ▶ *Financing*: Nearly all solutions to the water crisis will require capital



## Take away messages

- Water infrastructure and resources management promote growth and prosperity
- All economic sectors are vulnerable to climate change
- Benefit-sharing is central to equitable water allocation and governance
- Transboundary cooperation strengthens regional integration
- Investing in water delivers (multiple) social, economic and environmental co-benefits



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IANIC, member of Olympios Group, is a leading software integrator specializing in innovative water management solutions. We employ advanced technologies to help municipalities, institutions, organizations and businesses optimize water use, thus enhancing efficiency and safety. Our mission is to create a connected world through smart water management tools, fostering social responsibility and environmental sustainability.

IANIC transforms urban water management systems through its IoT ecosystem, supporting numerous smart meters, sensors and devices, and processing vast amounts of water-related data daily. It enables comprehensive monitoring and management of water resources, providing real-time provision and consumption insights, detecting anomalies and leaks, ensuring water quality compliance and streamlining billing and consumer support.

IANIC is dedicated to driving innovation in smart water management, forging partnerships with industry leaders to deliver comprehensive solutions that address the evolving needs of modern cities. By harnessing the power of data-driven insights IANIC aims in shaping the future of urban water infrastructure, creating resilient, adaptive systems that ensure equitable access to clean water resources for generations to come.

## ***Putting the EU's Water-Smart Vision into Practice***

In 2024, Europe embarks on a transformative journey as it navigates recovery from past crises while pursuing ambitious goals. The EU is focused on enhancing economic competitiveness through innovation, support for SMEs and investments in technology, green energy and sustainable agriculture. Emphasizing research and innovation, Europe is leveraging major funding programs to drive technological advancements and market-ready solutions. The European Green Deal's goal of climate neutrality by 2050 is being pursued with significant investments in renewable energy, circular economy practices and sustainable transportation. Digital transformation is a priority, with investments in 5G, AI and cybersecurity aimed at fostering a competitive digital economy. Additionally, Europe is strengthening international partnerships to address global challenges and enhance its global influence.

In IANIC, we believe that water is the lifeblood of our communities. It sustains existence, drives growth and nurtures our environment. This belief fuels our commitment to innovative solutions for sustainable and efficient water management being at the core of smart cities evolution. And our mission is fully aligned with EU's commitment to build a Water-Smart Society. And this is why we boldly contributed to this year's Water Innovation Europe with a firm bundle of propositions to put our joint vision into practice.



***Vangelis Balokas, Vice  
President of IANIC***

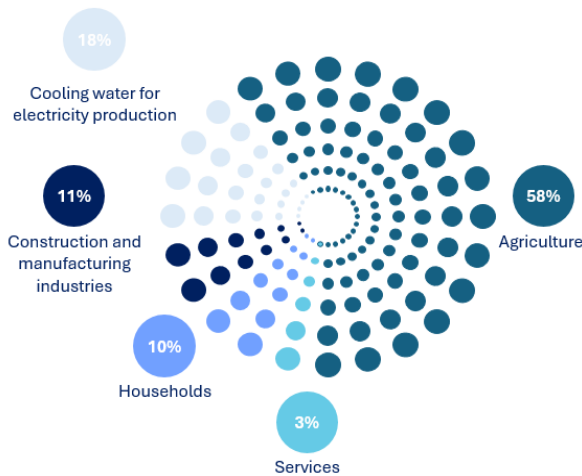
| Trending Solutions                                                                                                                                                                                                                                                                             | Future Solutions                                                                                                                                                                                                                                                                                           | Implementation Strategies                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▶ Water Management Systems Integrating IoT devices</li> <li>▶ Water Recycling and Reuse Technologies</li> <li>▶ Nature-Based Solutions (NBS)</li> <li>▶ Advanced Desalination Technologies</li> <li>▶ Water-Efficient Agricultural Practices</li> </ul> | <ul style="list-style-type: none"> <li>▶ Water-Energy Nexus Technologies</li> <li>▶ Digital Transformation of Water Infrastructure, Developing AI-driven analytics</li> <li>▶ Circular Economy Approaches</li> <li>▶ Climate Resilience Technologies</li> <li>▶ Community-Based Water Solutions</li> </ul> | <ul style="list-style-type: none"> <li>▶ Stakeholder Awareness and Collaboration</li> <li>▶ Regulatory and Policy Support</li> <li>▶ Safeguarding Continuity, investing in education and training programs</li> <li>▶ Pilot Projects and Demonstration Sites</li> </ul> |

# Main Sessions

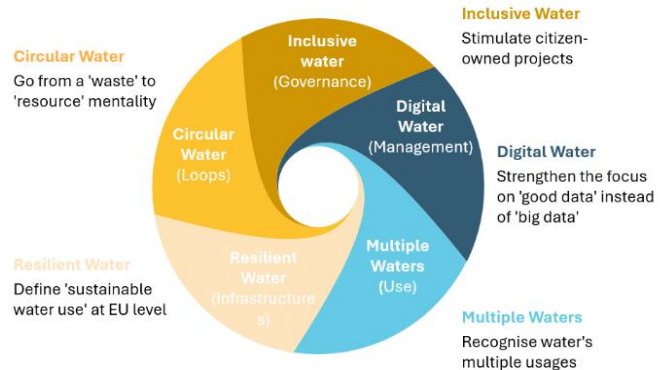


# KEY FACTS

## Freshwater usage by sector



## 5 Recommendations



## Recognising the socio-economic value of water will strengthen EU competitiveness

| Too much                                                                                                                                                                      | Too little                                                                                                              | Too polluted                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▶ Economic damages related to coastal floods alone might exceed EUR 1 trillion per year by the end of the century in the EU</li> </ul> | <ul style="list-style-type: none"> <li>▶ 56% foreseen deficit between global water demand and supply in 2030</li> </ul> | <ul style="list-style-type: none"> <li>▶ <u>22 % of Europe's surface water bodies and 28 % of the groundwater area are significantly affected by diffuse pollution</u></li> </ul> |



- 29%** Area affected by water scarcity in 2019 (excluding Italy)
- 38%** Share of EU population affected by water scarcity in 2019.
- 33%** Share of EU territories exposed to water stress.



CDP values water-related economic opportunities at approximately **€640 billion**, reflecting savings, market growth in water-smart technologies and improved community relations.



### ENERGY

- ▶ Water needs in the energy sector associated with the deployment of additional hydrogen solutions could increase by more than 30%.
- ▶ As the raw material of EV batteries, producing one tonne of lithium (enough for supplying 100 EV batteries) requires approximately 2 million tonnes of water. Around 20,000 m3 of water is required per li-ion battery.

### AGRICULTURE

- ▶ Current annual losses from drought amount to around €9 billion in the EU alone.
- ▶ The Water-Environment-Food-Ecosystems (WEFE) nexus approach and water retention are strategic dossiers for agriculture and water policies

### DIGITALISATION

- ▶ Samsung's gigafactory in Göd, Hungary, used 27,000 m3 of industrial and drinking water every day in 2022.
- ▶ According to a recent study, training the AI model Chat-GPT3 can consume a total of 5.4 million litres of water, and each query response can consume approximately 500 millilitres of water.
- ▶ 1 MW data centre power capacity on average consumes 26 million litres of water per year according to Savills.

### TRANSPORT

- ▶ Reaching the EU Hydrogen Target means Approximately 12 million tonnes of wastewater will likely be discharged after the pre-treatment, electrolysis and cooling process.
- ▶ The Rhine River transports over 300 million tonnes of goods annually, experienced low water levels in 2022, impacted significantly shipping arrivals/departures and capacity

# THE SOCIO-ECONOMIC VALUE OF WATER

## PRESENTATION OF THE SOCIO-ECONOMIC STUDY

Water Europe's manifesto advocates for a more holistic approach to water, based on an EU Water Strategy and an associated Action Plan. The Socio-Economic Study on the Value of Water, presented by Ilona Kirhensteine (WSP), is a key-asset in achieving such approach. It aims to gather and analyse data supporting the promotion of an EU Strategic Water Agenda for the upcoming EU policy cycle (2024-2029). This agenda aims to underscore the macroeconomic importance of water to the EU economy, emphasizing why water should be a political priority from 2024 onward. Beyond viewing water merely as a resource, the study highlights the added value of services like water treatment, purification, and wastewater management. These insights will support a forward-looking EU Water Strategy, advocating for dedicated European Water Funds under the next Multiannual Financial Framework.

The study analyses four priority sectors:

- ▶ **Semiconductor:** The semiconductor industry consumes significant amounts of freshwater, especially in regions with limited water resources. With the EU's semiconductor market growing, water quality issues can disrupt the supply chain, leading to shortages and price increases.
- ▶ **Data management (data centres):** The data centre sector is expected to increase water demand. Sustainable cooling solutions, such as adiabatic and free air cooling, can reduce water and energy consumption
- ▶ **Renewables and storage (hydrogen and batteries):** Green hydrogen production requires high water purity to improve energy efficiency. Water impurities can degrade electrolyzers, impacting plant lifetimes and operational costs.
- ▶ **Agriculture and food processing:** Agriculture is highly dependent on water. The European Green Deal promotes sustainable practices like precision agriculture and organic farming, which are generally more water efficient.

The study highlights the need for significant investments to support the EU's strategic water agenda, which include enhancing water efficiency and adopting sustainable practices. Increasing investment and a prioritisation of an EU Strategic Water Agenda brings societal and economic benefits, such as ensuring a reliable water supply, improving public health, and supporting economic activities. Mitigating floods and droughts also avoids significant economic damages. Investments in water can also boost economic competitiveness, create green jobs, and support ecosystem services. The European Green Deal aims to achieve climate neutrality by 2050, with water management playing a critical role in this transition.

Ilona Kirhensteine, Associate Director, WSP



# CHALLENGES & OPPORTUNITIES FOR COMPETITIVENESS

## CONTEXT

Water is a vital resource for health, the environment, economic growth, and sustainable development. A water-secure world is one in which citizens, industry and nature all have the water they need for a thriving, sustainable economy. Climate change is exacerbating water-related issues impacting EU and global supply chains and systems of trade, namely when most water use in a supply chain is externalised, putting pressure on water resources of the exporting region.

Moderated by Magdalena Rzeczkowska (Director of Federacja Przedsiębiorców Polskich Brussels Office), this panel pointed to the need of engagement between companies and suppliers to secure our water resources for the future, through direct engagement, financial incentives and solutions that foster water sustainable goals and limiting environmental impacts.

As highlighted by Mirjam Wolfrum (CDP), companies are gradually understanding the need for a water-smart model, as well as investments in water. This is as they become more and more exposed to water risks and as sustainability becomes a cornerstone of strong supply chains. At the moment, 1 in 5 companies report supply chain water risks. Companies integrating suppliers into risk assessments are seven times more likely to report supply chain risks and put in place measures to mitigate those risks.

To mitigate supply chain water risk is almost three times cheaper than the potential cost of impact yet businesses that prioritize water considerations in their long-term strategy discern four times more opportunities in their sector. Without a comprehensive understanding of the water-related risks impacting a supply chain, and of a company's water footprint, companies will be ill-equipped to anticipate potential disruptions and to capitalize on opportunities for action namely on the surge in consumer demand for sustainable goods.

## RECOMMENDATIONS

- ▶ Recognise the value of water by assimilating the cost of its extraction, transportation, usage and pollution, as well as defining sustainable water use in a quantifiable way
- ▶ Raise awareness of the water footprint in value chains, by supporting suppliers to set and meet water-related targets and plans to achieve water security.
- ▶ Promote high-quality mandatory private-sector water disclosure and benchmarking for sectors of activity across countries in the Global North.
- ▶ Call for financial institutions to incorporate water innovation in their governance structures and financial products.



### Water Footprint

Water footprint measures the amount of water used to produce each of the goods and services we use. It can be measured for a single process, such as growing rice, for a product, such as a pair of jeans, for the fuel we put in our car, or for an entire multi-national company. The water footprint can also tell us how much water is being consumed by a particular country – or globally – in a specific river basin or from an aquifer.



# EU BLUE DEAL: INDUSTRIAL BEST PRACTICES



Pietro de Lotto, European Economic and Social Committee (EESC)

The world is facing a global water crisis, and water stress is a major concern in Europe. In some areas there is even a risk of displacing industries from water-stressed areas, leading to loss of employment and destabilising economies. The current EU legal frameworks focus on the quality of water, but we have to deal also with water quantity. Water efficiency is lacking in many areas of our society, including water supply infrastructures, production processes and consumption. Water loss and wastage need to be significantly reduced.

This is why, the EESC, an advisory body of the EU representing organised civil society, calls to make water a strategic priority for the EU. Our call for an EU Blue Deal, a comprehensive water strategy for Europe, puts forward 15 principles and 21 actions to be adopted as a matter of urgency, addressing the social, economic, environmental and geopolitical aspects of water, water challenges in agriculture, industries, infrastructures and sustainable consumption.

Considering the vital role of water, we believe that water resilience and decarbonisation have to be addressed with the same determination, on an equal footing, with dedicated funding and making water a stand-alone strategic priority, embedded in all EU policies, laying out actions to improve water resilience, security and sustainability. Water is absolutely essential for our economic activities, green transition, sustainable agriculture and industrial competitiveness.

In EESC recently adopted opinion, we stress that industrial and technological approaches supporting a water-smart society must be structured around a comprehensive sustainable water management policy for industry based on reducing, reusing and recycling water, decreasing pollution and using water-efficient technologies, whilst ensuring a just transition and industrial competitiveness. We need a European water data management ecosystem, measure water consumption throughout production processes and minimise the use of drinking water for industrial purposes.

Therefore, we urge the EU to integrate water in a revised industrial strategic framework and in the transition pathways with a sectoral approach, including a pathway dedicated to the clean and water-efficient tech sector with a human dimension roadmap ensuring the availability of the required skills, quality jobs and decent working conditions. This revision should explore the idea of establishing a new industrial deal to offer European industry a consolidated strategy. All these actions require proper funding thereby, establishing the EU Blue Deal transition fund in the industrial field is needed.

I can reassure you that the EESC, as the pioneer institution calling for a comprehensive standalone water strategy, will continue to push for the right level of ambition concerning water, our most precious good.



Pietro de Lotto, European Economic and Social Committee (EESC).



Audience view at the Water Innovation Europe 2024 event.

# A EUROPEAN LEGAL FRAMEWORK THAT WORKS FOR A WATER-SMART ECONOMY

## CONTEXT

How to envisage a Water-Smart Society for the new EU mandate? What key-challenges is a Water-Smart Society facing at regulatory level? This session gathered cross-sectoral expertise and experiences, targeting a positive-toned narrative envisaging an economy that brings together water and sector's needs.

Preceded by the keynote speech of Mr. De Lotto, Chairman of the Consultative Commission on Industrial Change of the EU Economic and Social Committee and his call for a common water strategy, the speakers defended the urgency on investing in digital tools to monitor and report on water quality, as well as the importance on developing legislation in a bottom-up approach, alongside the relevant economic and societal sectors.

The proposal of a European Green Deal 2.0 and the nomination of a(n) (Executive) Vice-President of the European Commission for Water was recalled as the way forward to ensure that water is further elevated to a high-level topic. In addition, the speakers appealed to the implementation of the EGD at local level, through the empowerment of local authorities.

## RECOMMENDATIONS

- ▶ Both Green Deal and Competitiveness ambitions can coincide and thrive in the new mandate.
- ▶ Digital tools are relevant for farmers and other sectors to improve water efficiency and resilience.
- ▶ Water reuse should be extended and prioritization of drinking water for certain uses.
- ▶ Invest in nature-based solutions and establish clear frameworks on water-usage for each sector, such as the Water Reuse Regulation
- ▶ Actions on governance and implementation are essential to fully adhere to existing legislation and to solve problems associated with abstraction of water.

Nicole Couder, Suez; Nathalie Hemeleers, Solar Impulse; Arthur Guischet, European Water Association; Patrick Pagani, Copa Cogeca



# PUBLICATION

## BLUE BOOK ON WE's LIVING LABS

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Wim van Vierssen, Past vice-president of Water Europe,  
Senior Strategist Dareius

In the framework of the second session of Water Innovation Europe 2024, Wim van Vierssen, former vice-president of Water Europe and Senior Strategic for Dareius, introduced the Water Europe Living Labs.

This presentation followed up Water Europe's latest Notebook #3 titled "[Bluebook on Creating Water Europe Living Labs \(WELLS\)](#)". These new WELLS are distinct from the Water-Oriented Living Labs (WoLLs) in several aspects.

The WoLLs are water-oriented demo and platform-like environments with a cross-sector nexus approach. They involve multi-stakeholders in a certain continuity, which provide a testing ground for developing, testing, validating and scaling up a combination of solutions. These solutions encompass technologies, their integration in combination with new business models and innovative policies based on the social value of water.

“WELLS” stands for “Water Europe Living Labs” and are not less than cross-sectorial partnerships. Based on experiences gained with WoLLs, solutions-oriented approach in which organisational capacity is deployed with the aim of solving practical problems. Its main targets are practitioners, administrators, and scientists interested in addressing complex water issues and promoting the development of a Water-Smart Society.

The WELLS work at three inter-connected scales (national, river basin and local scales) in line with the three vertical leadership teams (regional, local and national) and connect them conceptually with six challenging WELLS Governance themes:

- ▶ National roles and responsibilities;
- ▶ European water compliance planning;
- ▶ Citizenship ownership;
- ▶ Industrial Symbiosis;
- ▶ Well embedded;
- ▶ Technology transfer.



# MAKE IT HAPPEN: THE ROLE OF COLLABORATION

## CONTEXT

There is a global water challenge, on which Europe is working at the forefront with its Water Framework Directive (WFD), and for which Europeans share a vision as key stakeholders, where the public and private sectors work closely together in a model of water symbiosis and where we collaborate across and beyond the traditional boundaries of silos, accelerating the introduction of innovative technologies to help establish a water-smart society.

Local and regional authorities play an essential role in the implementation of the water acquis and in finding solutions to make Europe water-smart. The new Blue Book on Water Europe Living Labs (WELLs) and the new Atlas of Water-Oriented Living Labs (WOLLs) showcase good collaborative practices in research and innovation.

Europe needs 30% more water at the moment and to ensure future needs, which is not available. The Blue Book and the WOLLs aim to bring new technologies, practical instruments and guiding principles to support citizens and different economic sectors to walk the path of a Water-Smart Society. Further, the WELLs provide examples of collaborative settings that accelerate water-oriented actions/solutions towards a Water-Smart Society, from the European to the local scale, based on mix of bottom-up and top-down approaches.

## RECOMMENDATIONS

- ▶ Develop a flexible EU-wide water-risk framework applicable to different Member-States and regions
- ▶ Invest in horizontal and mixed policy instruments, from regulatory frameworks to communication measures, including a clear timeline on the EU Blue Deal
- ▶ Stimulate bottom-up processes and engagement with citizen's owned water-management projects
- ▶ Invest time in making connections, in storytelling and in raising awareness: shift the focus between spending money and time collaborating and understanding local needs and realities and building meaningful connections between stakeholders.

Andrea Rubini, Water Europe; Luzette Kroon, Wetterskip Fryslân; Giorgos Sachinis, EYDAP; Bernard de Potter, Flemish Environment Agency; Inge Genné,



# PUBLICATION

## WATER-SMART INDUSTRY



Geoff Townsend, ECOLAB

The third main session of WIE 2024 was marked by the presentation of the White Paper on [Water-Smart Industry](#), by Geoff Townsend, Industry fellow of ECOLAB.

This white paper starts from the premise that three major crises are shaping the context of societal and industrial efforts, all interconnected through water: Climate change, energy demand, and biodiversity loss.

WE's white paper uses two perspectives to outline industry's relationship with these crises: the impact from industry and the impact on industry. The main impact from industry, is the result of the gap industry perpetuates through abstracting more water than is replenished to fresh water sources. This drastically increases risks, which themselves are growing at a considerably quicker rate, in both size and number, than industry is mitigating them. It is also important to mention industry's discharging of emissions and effluent has the capacity to negatively affect ecosystems.

To understand the impact on industry, the paper recommends looking at the WEFE nexus. Grasping the link between water and energy is particularly important: where either one is limited in any kind of way, so is the output of industry. Next, the energy transition is shifting the onus onto renewable energy sources such as green hydrogen, bioenergy, carbon capture. These are water-intensive both to create and maintain. For agriculture, the volatility of climate change increases uncertainty where water is concerned, decreasing food security as a result of droughts and floods. Europe's digital and security transformation is highlighted too, areas where strategic autonomy are of concern such as semiconductors, EV batteries, datacentres, drastically increase demand on the water basins local to the location of the plant.

The paper recommends three courses of action with the express two goals of addressing these crises through change and guarding industry's productivity simultaneously. The first step is defining sustainable water use, quantifying it at the local level and evaluating its social, environmental, and economic impact. This will allow the significant amounts of data already available to be used to the fullest extent possible, make it clearer for both local policy makers and industrial users alike and make sustainable water use more measurable. The second step is to set local water-smart targets, align basin users with these goals, and enable data sharing for better governance. This is crucial as water reduction efforts so far have often not been considerate of the basin as a whole, being determined more in isolation. Facilitating this step, allows industry to work towards an ultimate goal, enabling long term business viability. The third step is to develop showcases and communicate achieved success, promoting technologies that enhance water efficiency, waterless processes, and fully monitored and controlled closed (circular) production cycles. In combination with leveraging WOLLs and other EU-funded programs to demonstrate to industry, policymakers and society how water smart industries can be achieved.

# TURN OUT LINEAR PROCESS AND GO STRAIGHT AHEAD TO CIRCULAR ECONOMY

## CONTEXT

While an industrialized society has in general led to more prosperity, improved human health and higher standards of living, significant downsides have developed that need to be addressed. These stem from climate change, the energy crisis and the collapse of biodiversity. There is an increasing gap between freshwater consumption and natural replenishment. Industry accounts for ~50 % of freshwater withdrawal in Europe while water stress in Europe can go up to 70% during summer. The rate of growth of water-related risks in many places across Europe is far outpacing the efforts being made to mitigate them. In addition, industry can have a notable impact on water quality, while insufficient access to water is rapidly becoming a significant business risk in Europe.

This gap is rooted in a growing demand for fresh water, on our inability to determine sustainable water use, on insufficient data, on a lack of understanding of the complexity of water and its inter-relations with being a finite, local and shared valued, amongst others. Further, as pointed out by Veronica Manfredi (Director DG ENV), the EU is facing increasing difficulties in finding solutions for water-demanding sectors, with EU institutions not playing an ambitious enough role towards a water strategy or towards nature restoration.

Pär Larshans (Ragn-Sells) called for a mentality change from “we are producing waste” to “we are producing resources” while Geoff Townsend (ECOLAB) highlighted a ‘more for less’ approach, that entails reducing to achieve a ‘net positive’ future where grow while reducing resource consumption, a fundamental element of the Circular Economy.

## RECOMMENDATIONS

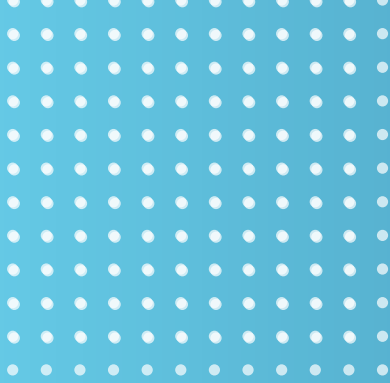
- ▶ Define “sustainable water use” at EU level, based on the true value of water resources and in waste management principles developed by UNEP
- ▶ Implement an EU Water Strategic Approach
- ▶ Recognise that legislative processes are at the core of change and push for more detailed technical guidelines through delegated and implementing acts
- ▶ Put in place a cap-and-trade system similar to the ETS applicable to water waste

Hans Goossens, Water Europe and Watergroep; Pär Larshans, Ragn-Sells; Andreas Bichler, Dehoust; Gerard van den Berg, ULTIMATE project and Water Europe; Veronica Manfredi, European Commission



# Awards





## SIX AWARDS

Innovative water-related approaches, solutions, and technologies are an integral part of the implementation of the Water Vision 2030 and the transition to a Water-Smart Society. Water Europe is committed to bringing forward innovations with high market or high-value application potential through its Water Europe Innovation Awards and its Water Market Europe programme. Since 2016, Water Europe has been awarding the most breakthrough solutions that are here to pave the way to a Water-Smart Society. Six awards have been created to support innovative solutions into digital water, water governance, international actions, technological innovation and water-smart policy actions. A specific focus on SMEs has been set up to raise awareness about a paramount local actors. In 2024, six new winners have been awarded during Water Innovation Europe. Have a look !



## Technology and SMEs Award

European Small and Medium Enterprises (SMEs) are undeniable carriers of out of the box innovations and breakthrough solutions and Water Europe could only recognise their important role by dedicating an exclusive award to their innovations. In its effort to support the economic opportunities for the SMEs but also the whole European water sector, Water Europe launched for the very first time the Water Innovation SME Awards in 2014. Since then, it has awarded SMEs, bringing them to the forefront of the water sector and welcoming them on board with a free annual membership to Water Europe.

Hydro Volta won this year's SME Award for its **SonixED**, an advanced water treatment innovation which enhances nitrate removal and desalination efficiency. The system offers a high-performance, cost-effective solution for diverse water treatment applications globally. [Discover more.](#)

## Water Governance Award

Establish a water system whose governance balances the interests of all stakeholders in its design, management and maintenance is a requirement to build a Water-Smart society. It will underpin the rational use of multiple waters, based on the value of water principle and new economic models, with minimised impact on natural water bodies. Europe's wide climatic diversity makes it a unique testing ground for new governance and technologies. Water Europe launched this awards in 2014 to support such initiative.

**Vatteninfo Sverige AB** is the winner of the Water Governance Award 2024. Vatteninfo has founded a national organization, the National Association for Joint Facilities for Water and Sewage, GEMVA, which acts as an umbrella organization that strengthen each small association's management capacity and their opportunities to acquire sufficient knowledge and expertise. To learn more, visit the official [website](#).



## Digital Water Award

Digitalisation is a critical trend for our society and economy. Smart-water and water-smart digital sector are intrinsically connected. Water Europe recognises the role of solutions providing digital value to water by exploiting the benefits of the extreme interconnectivity, creating capillary networks capable of monitoring the water system, thus generating continuous flows of valuable data for innovative decision-support systems at different governance.

**KIOS Research and Innovation Center of Excellence** (University of Cyprus), is the winner of the Digital Water Award for their PathoINVEST toolbox, an innovative software tool designed to enhance the response capabilities of water utilities during pathogen contamination events in drinking water networks. Developed through computational modelling, this tool focus on safety of water supplies, seeking to advanced solutions to ensure compliance and protect public health. [Check more.](#)

## Global Water Challenge Award

Water Europe recognises the importance of the Sustainable Development Goals for identifying the value of water globally, supporting SDG 6 and the other water-related SDGs. Europe is a hub for leading-edge water technologies and innovation, however application of these should never be confined to Europe. The Global Water Challenge Award looks to reward initiatives and technologies which have applications worldwide and provide tools to regions of the world that require solutions the most challenging water issues.

**Wasser 3.0 gmbH** won the Global Water Challenge Award for their innovate filter-free, highly efficient removal and reuse of microplastics from waters using non-toxic materials and skim technology. Their modular process requires less 50% energy and produces less 50% of CO2 than mainstream alternatives. [Check more.](#)



## Water Tech & Infrastructure Award

Societies need to create a resilient and reliable hybrid grey and green water system, designed to withstand severe external and internal shocks – such as climate change induced floods and droughts – without compromising essential functions. In the context of climate change, Water Europe wants to shed light on the work and actors which provide water services that we generally take for granted in our daily life.

This year, **Palermo University** won the Water Technology & Infrastructure Award for their Water Resource Recovery hub. The hub stands as a leading model in applying the circular bio-economy paradigm to the water sector in the region of Sicily and worldwide. Discover [more](#).

## Water-Smart MEP Award

Launched in 2019, this award highlights the work of the Members of the European Parliament that contribute to building a Water-Smart Society in Europe and beyond. Water is a shared resource which contributes to the success of the different policies if its management is secure, sustainable, and resilient. The European Parliament, as the European institution represented the citizens, has a societal responsibility to contribute to a society in which the value of water is recognised and realised to ensure water security, sustainability, and resilience; all available water sources are managed so that water scarcity and pollution are avoided; water and resource loops are largely closed to foster a circular economy and optimal resource efficiency; the water system is resilient against the impact of climate and demographic change; and all relevant stakeholders are engaged in guaranteeing sustainable water governance.

This year, **Pernille Weiss** is the winner of the Water-Smart MEP Award. Pernille has demonstrated an outstanding work as a Member of the European Parliament and as a Chair of the MEP Water Group, who has contributed to achieving a Water-Smart Society in Europe and beyond. Learn more about her role [here](#).



