

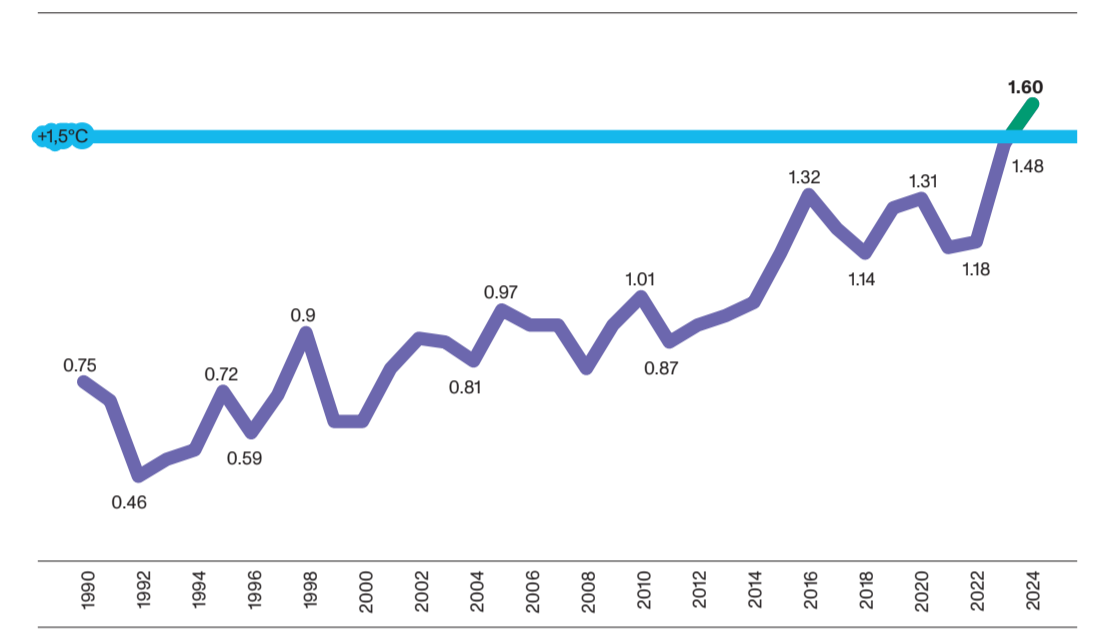
The Community's Mission

To be the multi-stakeholder think tank to develop scenarios, strategies and policies in support of the extended water supply chain in Italy and its development to aid Italy in becoming a European and world benchmark

1 The "Planet Water" and the challenge of climate change

- In 2024, **global warming exceeding for the first time the +1.5°C threshold** compared to the pre-industrial era
- In Italy, climate change is manifesting through **substantial alterations in the water cycle**:
 - In 2022, there were 299 **rain-free days**, approximately 15 more than the historical average (1981-2010)
 - **Extreme rainfall** events have seen an average annual increase of 48% between 2005 and 2024
 - **Urban flooding** incidents have risen from an average of 3 per year in the 2005-2009 period to 134 in 2024

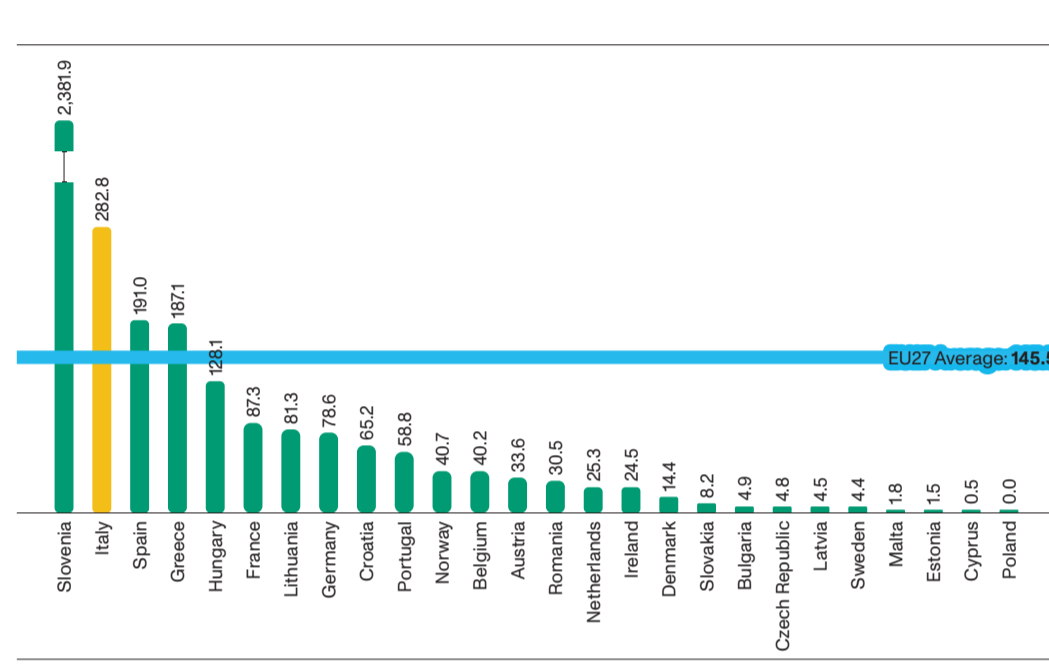
Figure 1
Trend in thermal anomalies with respect to the pre-industrial period average (var. °C vs. 1850-1900 average), 1990-2024.



- Italy is the **4th most water-stressed* country in Europe**
- Italy is the **2nd** country in the EU27+UK for economic losses related to climate in the 2022-2023 period, with €282.8 per capita
- Water scarcity also has a direct impact on the economy:
 - In 2022, drought and extreme events caused damages amounting to 5.6 billion euros in the agricultural sector

*Water stress is defined as the ratio between total water withdrawals and the availability of surface and groundwater

Figure 2
Average of economic losses related to climate change* for the past 2 years in EU-27** (Euro per capita), 2022-2023

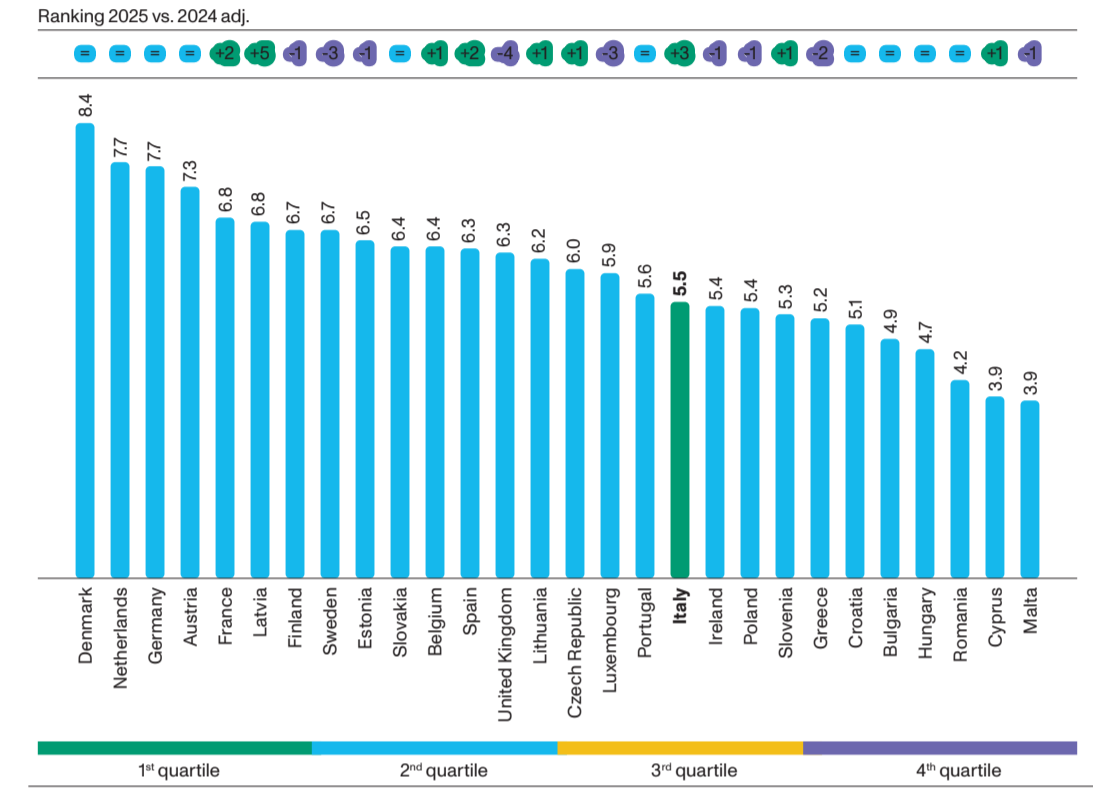


2 Snapshot of water management in Italy and value of the extended value chain

- Water has a direct or indirect impact on 10 out of 17 of the United Nations SDGs and 53 out of 90 targets
- To assess the sustainability of water management and compare Italy's performance with that of other EU and UK Countries, the Community has developed a **Composite Index** which includes **39** objective and measurable Key Performance Indicator (KPI)
- In the Value of Water for Sustainable Development 2025 index, Italy ranks 18th among EU27+UK Countries, with an index score of 5.5
- Italy has improved by three positions compared to the Value of Water for Sustainable Development 2024-Adjusted index*

*The Valore Acqua Index towards Sustainable Development 2024-Adjusted provides a snapshot of the state of European countries in the previous year, while taking into account the revision of historical series by major international databases

Figure 3
Value of Water for Sustainable Development 2025 index (EU27+UK countries; rising scale from 1=min to 10=max).

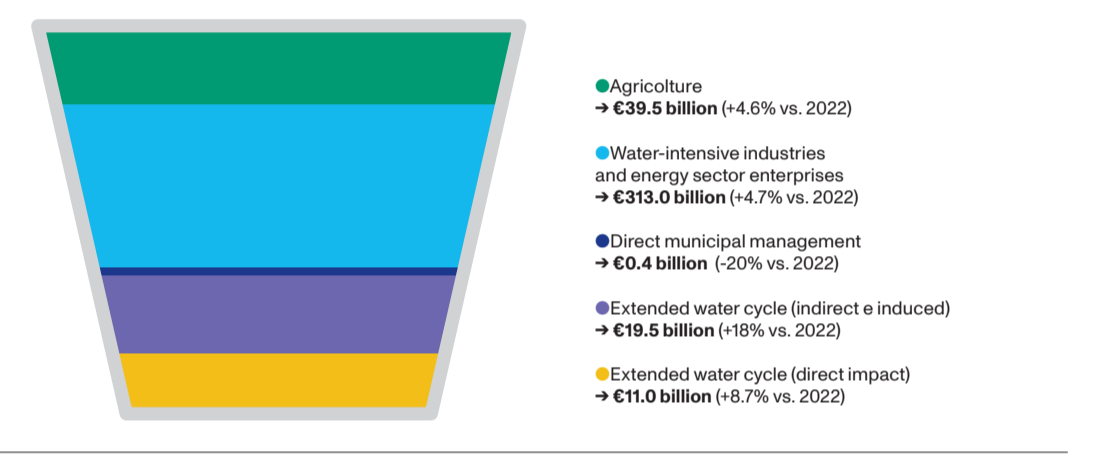


- The Value of Water Community has mapped and reconstructed, for the first time, the value of the extended water supply chain in Italy, analyzing over 84 million observations
- **Water is a primary input for 1.1 million** agricultural enterprises and approximately 330,000 water-intensive manufacturing companies
- In 2022, the extended water cycle generated €11 billion in Added Value, with an average annual growth rate of 5.5% over the period 2015-2023, above the manufacturing rate and Italian GDP
- Without water resources, 20% of Italian GDP could not have been generated

Figure 4
Value added generated by the extended water supply chain in Italy, 2023.

Water is a fundamental enabler for the generation of over **€383 billion** of Value Added in Italy in 2023

Without water resources **20%** of Italian GDP could not be generated (+1 p.p. vs. 2022)



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Strategic Report 2025

Value of Water Community

6th Edition

Conceptual map

The European House Ambrosetti

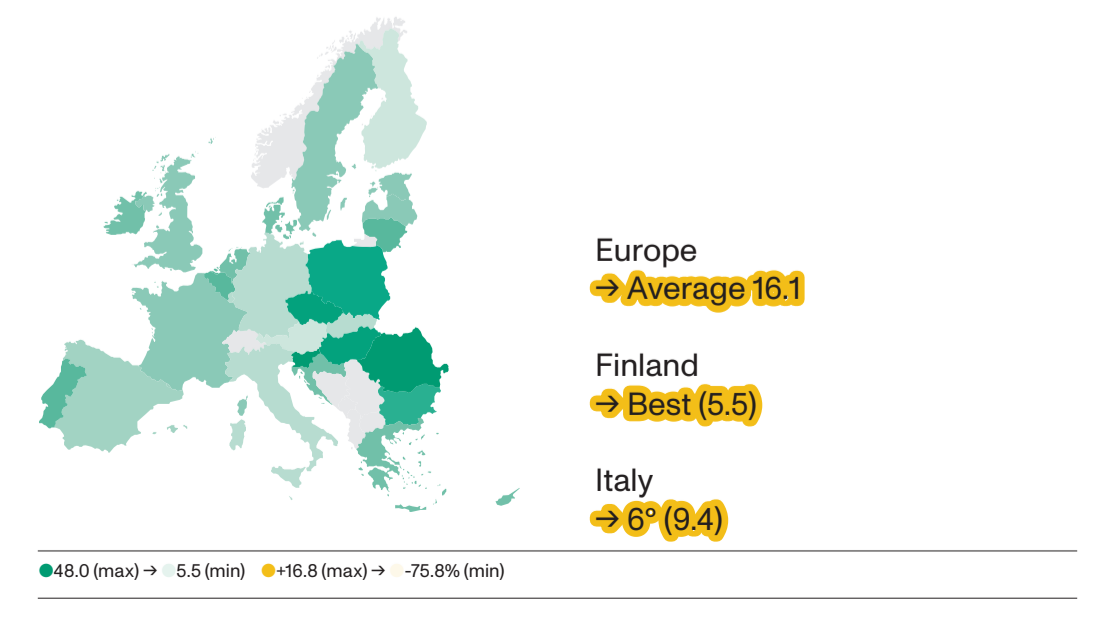
3 The challenges to optimize water management in Italy

Safeguarding water quality and the relation between water and health

- Strengths**
 - Italy ranks 6th among the EU27 countries for the **lowest impact of water on health**, measured in terms of DALYs*, with 9.4 years of healthy life lost per 100,000 inhabitants
 - Italy is characterized by **high water quality**: 85% of drinking water withdrawals come from naturally protected underground sources
- Weaknesses**
 - Italy ranks 22nd among the EU27 countries for the share of **safely treated domestic wastewater**, with a rate of 70.2%
 - The European Union has launched **four infringement procedures against Italy** due to deficiencies in wastewater treatment services in certain areas, where 1.3 million Italians live in 296 municipalities without wastewater treatment service

Figure 5
Per capita water related DALYs*

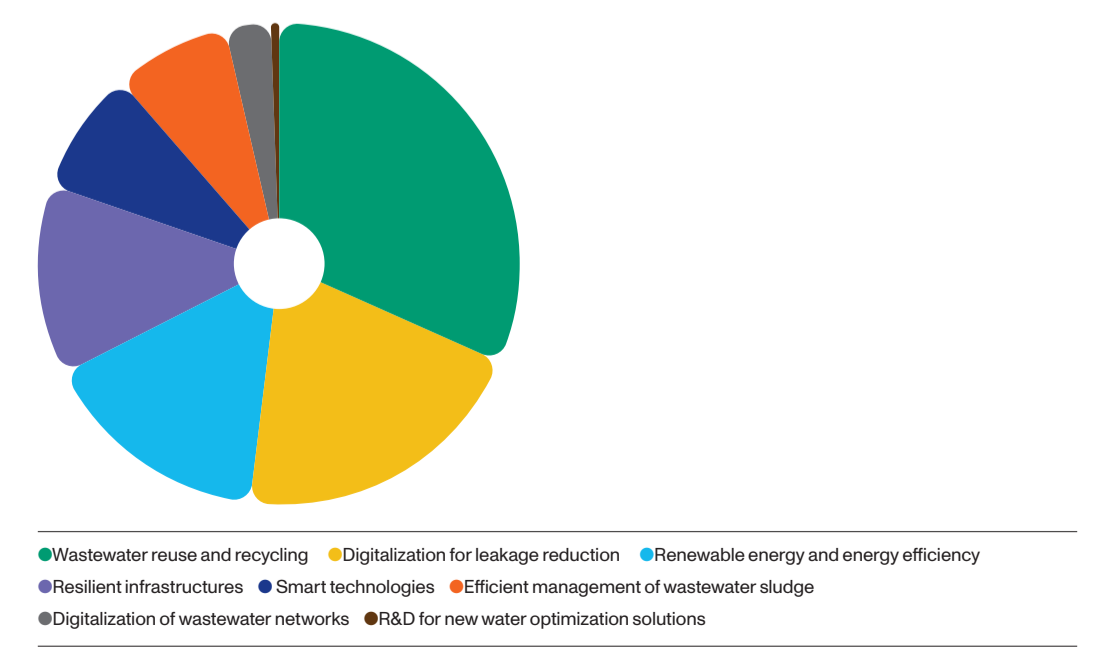
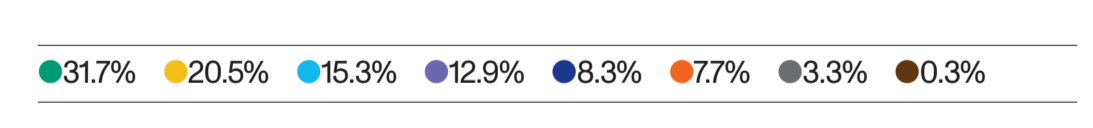
(*) Disability Adjusted Life Year (DALY) measures the time lost in good health due to disability or premature death caused by a disease



«Smart & Circular Water»

- Strengths**
 - 9 out of 10 operators plan to **digitize more than 90% of their network** within the next 2-3 years
 - The share of **technology investments** in Italy is expected to increase by 3 percentage points by 2029, a growth rate three times higher than the EU27+UK average
- Weaknesses**
 - Italy's **large reservoirs** are aging infrastructures, with an average age of 58 years
 - The penetration rate of **individual smart water meters is 17%** (vs. the EU27+UK average of 49%)
 - 42% of agricultural businesses are significantly **lagging in adopting Agriculture 4.0** solutions

Figure 6
Investments in innovation and circular water per technology type in Italy (% of total), 2023

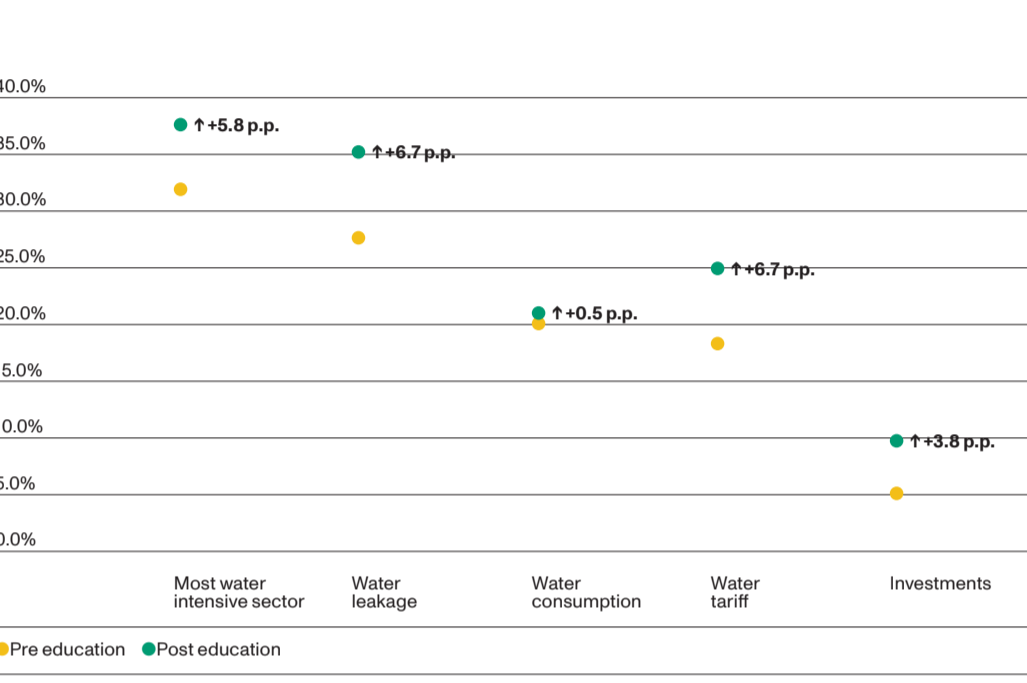


4 A new water awareness

- Strengths**
 - Citizens' awareness of climate change appears to be growing compared to last year: in 2024, it has returned to being one of the country's top three concerns
 - The education of Italian students on water-related topics through the Pilot Project in Italian Schools has led to:
 - Improved knowledge across all areas of education
 - Promotion of sustainable behaviors, such as drinking tap water, among students and their families

- Weaknesses**
 - According to over 65% of Italians, the latest political elections did not demonstrate adequate sensitivity toward proper water resource management in party programs
 - Only 6% of Italians have an accurate perception of their water consumption, while 23% significantly underestimate it, and 71% are unable to quantify it

Figure 7 Rate of correct answers to questions on water sector knowledge before and after the administration of the Community Water Kit (% of total), 2024. Survey to Italian students by the Value of Water Community, December 2024.

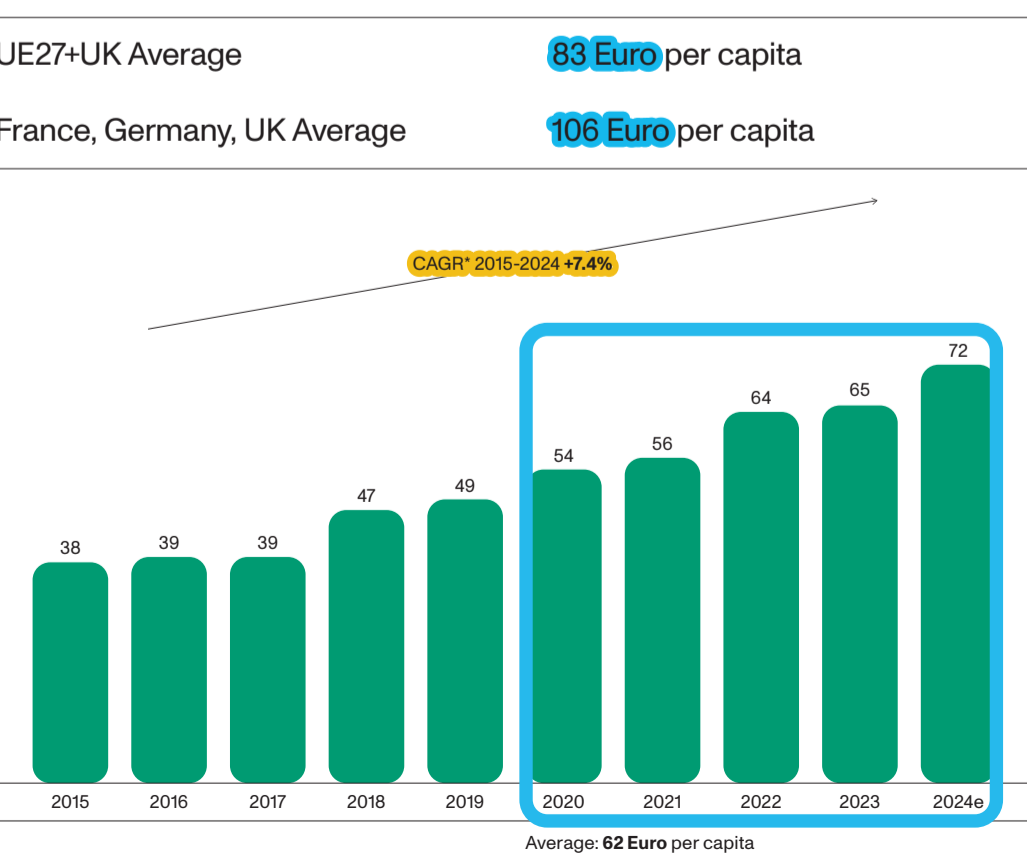


5 Boosting investments

- Strengths**
 - Private investments by industrial operators in the Integrated Water Service amounted to €72 per capita in 2024, nearly doubling compared to €38 per capita in 2015
 - Seven allocation items from the PNRR funds directly impact the water sector, with a potential value of €8.9 billion

- Weaknesses**
 - The average private investments by industrial operators in the Integrated Water Service over the last five years are 25% lower than the EU27 average
 - After the exhaustion of PNRR funds in 2026, approximately 24% of sector investments risk being left uncovered

Figure 8 Per capita investments in the water sector in Italy by industrial operators (Euro per inhabitant), 2015-2024e. TEHA Group elaboration based on EurEau and Fondazione Utilitatis data, 2025. (*) CAGR: Compound Annual Growth Rate. N.B.: Fondazione Utilitatis estimate for 2024.



UE27+UK Average: 83 Euro per capita
 France, Germany, UK Average: 106 Euro per capita

6 How to reinforce the development of the extended water value chain: Agenda for Italy

1 A bold vision for a more sustainable water supply chain and country

Establish Italy as a sustainable Country, starting from the efficient, local and circular management of its water resources, that is involved in fully mitigating the risk tied to this resource and is capable of attracting investment and technological innovation throughout the extended value chain, with authoritative influence on a European level and which makes sustainable water management a competitive and development-oriented asset.

2 Creating the enabling conditions for investment growth and sector consolidation

- Continue to promote industrial water management to guarantee effective investment in the local area involved
- Enable growth in water sector investments to reach the European average by 2030 and align with the top 10 countries by 2035
- Fully promote and reinforce the efficacy of public debate by granting adequate power to the National Commission and better defining the time frames of public debate

3 Leveraging public and private financing tools

- Ensure that PNRR time frames are respected by developing a strategy to efficiently and rapidly take advantage of the funds earmarked for the extended water supply chain
- Prioritize the search for resources from the private sector to be invested in the water sector, in order to fill the funding gap that will remain uncovered after the expiration of PNRR financing
- Review the technical criteria of the EU Taxonomy for investments in relation to the Integrated Water Service, starting from an open and transparent discussion with operators
- Support the creation of sustainable finance instruments to boost investments, such as "water corporate bonds" or "sustainability-linked loans"
- Organize training courses for companies on Sustainability Reporting
- Introduce incentive mechanisms with reward systems that promote sustainability and the development of green finance mechanisms
- Support the inclusion of infrastructure for water storage/reserve and territorial water management within the "Water Resilient Europe" initiative
- Support the candidacy of the extended water supply chain as the first "benefit value chain" in Italy

4 Tariff adjustments and financial support to raise awareness of proper water use

- Include in the water tariff the operational activities aimed at maintaining watercourses to enhance territorial resilience
- Recognize, through both tariff adjustments for the Integrated Water Service and targeted funding, the costs of communication and awareness-raising efforts for the proper use of water resources

5 Infrastructure upgrades to enhance water storage and circularity (Circular Water)

- Develop water resource management plans and flood mitigation strategies through water basins suited to the intensification of meteorological events
- Enable the full operation of existing reservoirs through targeted funding
- Plan fast-track investment projects for both drinking water supply and irrigation
- Simplify regulations related to EPC (Engineering, Procurement, Construction) contracts and the reporting processes associated with financing mechanisms
- Accelerate the implementation of wastewater treatment infrastructure in areas lacking service, envisioning a certified wastewater treatment supply chain
- Enable a new purpose for wastewater sludge, leveraging treatment plants as "biorefineries."
- Identify tools to promote water reuse in both the industrial and agricultural sectors
- Diversify water supply sources through infrastructure investments and by accelerating research into innovative technologies (e.g., desalination).

6 Digitalization of the extended water supply chain (Smart & Digital Water)

- Encourage the adoption of smart water technologies across the extended supply chain through tax incentives to stimulate investment
- Enhance the relationship between operators and citizens while promoting energy and technological efficiency in high-energy-consuming infrastructures
- Incentivize the installation of individual smart water meters in residential buildings
- Support the digitalization of the agricultural sector and hydraulic networks with adequate funding, extending the application of the Agriculture 4.0 model
- Leverage digital transition to implement tracking and early warning systems aimed at reducing health risks related to water quality

7 Improving data collection and management across the extended water supply chain

- Complete the development of water balance assessments at the district and sub-district levels
- Initiate the creation of a unified database, differentiated by various water uses, to rethink the extended water supply chain as a single integrated ecosystem
- Establish an Observatory to define standardized measures for monitoring, collecting, and disseminating water sector data at the national level

8 Calculating the water footprint to promote responsible water consumption across the sector

- Develop a shared and updatable database to monitor the status and variations of the water footprint of businesses in the Italian context and promote a "water positive" approach
- Introduce reward systems or "Blue Certificates," depending on the sector of use (agricultural or industrial), to encourage water conservation and the reduction of withdrawals by all water resource users

9 Communication, education, and training on proper water resource management

- Expand nationwide the Pilot Project in Italian schools launched by the Value of Water Community
- Implement education programs for citizens on the state of water management in Italy and the value of water in the context of the climate crisis
- Promote dialogue with local and national institutions to establish a structured approach for raising awareness, providing information, and educating on the importance of water
- Launch training and skill-building programs to develop new water professionals

10 Strengthening public-private collaboration and integrated coordination among stakeholders

- Promote the centralization of ministerial responsibilities into a single Ministry of Water
- Make Water Crisis Steering Committee in Palazzo Chigi permanent, establishing it as a platform for consultation and dialogue