Advancing water resilience through digital innovation and responsible stewardship

CISPE policy recommendations for the European Water Resilience Strategy

June 2025

Water scarcity is rapidly becoming one of the world's most pressing challenges. The 2024 UN Water Report underscores a troubling paradox: while flooding is increasing, water scarcity is also rising, now affecting 50% of the global population-including 11% of Europeans.

In this context, CISPE (Cloud Infrastructure Services Providers in Europe) strongly supports the European Commission's commitment to placing water resilience at the heart of the European Green Deal. As Europe advances toward its Digital Decade and sustainability objectives, cloud infrastructure and data centres serve a dual purpose-as responsible water users and as key enablers of water innovation. CISPE members are committed to responsible water management, technological advancement, and active collaboration to strengthen Europe's water resilience.

Data centres operate with a strong focus on water efficiency and continue to make progress through innovation and responsible resource management. Our industry leads by example-embracing voluntary sustainability commitments, adhering to international standards, and continuously advancing best practices. CISPE advocates for a proportionate, evidence-based EU Water Resilience Strategy that balances environmental protection with Europe's digital competitiveness. The Commission's focus on water presents a vital opportunity to align technological progress with sustainable water use.

1. Enable industrial water reuse across the EU

Water stewardship involves the responsible use, protection, and management of water resources through collaboration across sectors. Leading tech companies already implement catchment-level assessments, sustainable sourcing, and replenishment programmes. Increasingly, these companies aim to become "water positive"- returning more water to ecosystems and communities than they consume. Through sustainable operations and local partnerships, industry organisations are aligning with EU water goals by investing in innovative reuse systems, closed-loop cooling processes, and community-focused water projects. These efforts support not only business continuity but also broader environmental and social outcomes.

Modern data centres utilise a range of advanced cooling technologies-including evaporative hybrid systems and close-circuit systems to enhance water efficiency without compromising thermal performance . These conservation gains can be significantly scaled by enabling access to alternative water sources, particularly through industrial water reuse. While the EU introduced minimum standards for agricultural water reuse in 2017, the regulatory framework has yet to fully address the potential of reuse in industrial settings. EU Regulation 2020/741 recognises this opportunity, with Recitals and Article 12.2 granting Member States discretion to adopt national measures and signalling openness to future expansion.

The EU Water Resilience Strategy presents a timely and strategic opportunity to formalise support for industrial water reuse across Europe. By promoting the treatment and reuse of municipal wastewater for non-potable applications-such as data centre cooling, urban landscaping, and ecosystem restoration — the EU can significantly reduce pressure on freshwater sources. This approach not only preserves high-quality water for essential uses like drinking and agriculture but also minimises environmental discharge and strengthens the resilience of Europe's water systems.

Policy Recommendations:

- **Establish a formal EU framework to support industrial water reuse/return, by expanding beyond agricultural applications and encouraging Member States to adopt harmonised measures. Promote the treatment and reuse of municipal wastewater for non-potable industrial uses, including data centre cooling, urban landscaping, and environmental restoration.**
- **Preserve high-quality freshwater for essential uses (e.g., drinking water and food production) by systematically enabling recycled water use in suitable industrial and urban applications.**
- **Increase the supply of water replenishment projects.**

2. Incentivise investments to accelerate water-efficient technologies and infrastructure

The cloud and data centre industry has committed to sustainability targets under the Climate Neutral Data Centre Pact, an industry-led initiative whose signatories represent around 85% of the data centre market in Europe, endorsed by the Commission. These include achieving a Water Usage Effectiveness (WUE) of 0.4 litres/kWh for new data centres in water-stressed areas by 2025. Many facilities already employ water-saving technologies like free air cooling and direct evaporative cooling, especially in temperate zones. The Pact's WUE metric is particularly robust, as it considers both the degree of local water stress and the quality of water used—ensuring that water efficiency efforts are responsive to real-world environmental conditions.

Beyond cooling technologies, many operators also apply advanced water stewardship strategies-such as sourcing non-potable or recycled water and integrating circular water systems into their operations. These efforts support a holistic approach to sustainability that exceeds compliance requirements and showcases the sector's commitment to innovation-driven resource efficiency. CISPE members support local water resilience through investments in infrastructure, wetland restoration, and community partnerships. These initiatives ensure sustainable growth while respecting local water contexts.

To meet Europe's growing water infrastructure demands and bridge the significant investment gap, the European Commission should establish a dedicated framework for public-private partnerships (PPPs) focused on water system modernisation. Such a framework would enable the development of sustainable financing models that harness private sector innovation and capital, while ensuring robust public oversight and accountability. By aligning investment horizons with business cycles, this approach can drive phased, efficient upgrades-such as the deployment of advanced monitoring tools, leak detection technologies, and digital water distribution networks. Structured PPPs would also acknowledge and build upon existing industrial investments, offering a clear and coordinated path towards modernisation. This model ensures that water efficiency improvements are not only technically achievable but also economically sustainable, delivering lasting benefits to public authorities, private stakeholders, and local communities through more resilient, resource-efficient water infrastructure.

Policy Recommendations:

- **Establish a formal EU framework for public-private partnerships (PPPs) specifically dedicated to modernising water infrastructure.**
- **Create sustainable funding mechanisms that combine private sector innovation and capital with public sector oversight.**
- **Align investment timelines with business cycles to support phased, efficient infrastructure upgrades.**

3. Strengthen Europe's water sector with digital solutions

The integration of Internet of Things, artificial intelligence, and advanced analytics enables digital water management that benefits infrastructure operators and end users. These technologies allow water utilities to implement predictive maintenance, help industrial users ensure environmental compliance, and enable agricultural businesses to optimise irrigation through data-driven insights.

To unlock the full potential of digital innovation in water management, the EU Commission should establish a framework that accelerates the adoption of cloud-enabled technologies. These solutions, including digital twins, AI analytics, and IoT sensors, can transform water resource management by enabling real-time monitoring, predictive maintenance, and automated optimisation across utilities and industrial operations.

A cloud-based approach would allow water utilities and industrial users to centralise data collection, automate operational processes, and leverage machine learning algorithms for improved decision-making. By setting clear technical standards and implementation guidelines, the EU can facilitate the deployment of these technologies while ensuring data security and interoperability. This modernisation would enhance leak detection, reduce water waste, optimise treatment processes, and enable proactive responses to environmental challenges, ultimately creating more resilient and sustainable water systems across member states.

Policy Recommendations:

- **Develop a policy framework for secure, interoperable cloud-based water solutions.**
- **Promote the deployment of digital twins and digital sensors in water systems.**
- **Ensure regulatory clarity on data governance, especially for critical infrastructure.**

4. Ensure a coherent EU water resilience framework across sectors

As the demand for digital infrastructure grows, so does the need for sustainable water management in the data centre industry. A comprehensive EU Water Resilience Strategy must take a balanced, cross-sectoral approach that considers the efficiency, societal value, and environmental impact of water consumption across all industries. At the same time, to ensure coherence and avoid unnecessary duplication, the strategy should align with existing regulatory frameworks rather than introduce new, fragmented requirements.

Water efficiency is already covered under EU frameworks such as the Energy Efficiency Directive (EED). Proposals for additional reporting or performance obligations risk duplicating existing rules without added benefit. Instead, regulation should be streamlined to support innovation and reflect local water conditions. A one-size-fits-all approach-such as Minimum Environmental Performance Standards (MEPS) — would not account for regional differences in water availability and infrastructure. Specifically, MEPS fail to consider the interdependencies between water use and efficiency, energy efficiency, and heat reuse potential in data centres. For example, mechanically air-cooled data centres are typically less energy efficient than water-cooled data centres, but they are more water efficient. A rigid MEPS regime risks creating administrative burdens without environmental gains, especially where climatic conditions make water-free cooling the norm. The upcoming Date Centres Rating Scheme under the EED already incorporates water-related indicators such as WUE, providing a more flexible, context-sensitive approach.

Data centres are vital to Europe's digital infrastructure, economic resilience, and public services. The sector is already navigating high energy costs, uneven electricity market access, and complex regulatory demands. Imposing new, standalone water regulations could increase costs, create regulatory fragmentation, and deter investment. This risks shifting infrastructure outside the EU-undermining both sustainability and sovereignty goals. Such regulatory uncertainty could also reduce Europe's attractiveness for climate-neutral infrastructure investment at a time when other regions offer clear and stable frameworks for green data growth.

The Water Resilience Strategy should reinforce Europe's leadership in sustainable cloud infrastructure, not constrain it. Smart, targeted policy will support innovation while safeguarding both water resources and digital progress.

Policy Recommendations:

- **Adopt a cross-sectoral, holistic approach to water policy that avoids singling out specific industries.**
- **Prevent regulatory duplications by aligning with existing EU frameworks.**
- **Focus on closing gaps in water management without duplication requirements.**

About CISPE

CISPE is the most representative, respected and relevant association for cloud service providers in Europe. Working for the benefit of cloud vendors and users, CISPE gives a voice to all players from local SMEs to global hyperscale cloud providers. It has proven itself a valuable partner to European institutions through insight and the development of practical tools, frameworks, codes of conduct and guides that help implement EU policy. CISPE is also a founding and current board member of Gaia-X.

CISPE is governed by an exclusively European board that enshrines the power of smaller players whilst understanding the reality of federated, distributed, and multi-cloud approaches.

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