

# POSITION PAPER 2023

## VALUE OF WATER FOR ITALY COMMUNITY

4<sup>th</sup> Edition



### MAIN PARTNER



### PARTNER



### JUNIOR PARTNER



### SCIENTIFIC PARTNER



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# Value of Water for Italy Community 4<sup>th</sup> edition

## WATER: A KEY RESOURCE FOR THE SUSTAINABLE RELAUNCH OF THE COUNTRY

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### **Mission**

*“Being the reference multi-stakeholder Think Tank  
for scenarios, strategies and policies that can foster the development  
of Italian extended water value chain and  
supporting Italy in becoming a European and global benchmark  
in sustainable and responsible water management”*



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## *"Water is the driving force of all nature"*

*Leonardo da Vinci*

The world is experiencing unprecedented transformations. The current scenario is characterised by the unfolding of five crisis factors, which were unimaginable until recently. The outbreak of the COVID-19 where pandemic in early 2020, rising energy costs, disruptions in global supply chains, the resulting inflationary pressure, and the tensions that erupted into the conflict between Russia and Ukraine have further exposed the fragility of our society.

However, this scenario should not divert the focus and political priority away from the environmental issue and, in particular, water as a resource. Water is an essential element for human societies and natural environments to continue to thrive over time. Water is the foundation of civilisation and progress as well as of human history, past, present and future.

Natural disasters are increasing in frequency all over the world. Globally, 74% of natural disasters in the last two decades are water-related (+50% in the last 10 years and 4 times more frequent than in 1980). These natural disasters, starting with floods and droughts, have had major economic and social consequences for the affected territories. The year 2022 was the hottest and driest year in Italian history, with temperature anomalies reaching +2.7 °C compared to the 1981-2010 average and rainfall anomalies amounting to -48 mm in the year.

In this sense, an efficient and sustainable water value chain is crucial for the future of any territory. It is therefore essential to have a vision and a strategy capable of bringing together the contributions of all players in the value chain, civil society and Institutions. Starting from these observations, as the number one Think Tank in Italy, number four in the European Union, and among the most respected independent Think Tanks in the world out of the 11,175 surveyed by the University of Pennsylvania, The European House - Ambrosetti decided to launch in 2019 the Value of Water for Italy (Valore Acqua per l'Italia) Community, a multi-stakeholder platform dedicated to the water resource management as a driver for competitiveness and sustainable industrial development, with the aim of submitting proposals to the Government and the Country System.

The Community's Observatory has highlighted that Italy is one of the most water-hungry countries in Europe, with 154 m<sup>3</sup> of water drawn per inhabitant per year (no. 2 Country in the European Union after Greece), almost double the EU-27+UK average and France and 2.4 times that of Germany.

Added to this is an obsolete and inefficient infrastructure network at every stage of the supply chain: e.g., 60% of the water distribution network is more than 30 years old and 25% more than 50 years old. The cause of this is insufficient investments. Once again, this year, Italy is at the bottom of the European ranking for investments in the water sector, with €56 per inhabitant per year, i.e., 72% of the European Union average plus the United Kingdom (€78) and almost half of French and German investment. Differences in investment rates are also related to discrepancies in tariff levels. To date, the Italian water tariff of €2.08/m<sup>3</sup> is half of France's and 40% of Germany's.

Nevertheless, the update of the survey carried out by Community in September 2022 showed that almost 9 out of 10 Italians overestimate their spending on water bills. Moreover, only 11.6% of citizens are aware that the water tariff is between €1-3 per 1,000 litres of water consumed.

However, there is also good news. Italy can count on good water quality (85% of drinking water comes from underground sources, which require less treatment to be made potable because they are naturally protected, 20 percentage points above the European average), sustainable agricultural production models that promote the circular use of water, and a solid industrial base.

In this regard, to measure the relevance of the water value chain, The European House - Ambrosetti consultants reconstructed for the first time the extended value chain of water in Italy, creating a database with the multi-year economic data of all companies operating in the supply chain, totalling almost 70 million observations and over 1.8 million companies. The water supply chain activates a long and articulated value chain, involving 26 two-digit ATECO codes and 74 three-digit sub-codes, and including the agricultural sector, 'water-hungry' manufacturing industries, the energy sector, the integrated water cycle, technology and software providers and machinery and plant suppliers. Overall, water is the catalyst for €319.4 billion in Added Value: 18% of Italy's GDP could not be generated without water.

Water must therefore be one of the key resources for the Country's sustainable revitalisation. With this in mind, the Community has estimated the impact of efficient and responsible water management on the 17 Sustainable Development Goals of the UN 2030 Agenda: water impacts on 10 of the 17 Sustainable Development Goals and 53 of the 169 respective targets. It is necessary to accelerate the transition towards responsible and conscious water management models: for the fourth edition too, Italy remains in 18<sup>th</sup> place out of 27 European Countries and the United Kingdom considered in the "Water Value Towards Sustainable Development" index calculated by the Community, with a score of 5.3 on a scale of 1 (min) to 10 (max).

The findings of the White Paper 2023 show that systemic action at the national level is urgently needed. The fourth edition of the Community has renewed an 'Agenda for Italy', with a list of ten proposals for action to promote the development of the water value chain and encourage efficient and sustainable water resource management.

The 'Value of Water for Italy' White Paper would not have been possible without the determination of the partner companies' top management: A2A, ACEA, Acquedotto Pugliese, Celli Group, Gruppo Hera, Intesa Sanpaolo, Intesa Sanpaolo Innovation Center, Iren, MM, SMAT, ANBI - National Association of Territorial and Irrigation Water Management and Preservation Consortia, Schneider Electric, Engineering, Suez, Xylem, AcegasApsAmga, Alfa Varese, Barchemicals, Brianzacque, Consorzio Idrico Terra di Lavoro, Crédit Agricole, CVA - Compagnia Valdostana Acque, Fisia Italimpianti, Irritec, IWS - Integrated Watercare Solutions, Livenza Tagliamento Acque, Maddalena, Padania Acque, RDR, SIT and SOTECO. To all of them go my most profound thanks.

A warm thank you also to Utilitalia and Fondazione Utilitatis, with which The European House - Ambrosetti has signed an agreement for a scientific partnership for the drafting of the 'Water Value for Italy' White Paper and the Blue Book 2023.

Before leaving you to read the White Paper, a heartfelt thank you to the team The European House - Ambrosetti composed of Benedetta Brioschi, Nicolò Serpella, Mirko Depinto, Alessandra Bracchi, Alberto Gilardi, Giulia Tomaselli, Fabiola Gnocchi, Erika Panuccio, Simonetta Rotolo, Manijeh Merlini, Alice Vertemati, Annalisa Pinto and Walter Adorni.

**Valerio De Molli**  
Managing Partner and CEO, The European House - Ambrosetti





## ***KEY FACTS & FIGURES***

### **A2A CICLO IDRICO S.P.A.**

*In Italy for more than 80 years*

**Headquarters:** Brescia, Lombardy

A2A Ciclo Idrico is a member firm of the A2A Group. A2A is a Life Company active in the environment, water and energy sectors, the conditions necessary to life. A2A provides essential services towards long-term sustainability thanks to its outstanding expertise and cutting-edge technologies. Listed on the Italian stock exchange and with approximately 13,000 employees, the Group manages energy generation, sales and distribution, district heating, waste collection and recycling, electric mobility and smart urban services, public lighting and Integrated Water Services.

Sustainability is at the heart of A2A's industrial strategy, one of the first companies to have defined a policy inspired by the 17 goals of the UN's 2030 Agenda. To promote the Country's sustainable growth and make the energy transition and the Circular Economy concrete realities, its 10-year business plan envisages investment for projects in line with the UN Agenda.

For the A2A Group, caring for people in the Company and the local area, listening and transparency, and the development of diligent corporate governance mean the creation of long-term sustainable value for the company and the communities it serves.

A2A Ciclo Idrico was created on October 1<sup>st</sup>, 2010 with starts of operations on January 1<sup>st</sup>, 2011 and it was built on the activity of the utilities services agency Azienda Servizi Municipalizzati di Brescia which began its water services back in 1933 as the operator of the aqueduct for the Municipality of Brescia.

Currently, A2A Ciclo Idrico distributes drinking water in the city of Brescia and numerous municipalities in the province. As at December 31<sup>st</sup>, 2021, the aqueduct networks managed have a total length of 3,585 km. The water comes from 176 wells and 182 sources and springs and the amount of water delivered totals around 49 million m<sup>3</sup> a year.

A2A Ciclo Idrico also manages the sewer system of Brescia and the municipalities it serves in the province and consists of 2,839 km of sewer network and 221 pumping stations.

For waste water treatment, the largest treatment plant is located in Verziano (Brescia). It is connected to the sewer system of the city and a number of neighbouring towns, and its treatment capacity is 296,000 equivalent inhabitants. In addition to the Verziano plant, A2A Ciclo Idrico manages 57 other plants, some of which serve multiple towns.

In perfect harmony with its mission, "A2A Ciclo Idrico supervises services connected with the integrated water management, operating with constant attention to the needs of the community and full satisfaction of all entities it deals with." It is cognizant of the technological evolution and innovation of activities to be able to always respond better to the concept of Circular Economy (from the drawing of water from the environment to the return of the resource to the same environment following purification).

As at December 31<sup>st</sup>, 2021, A2A Ciclo Idrico revenues amounted to approx. €100 million with over 44 million m<sup>3</sup> billed to users (around 45% of the total billing volume in the entire province of Brescia). During the same year it invested over €64 million in water service infrastructure for a unit value of about €109 per served inhabitant.

**[www.a2a.eu](http://www.a2a.eu)**

**[www.a2acicloidrico.eu](http://www.a2acicloidrico.eu)**



## ***KEY FACTS & FIGURES***

### **ACEA S.P.A.**

*In Italy for more than 110 years*

**Headquarters:** Rome, Lazio

ACEA is one of Italy's main multi-utilities. Listed on the Stock Exchange in 1999, it is active in the management and development of networks and services in the water, energy and environment businesses. Among its activities: Integrated Water Service, electricity distribution, public and artistic lighting, sale of electricity and gas, energy production mainly from renewable sources, waste treatment and recovery.

ACEA is the number one national operator in the water sector with about 9 million inhabitants served in Lazio, Tuscany, Umbria, Molise and Campania; among the main Italian players in energy distribution with about 9 TWh of electricity distributed in the city of Rome and in the sale of energy with about 8 TWh of electricity. It is one of the major operators in Italy in the environmental sector with about 1.5 million tons of waste managed per year.

**[www.gruppo.acea.it](http://www.gruppo.acea.it)**



## HERA S.P.A.

*Excellence, innovation and security for a service oriented to the needs of communities and territories*

**Headquarters:** Bologna, Emilia-Romagna

The Hera Group is one of the largest Italian multi-utilities and operates in the environment, energy and water sectors, with more than 9,000 employees, engaged every day in meeting the multiple needs of about 5 million citizens located mainly in Emilia-Romagna, Veneto, Friuli Venezia Giulia, Marche, Tuscany and Abruzzo. Listed since 2003, it is among the top 40 Italian companies by capitalisation (it is part of the FTSE MIB index) and since 2020 it has entered the Dow Jones Sustainability Index, World and Europe.

With over 53,000 km of network and more than 900 production plants, drinking water treatment plants and purifiers, the Hera Group is the second largest national operator in the management of the Integrated Water Service.

Each year, the Group invests an average of more than €130 million in the Integrated Water Service, with the introduction of cutting-edge technological solutions that also include the automation and remote control of networks and plants.

The Group has one of the lowest network loss rates in the Country thanks to an approach that integrates network districting and pressure management.

Safety is an essential element for the multi-utility: in the areas managed, the quality of the drinking water supplied and that reintroduced into the environment is ensured by more than 800,000 tests a year.

Hera was the first multi-utility in the world to obtain Alliance for Water Stewardship (AWS) certification - the international standard that guarantees the efficient use and sustainable management of water resources - for the Val di Setta drinking water treatment plant in Sasso Marconi (BO), which also serves the city of Bologna.

In the field of sewage, Hera is one of the implementing parties of the "Bathing Protection Plan" in Rimini, the largest sewage reclamation project ever carried out in Italy, to drastically reduce the number and effects of discharges into the sea around the city, thus avoiding bans on bathing.

Thanks also to Aliplast's expertise, Hera was the first company in Italy to experiment with of recycled plastic in the construction of sewer pipes, as well as in electricity networks. By recovering rainwater and reusing purified water, the Group aims to reduce the water consumption of its offices and plants by 25% by 2030.

In particular, with regard to wastewater reuse projects within the Value Ce-In project (from the acronym of 'Valorizzazione di acque reflue e fanghi in ottica di economia Circolare e simbiosi Industriale' - Wastewater and Sludge Valorisation with a view to Circular Economy and Industrial Symbiosis) at the Cesena water treatment plant, an innovative system of direct reuse of purified water for irrigation has been implemented.

Finally, in terms of energy innovation, a 'power-to-gas' technology plant called SynBioS (Syngas Biological Storage) will be built in Bologna at the Group's largest sewage treatment plant, with an investment of around €10 million. This is one of the first plants on the international scene, capable of converting renewable electricity and wastewater into 'green' hydrogen and then into biomethane, thus favouring a complete synergy between energy decarbonisation and water purification.

[www.gruppohera.it](http://www.gruppohera.it)

## ***KEY FACTS & FIGURES***

### **CELLI GROUP**

*In Italy for 49 years*

**Headquarters:** San Giovanni in Marignano (RN), Emilia-Romagna

The Celli Group is a global leader in the design and manufacture of beverage dispensing solutions and related technical support services. The company, founded in 1974, is a strategic supplier to all international beverage groups and works with brands such as Coca Cola, Pepsi, Heineken, Carlsberg, ABInbev, Asahi, and Nestlé. It has 1,000 employees in 9 production plants located in Italy, the UK, France and Spain. It exports its products to over 100 Countries worldwide and has sales offices in Germany, Russia, Singapore, Brazil, United States and France.

In 2019, the private investment company Ardian entered the Group by acquiring 100% of the capital, continuing the path of economic support carried out by the independent private equity fund Consilium Sgr, which had supported the Group in the previous 5 years. The company has always believed that the future of our planet also depends on the overcoming of the disposable container, especially if in PET, by the beverage industry and by consumers. This can happen thanks to beverage dispensing systems that are increasingly technological, connected and offer an increasingly satisfying consumption experience.

The Group's focus is on digitalisation, which has led to the in-house development of the most advanced IoT platform for beverage dispensing systems, enabling the complete digitalisation of the consumption experience, as well as remote control of systems in order to optimise technical assistance and quality control processes. Its digitised, interactive and smart products enrich and enhance the consumption experience while providing large beverage groups with important information for their business.

In 2022, the Group closed with +33% in sales over 2021, a year in which pre-pandemic sales had already been recovered and is aiming for €200 million in sales in 2023. In the UK, the five different acquisitions made by the Group have allowed Celli to become leader in the UK market, the largest in the world for draught beer consumption. Also in 2020, at the height of the COVID-19 pandemic, the acquisition of T&J Installation, UK leader in technical assistance services for beverage dispensing equipment, was finalized and, with the opening of the innovative logistics centre in Wetherby, the UK hub of the Asset Management business unit was created to offer field service, supply chain and refurbishment services, thus completing the offer for the UK market.

Also in 2020, the process of international development continued with the opening of three new branches in Germany, the United States and Brazil and the inauguration in June of the German office in Krefeld. In 2023, Celli announced that it has finalised the strategic acquisition of 100% of the capital of CAB S.p.A, which represents yet another strategic step for the Group with the aim of complementing its already wide product range and entering a new segment such as frozen drinks, and of 70% of Exclusivas JLL, a leading Spanish company in the design and manufacture of high-quality customized towers, drip trays and lenses for the beer business. These further acquisitions follow that of the software house Uquido, Spain's Reyvarsur, and the opening of sales offices in France and Spain in 2022.

In Italy, strong business growth came in October 2016 with the acquisition of 100% of Cosmetal, a leading company in Italy and Europe in the production of drinking water dispensing solutions, glimpsing growing consumer awareness towards the environmental non-sustainability of a consumption model based only on the bottle. In 2018, the Celli Group launched Acqua Alma, the first brand dedicated to the enhancement of mains water, supported by partnerships with star chefs and sports champions. During 2020, the offer of professional water dispensers is extended to all areas, Horeca, residential buildings and homes, workplaces and out of home - always with the guarantee of safety and assistance of the Celli Group.

**[www.celligroup.com](http://www.celligroup.com)**



## ***KEY FACTS & FIGURES***

### **IREN S.P.A.**

*The multiutility that shapes tomorrow, today*

**Headquarters:** Reggio Emilia, Emilia-Romagna

Iren is the leading multi-utility in the northwest of Italy in the electricity, gas, district heating, energy efficiency, Integrated Water Service, integrated waste cycle and technological services sector.

Thanks to its high industrial know-how and significant investment potential, Iren is the partner of reference for communities and public administrations in projects involving the development and promotion of local areas through long-term sustainable growth plans.

The Group offers a wide range of services such as generation of electrical energy (already, 73% from renewable sources) and thermal energy for district heating, a sector in which Iren is the national leader; implementation of high-tech solutions for energy efficiency and smart cities to support the public administration; integrated waste management (in which it boasts percentages of sorted waste as high as 80%); development of Circular Economy solutions with over 40 waste treatment plants; supervision and upgrading of the integrated water management and high-efficiency electrical energy and gas distribution grids and networks; and upgrading of a service and sales network for its 2 million customers through in-person help desks, call centers and app.

In particular, in the integrated water cycle, the Iren Group companies manage a total of more than 20,000 km of aqueduct networks, 11,000 km of sewerage networks and more than 1,300 purification plants, with an average network leakage rate of 32%, serving 2.8 million people in 241 municipalities in the provinces of La Spezia, Genoa, Imperia, Savona, Parma, Piacenza, Reggio Emilia, Asti, and Vercelli, for an annual total of 175 million m<sup>3</sup> of water supplied. More than 60 per cent of the network is districted, allowing for effective and efficient pressure management and leak detection.

With the goal of strengthening its activities and responding ever more effectively to the challenges of sustainable development in local areas, in 2021 the Group approved a 10-year strategic plan, the most ambitious in the multi-utility's history, with €12.7 billion in investment to 2030, of which more than 80% will be allocated to sustainable investments and with a strong focus on the water sector, with the aim of achieving a significant improvement in service quality, first and foremost reducing leaks, overcoming infringements of European regulations on wastewater, developing projects in the field of reuse of purified wastewater and combating hydrogeological instability.

It is a goal based on three strategic pillars: ecological transition through progressive decarbonisation of all activities and strengthening of leadership in the circular economy and sustainable use of resources, in line with the goals of the UN 2030 Agenda; focus on local areas by broadening the services offered and through increased presence with the community and public administrations to identify new requirements, satisfy needs and find innovative solutions; and service quality by continuously improving performance and maximising the satisfaction levels of customers/residents. This plan will be implemented thanks to its substantial body of best practices and expertise, at the entrance and expertise and through the hiring of 7,000 new employees by the Group over its course.

**[www.gruppoiren.it](http://www.gruppoiren.it)**

## INTESA SANPAOLO GROUP

The Intesa Sanpaolo Group is one of the leading banking groups in Europe, with a strong ESG commitment, world-leading positioning for social impact and a strong focus on climate.

The Intesa Sanpaolo Group is the largest banking Group in Italy, with 13.6 million customers and over 3,600 branches, and is a leader in financial activities for households and businesses in the Country, particularly in banking intermediation (with a share of 19% of loans and 22% of deposits), pension funds (24%), asset management (25%) and factoring (26%). In addition, the Group has a strategic international presence, with over 950 branches and 7.1 million customers.

As of December 31<sup>st</sup>, 2022, the Intesa Sanpaolo Group had total assets of €975,683 million, loans and advances to customers of €446,854 million, direct banking deposits of €545,386 million and direct insurance inflows and technical reserves of €173,597 million. The Group's activities are divided into six divisions:

- Banca dei Territori Division: market focus and centrality of the local area to strengthen relations with individuals, small and medium-sized enterprises and non-profit organisations;
- IMI Corporate Division & Investment Banking: global partner for companies, financial institutions and public administration in the medium to long term, on a national and international basis. It includes capital markets & investment banking activities and is present in 25 Countries to support the cross-border activities of its customers with a specialised network consisting of branches, representative offices and subsidiaries performing corporate banking activities;
- International Subsidiary Banks Division: includes subsidiaries performing commercial banking activities in the following Countries: Albania (Intesa Sanpaolo Bank Albania), Bosnia and Herzegovina (Intesa Sanpaolo Banka Bosna i Hercegovina), Croatia (Privredna Banka Zagreb), Egypt (Bank of Alexandria), Moldova (Eximbank) Czech Republic (Prague branch of VUB Banka), Romania (Intesa Sanpaolo Bank Romania), Serbia (Banca Intesa Beograd), Slovakia (VUB Banka), Slovenia (Intesa Sanpaolo Bank), Ukraine (Pravex Bank) and Hungary (CIB Bank);
- Private Banking Division: serves customers in the Private and High Net Worth Individuals segment by offering targeted products and services. The division includes Fideuram - Intesa Sanpaolo Private Banking, with 6,648 personal financial advisers;
- Asset Management Division: asset management solutions for Group customers, commercial networks outside the Group and institutional customers. The division includes Eurizon, with €304 billion in assets under management;
- Insurance Division: insurance and pension products for the Group's customers. The division, which has direct inflows and technical reserves of €174 billion, includes Intesa Sanpaolo Vita - which controls Intesa Sanpaolo Assicura, Intesa Sanpaolo Life, Intesa Sanpaolo RBM Salute and Intesa Sanpaolo Insurance Agency - and Fideuram Vita.

*Updated at February 2023*

## **INTESA SANPAOLO INNOVATION CENTER**

Intesa Sanpaolo Innovation Center is the Intesa Sanpaolo Group company dedicated to frontier innovation. It explores scenarios and future trends, develops multidisciplinary applied research projects, supports start-ups, accelerates the business transformation of companies according to Open Innovation and Circular Economy criteria, encourages the development of innovative ecosystems and spreads the culture of innovation, to make Intesa Sanpaolo the driving force behind a more aware, inclusive and sustainable economy.

With its headquarters on the 31<sup>st</sup> floor of the Intesa Sanpaolo skyscraper and a national and international network of hubs and laboratories, the Innovation Center is a catalyst of relations with other stakeholders in the innovation ecosystem - such as companies, start-ups, incubators, research centres, universities, and national and international Institutions - and a promoter of new forms of entrepreneurship in accessing risk capital, with the support of venture capital funds, also through its subsidiary Neva SGR.

*Updated at February 2023*

**[www.intesasanpaoloinnovationcenter.com](http://www.intesasanpaoloinnovationcenter.com)**



## **KEY FACTS & FIGURES**

### **ACQUEDOTTO PUGLIESE S.P.A.**

*Commitment to sustainability*

**Headquarters:** Bari, Puglia

Acquedotto Pugliese S.p.A. is one of Europe's largest and most complex players in the supervision of integrated water management. It boasts networks totalling 32,000 km that serve 260 municipalities in Puglia and Campania with over 4 million citizens served, 2,200 reservoirs, partitions and lifting plants, 5 drinking water plants, located in Puglia, Basilicata and Campania, 10 analysis laboratories, 184 purification plants and 9 refining plants for the reuse of treated water. A large public enterprise, entirely owned by the Puglia Region, with over 2,000 employees, a production value of €646.2 million and a gross profit of €43.6 million. It is a company engaged in a vast plan to consolidate and modernise its facilities, with investments in 2021 of €228.7 million, up 8% over the previous year, which place AQP among the most virtuous utilities. Over the last three years, direct and indirect benefits for the community amounted to over €7 billion.

Acquedotto Pugliese is committed to designing and implementing the most modern forms of innovation - in respect of the environment and sustainable development - with the aim of reducing losses on the networks, monitoring and forecasting spring flows, in order to optimise the availability of water for drinking and agricultural uses and improving the purification processes of urban wastewater.

The 2021 financial statements recorded a 1.7% decrease in electricity consumption compared to 2020. Today, AQP is able to produce almost up to 10% of its energy needs on its own: there are currently 9 hydroelectric power plants, 6 photovoltaic plants and 1 biogas cogeneration plant from sewage sludge. These investments made it possible to generate 14 GWh of electricity from renewable sources, twice as much as in the previous year.

Acquedotto Pugliese includes the subsidiary Aseco S.p.A., a leading company in the production of quality fertilisers.

The hundred years of significant professional experience gained at Acquedotto Pugliese has led to the establishment of the AQP Water Academy - Centre of Excellence for Culture and Training on Integrated Water Service Management.

Acquedotto Pugliese's activity is also aimed at encouraging the development of public initiatives in integrated water management in the Countries of the Mediterranean basin and the Balkans. More recently and during 2022, activity also intensified with Middle Eastern Countries and the United Arab Emirates.

Also noteworthy is the participation in Interreg Greece, Interreg IPA with Albania and Montenegro in order to share and actively contribute to the dissemination of good practices in the use of refined wastewater, network design and control systems.

In 2022, Acquedotto Pugliese launched TVA, the first thematic web TV dedicated to the world of water, a new and innovative communication project that aims to enhance the information offer on sustainability, environment and innovation issues.

**[www.aqp.it](http://www.aqp.it)**





## ***KEY FACTS & FIGURES***

### **MM S.P.A.**

*For over 65 years, serving the City of Milan*

**Headquarters:** Milan, Lombardy

MM was founded as an engineering company in 1955 to design and build the entire urban network of the City of Milan. Today MM is an integrated multi-service company, a centre of excellence in the engineering sector with proven experience and a strategic partner in the development, management and reorganisation of cities, services, networks, infrastructures and public real estate, with a view to urban regeneration.

In 2003, the Municipality of Milan entrusted MM with the supervision of integrated water management, making use of its technical and management experience to improve the level of water-related services and to promote an adequate maintenance and investment plan on the aqueduct and wastewater networks.

Since the end of 2014, MM has been managing the public housing assets owned by the City of Milan, dealing with administrative, accounting and technical-legal activities, relations with tenants, ordinary and non-routine maintenance, and asset protection. Since 2023, MM has also been active in this area on behalf of the Municipality of Bergamo.

Since 2020, MM has further developed its field operations oversight and currently manages facility management and maintenance activities of school building assets, lifting systems serving road underpasses and sports facilities owned by the Municipality of Milan and managed by Milanospoort.

In 2018, MM inaugurated the Centrale dell'Acqua di Milano, a space entirely dedicated to the theme of water and sustainability, open to citizens and free of charge. The Centrale is part of Museimpresa, the network of Italian business archives and museums that brings together the places of excellence of the Country's technical and industrial memory.

Every year MM shares the company's heritage of technological innovation and know-how gained in over sixty years of activity through its own business academy, MM Academy, which organises training courses and technical visits in collaboration with professional orders.

In the financial year 2021 MM S.p.A. ('MM') generated revenue of €267 million (in 2020 it was €261 million). During the year, the company recorded EBITDA of €53 million (in 2020 it was €60 million). Shareholders' equity stood around €239 million.

With regard to MM's rating, Moody's maintained its rating at Baa3 in 2022, confirming the Company's Investment Grade positioning.

Against the maintenance of a water tariff among the lowest in Italy and Europe, MM made a high volume of investments related to the Programme of Interventions of the Water Service of the City of Milan, increasing its volume, reaching about €70 million in 2019, €58 million in 2020 and €58 million in 2021, despite the pandemic.

**[www.mmspa.eu](http://www.mmspa.eu)**



## ***KEY FACTS & FIGURES***

### **SOCIETÀ METROPOLITANA ACQUE TORINO — SMAT S.P.A.**

*In Italy for 22 years*

**Headquarters:** Turin, Piedmont

SMAT was legally established in April 2001 and is today a leading company in Integrated Water Service.

The company works towards continuously improving its service and is always prepared for possible scenario shifts (climate change, emergencies, etc.) through targeted investment in plant and equipment, corporate management, control systems and research.

With revenues of over €440 million and profits of over €34 million, SMAT is an in-house company public shareholding employing approx. 1,000 people, and it guarantees the supply of Integrated Water Services in 290 municipalities located in the metropolitan area of Turin, covering an area of 6,317 km<sup>2</sup> with over 2.24 million residents.

Through its 94 water purification facilities and 394 water treatment plants, a water network of 12,842 km and sewer system of 10,115 km, SMAT supplies water services to over 400,000 users, guaranteeing the quality of the water supplied with more than 880,000 analysis results a year provided by its own certified laboratories.

SMAT has developed a specific Industry 4.0 Plan as part of an ambitious Area Investment Plan that provides for investments of about €1.2 billion by 2033.

The SMAT Research Centre is a pole of excellence that is one of the most important in Italy in the field of applied research and control of drinking water and sewage. It is equipped with advanced technologies capable of developing concepts, research, projects, pilot plants and innovative products and patents.

In 2022, the SMAT Research Centre took part in 10 projects with academic partners, one project funded by the European programme Horizon 2020, one project financed by the European Regional Development Fund POR FESR 2014/2020, two collaborations as part of the European Interreg programme, and it signed 30 partnership agreements for applied research with academic Institutions, research centres and industrial partners which involved more than 70 technicians and researchers.

Within the framework of the Italian National Recovery and Resilience Plan (NRRP), SMAT was selected as the implementing party for significant strategic works, including the construction of the Valle Orco aqueduct (with funding of €129 million out of €254 million in the value of the works to be tendered) and the digitalisation of the networks (€50 million funded out of €66 million). The distribution of 600 litres per second will meet the needs of 130,000 residents and 30,000 visitors and tourists.

The 'Digitalisation' project aims to digitalise and monitor the distribution network of the 290 municipalities belonging to Turin ATO3. The total project area includes a distribution network of 12,842 km and a total of 2,321 km of connection pipelines, 617 remote-controlled plants, 169 SMAT Water Points, 1,431 storage tanks, 207 pumping plants and 89 water purification plants within the served territory.

**[www.smatorino.it](http://www.smatorino.it)**



## ***KEY FACTS & FIGURES***

# **ANBI — NATIONAL ASSOCIATION OF CONSORTIA FOR MANAGEMENT AND PRESERVATION OF LOCAL AREAS AND IRRIGATION WATER**

*In Italy for more than 100 years*

**Headquarters:** Rome, Lazio

ANBI - Associazione Nazionale Consorzi di Gestione e Tutela del Territorio e Acque Irrigue (National Association of Consortia for the Management and Protection of the Territory and Irrigation Waters), was founded as a mandatory National Association in 1928.

In 1947, the Association received, by decree of the Provisional Head of State, legal recognition (DCPS no. 1442 of July 10<sup>th</sup>, 1947) as a voluntary association with legal personality.

The current statute, approved in 2015, defines the institutional functions of the Association, providing that it has the task of promoting full knowledge of both the role of land reclamation and irrigation within the public action for the protection, defence and enhancement of land and water, and the role of the Consortia as public bodies of self-government and participation of private individuals.

The sector has achieved, with the State-Regions agreement of 2008, its reform and streamlining following the principle of achieving greater effectiveness, efficiency and economy.

The Association, spread across the territory through ANBI Regional offices, carries out actions of representation of land reclamation interests and Consortia in the various sectors of their institutional and operational activities, ensuring the necessary assistance in the technical, economic and legal sectors, defining the operational guidelines and objectives to be pursued, providing for the examination and study of legislative measures of interest to the Consortia.

Currently, the Association has 143 members, including land reclamation and irrigation Consortia, which cover more than 50% of Italy's land area for a total of almost 17 million hectares, i.e., the entire plain (which in Italy covers about 6 million hectares) and most of the hills and provide water to 81% of irrigated agriculture.

The Association is a Member of the European Union of Water Management Associations (EUWMA) and a founding member of Irrigants d'Europe, the association that brings together the irrigation associations of Italy, Spain, Portugal and France, all committed to finding shared solutions to address European policies relating to irrigated agriculture (water, energy, food) in favour of the countries bordering the Mediterranean.

ANBI collaborates with many public and private institutions for activities of common interest through agreements and conventions, including, by way of example, the one with the Extraordinary Commissioner for the adjustment of illegal landfills, the one with Terna and Coldiretti and the one with Bonifiche Ferraresi S.p.A. and the Consortium of the Emiliano Romagnolo Canal.

**[www.anbi.it](http://www.anbi.it)**

## **KEY FACTS & FIGURES**

### **SCHNEIDER ELECTRIC**

*In Italy for more than 100 years*

**Headquarters:** Stezzano (BG), Lombardy

Schneider Electric is the leader in digital transformation of energy management and automation. The Group, led by its president and CEO Jean-Pascal Tricoire, has over 130,000 employees around the globe, and recorded revenues of €34 billion in 2022.

The company has been active in Italy since 1919. Today, it has five production sites, eight commercial offices, two innovation hubs and an integrated logistics centre, and a total of about 3,000 employees. Italy is also the home of an international centre of excellence for emergency lighting and OEM Packaging Solutions Competence. Heading Schneider Electric Italia is its president and CEO Aldo Colombi.

Schneider Electric provides digital solutions for energy efficiency and automation management for industry and sustainability. It integrates the best technologies on a global level, real time automation, software and services, and residential, building, data center, infrastructure and industrial solutions.

Schneider Electric has chosen unique positioning within a strategic sector for the future to guide the digital transformation of automation and of energy and water management. Using the IoT (Internet of Things), its business solutions make it possible to connect, collect, analyse and intervene on data in real time while optimising system security, efficiency, reliability and sustainability.

Schneider Electric is committed to offering integrated solutions, with a portfolio of activities designed to respond to all customer needs to allow them to take full advantage of the new opportunities created by digitalisation and boost competitiveness in the increasingly technology-based economy. The company oversees the management of technologies that can redesign industries and transform cities, offering solutions for networks, buildings and data centres.

The variety of solutions Schneider Electric offers allows it to meet the needs of customers in different sectors of industry, including the water sector. The company is the technological leader in improving processes and applications throughout the water cycle through the EcoStruxure platform, based on an interoperable digital architecture.

The solutions it offers for the water cycle involve management of critical water infrastructure problems (scheduled and non-scheduled maintenance; management of regional basins; upgrading and supply of sustainable quantities of water); technological management of the sewerage system; security, automation and optimisation of waste water treatment and desalination plants; strategic development and creation of smart water grids to improve efficiency, service life and reliability of the infrastructure and maximise return on investment; containment and management of leaks from the distribution network and aqueducts.

[www.se.com/it](http://www.se.com/it)



## ***KEY FACTS & FIGURES***

### **SUEZ**

**Headquarters:** Milan, Lombardy

SUEZ is a leader in the design, construction and management of municipal and industrial facilities in accordance with the principles of occupational safety and environmental sustainability. Since 1963, SUEZ solutions have focused on the reduction of atmospheric emissions, the reuse of purified water for irrigation and industrial purposes and the reuse of sludge for energy and agricultural purposes, offering maximum environmental and social integration with minimal operating costs. SUEZ has successfully implemented plants in both the civil and industrial sectors, taking care of their design, construction and operation, in some cases also through project financing.

SUEZ provides customers with know-how and technologies to enable the transition from treatment plants to bio-refineries, offering solutions for material and energy recovery from sludge and organic waste in a Circular Economy perspective.

In Italy, the Group is currently involved in one of the most important projects: the environmental remediation of the Regi Lagni, through the upgrading and management of the Cuma and North Naples purification plants in Campania and has just completed the refunctionalisation of the Naples Cuma plant.

SUEZ's experience in the water sector has been further consolidated since 1989 with integrated water management, particularly in Tuscany in the Arezzo, Pisa and Florence areas. The Group is present in Italy through mixed companies, recognised for their excellence in water performance and know-how and considered among the top operators in Italy according to the ARERA standard that measures performance on water network efficiency in terms of leaks. The activities in Tuscany as a whole provide the water cycle service to around 2.7 million inhabitants.

The Group is also one of the main shareholders of the multi-utility Acea, the number one water utility in Italy with a total of about 9 million inhabitants served.

The continuous search for technological innovations aimed at improving infrastructure performance, optimising investments, reducing costs and improving service is pursued through a range of solutions designed to protect and preserve environmental capital: water, land and air. The technology package includes in particular the Aquadvanced® software platform for real-time monitoring of water infrastructure for decision support, digital twin software solutions for the implementation of virtual sectorialisation, and innovative smart metering for the remote acquisition and real-time management of consumption data and meter operating conditions as well as for the activation of smart grids.

In this context, Suez is proud to have supported one of Italy's leading water service operators (the City of Milan) in its journey to digitalise its infrastructure and improve performance by implementing the Aquadvanced platform modules for optimising pumping stations and reducing energy consumption for real-time monitoring of leakage indicators and virtual sectorialisation of the aqueduct distribution network. A range of cutting-edge solutions are also available to promote air quality, the fight against climate change and the energy transition with the biomethane chain. The Air & Climate package offers real-time monitoring technologies for odour pollution concentrations, and the control of greenhouse gas emissions using precise sensors and digital platforms with integrated predictive systems.

**[www.suezwatertechnologies.com](http://www.suezwatertechnologies.com)**

## ***KEY FACTS & FIGURES***

### **ENGINEERING**

*In Italy since 1980*

**Headquarters:** Rome, Lazio

Engineering is the leading Digital Transformation Company in digital transformation processes for businesses and public administration.

An Italian Group with headquarters in Rome and a strong international presence, Engineering has about 12,000 employees, 39 offices in Italy and, in total, more than 60 offices in Europe, the United States and South America, and a network of 20 companies in 12 Countries.

For more than 40 years, it has been supporting private and public organisations in evolving the way they work and do business, bringing together a deep understanding of business processes in all market segments (from Finance to Healthcare, from Utilities to Manufacturing and many more), seizing the opportunities provided by the most advanced technologies (in particular, in the cloud, cybersecurity, metaverse, AI & advanced analytics) and proposing a portfolio based on proprietary, best-of-breed market solutions and managed services.

The Group also continues to expand its expertise through M&A operations and partnerships with leading technology players.

With a constant focus on innovation, through its R&I division comprising over 450 researchers and data scientists, the Group invests in international R&D projects, exploring revolutionary technologies and designing new business solutions. A strongly human capital company, Engineering, through its 'Enrico Della Valle' IT & Management Academy, provides continuous upskilling and reskilling paths for employees and stakeholders, delivering over 32,000 training days per year.

Engineering's history and identity are built on a constant focus on sustainability and social responsibility: a focus further strengthened by joining the UN Global Compact, a further step towards ethical business and the integration of sustainability into industrial strategies.

Also with a view to assisting organisations in integrating business and sustainability objectives, Engineering has developed a Composable Platform to support the management of utilities infrastructure impacted by the NRRP investment lines in the market areas of Water, Power & Gas, Heating, and Waste. It is a horizontal technology platform, which, based on the needs of the main stakeholders in the ecosystem, integrates Engineering's Platforms & Solutions with other market solutions thanks to a network of partnerships that guarantee the best process and technological expertise.

Thanks to this modular approach, in order to support the challenges of Integrated Water Service Authorities in the coming years, Engineering has created the Water Management Solution (WMS), a modular and interoperable digital solution to manage water collection, distribution and sewerage infrastructure, optimising their efficiency, service life and reliability.

## **XYLEM WATER SOLUTIONS**

*Innovative technological solutions for the world's water challenges*

**Headquarters:** Lainate, Milan

Xylem aims to help its customers solve the most complex water challenges, treating water to make it drinkable, transporting it to where it is needed, using it in the most efficient way, testing and analysing its qualities, and making it clean after the countless uses to which it is put.

The company consists of 17,000 people united by a common goal: to create innovative solutions to meet the planet's water needs. It transports, treats, analyses and returns water to the environment, helping people to use water resources efficiently, at home, in buildings, industry and agriculture. There are more than 150 countries in which strong and lasting relationships have been established with customers who are familiar with the product brands and who appreciate the competence offered in applications and the vocation to provide innovative solutions.

Xylem is the world leader in the design, manufacture and supply of electric pumps and motor pumps, mixers and aeration systems, filtration and water treatment systems with oxygen, ozone and UV rays, monitoring and control systems, management software for networks and treatment processes, and technologies for leak detection, network mapping and water accounting.

With plants on four continents, Xylem products are used daily in wastewater treatment plants, sewer networks, drinking water treatment and distribution plants, construction, the processing industry and numerous other applications.

What's new in Xylem in 2023:

- Xylem has launched the new brand Xylem Vue powered by GoAigua. It is an integrated platform of analysis software and systems that allows utilities to connect and manage their digital assets and field instruments, optimising water processes in a simple, secure and organic holistic view. This integrated offering relies on the efficiency and quality of Xylem's services to drive its customers' digital transformation;
- rental of pumps and treatment plants. Xylem has strengthened its rental portfolio, giving customers access to the latest high-tech machines in water handling and treatment. The rental offer is complemented by the support and assistance of highly qualified Xylem technicians, who guarantee operational continuity and full plant efficiency;
- Xylem has developed intelligent preventive maintenance plans (Smart PMA: Preventive Maintenance Agreements) that combine a real-time monitoring service with a service plan based on the actual condition of the equipment and its use over time, reducing the risk of breakdowns while reducing operating costs;
- sustainability is at the core of Xylem's activities: from technologies and solutions to engagement in corporate responsibility projects, sustainability is at the heart of the Group's mission and ethos.



## ***KEY FACTS & FIGURES***

### **IWS - INTEGRATED WATERCARE SOLUTIONS**

*A network of companies*

**Headquarters:** Rubano (PD), Veneto

Integrated Watercare Solutions (IWS) is a network of companies that offers Integrated Water Services to water utilities. It is comprised of three companies (2f Water Venture Srl, B.M. Tecnologie Industriali Srl and Mea engineering Srl) which all have the water market as their core business.

The main services offered by IWS companies involve to massive monitoring of urban drainage systems, drinking water networks and water treatment and potabilisation plants; environmental protection and safeguard of local areas are the cornerstones of the daily activity of these network companies.

The goal of IWS is to be present in the market as a single partner for integrated water management providers, given that the products and services it offers are complementary to each other. Each IWS company is highly specialised in the product/service it offers and is a consolidated market leader.

The innovative solutions that the Group companies provide for the digitalisation and optimisation of integrated water management processes can be seen in the engineering activity that provides for the modelling, monitoring and water districting of water networks and large-scale monitoring of sewerage systems.

With the short-, medium- and long-term monitoring of grids, IWS manages a large quantity of data, which are transmitted to water utilities to provide detailed knowledge in real time of how water networks and sewerage systems are performing to optimise their management and offer the customer engineering information to reduce leaks, inflow and infiltration, and to prepare the numerical models that make it possible to predict network performance.

During monitoring, instruments produced by Group companies for the Italian market are applied to measure water flow rates, levels, pressure and quality. IWS also produces battery data loggers with data transmission capabilities that are particularly suited for demanding situations in water networks and sewerage systems.

Thanks to the data acquired through monitoring, IWS is engaged in digitalising the processes of the Integrated Water Service and has developed the SWMS Smart Water Management System platform based on GIS and where all measurements are integrated and cross-referenced to provide useful information for informed decisions. ASSET MANAGEMENT software has been integrated into the SWMS.

The company 2F Water Venture is also a manufacturer of ultrasonic smart meters for billing complete with anti-delinquency valve and sensors for data transmission in NBIOT.

It is also the Italian market distributor of the ASTERRA technology developed by Utilis for advance water leak detection via satellite and the KANDO technology that allows providers to identify potential sources of sewer pollution using a system that alerts the treatment plant of the time frame and type of pollution load on its way to the plant.

**[www.integratedwatercaresolutions.it](http://www.integratedwatercaresolutions.it)**





## **KEY FACTS & FIGURES**

### **SO.T.ECO. S.P.A.**

*In the Italian market for more than 45 years*

**Headquarters:** Santa Maria Capua Vetere (CE), Campania

SO.T.ECO. S.p.A., a company in the market for over 40 years, has been able to conquer and maintain over time a leading position in raw water, household and industrial sewerage treatment, and management and maintenance of plant and equipment. Specifically, the company is involved in the entire treatment cycle, from the design of treatment and potabilisation plants to their construction, maintenance and management, as well as the supply of chemicals for potabilisation and treatment.

This position is the result of the company's strong and constant focus on quality and innovation, which provides the impetus to develop always cutting-edge technologies and services. The result of a natural evolution that began in the 1970s and continued with the creation of its in-house research lab, SO.T.ECO. S.p.A. has succeeded in establishing itself in the market with its proprietary patents, which were precursors to what is today the modular approach in the treatment sector. This constantly growing commitment to research and processes blossomed in the 1990s into an approach that was increasingly open and receptive towards innovative aspects. SO.T.ECO. S.p.A. also develops projects and creates chlorine dioxide production and dosage control systems for drinking water disinfection. Research, development, innovation, flexibility, market orientation, and development of collaborative relationships and partnerships with European companies for product development and production technologies are the ingredients, which, already in 1999, led the company to have its own certified Quality System based on UNI EN ISO 9001:2008 and ISO 14001:2004 that forms the basis of SO.T.ECO. S.p.A.'s concept of its work, products and services. This approach has proven to be a winning formula and will also accompany the company in the new millennium. SO.T.ECO. S.p.A. operates its own certified Quality System, monitoring its up-to-datedness and consistency with its goals.

SO.T.ECO. S.p.A. also holds the SOA Qualification Certificate for the following Qualification Categories and Classifications: OS22 Classification VIII (unlimited), OG 6 Classification VII, OG 1 Classification III, OS 30 Classification II.

It also holds the following certifications:

- Certification of its Quality Management System according to UNI EN ISO 9001:2015;
- Certification of its Quality Management System according to UNI EN ISO 14001:2015;
- Certification of its Safety Management System according to UNI EN ISO 45001:2018;
- SA 8000:2014 certified;
- UNI ISO 37001:2016 certified;
- Legality rating issued by the Italian Antitrust Authority with a score of ★★★;
- Registration with the Caserta Police Headquarters in the White List since 20/02/2017;
- Since 18/09/2017 the company has adopted the Organisation, Management and Control Model (231 Compliance Programme) pursuant to Italian Legislative Decree 231 of 2001, complete with Code of Ethics and Disciplinary System.

**[www.sotecospa.com](http://www.sotecospa.com)**



## ***KEY FACTS & FIGURES***

### **R.D.R. S.P.A. BENEFIT COMPANY**

*In Italy for more than 50 years*

**Headquarters:** Torre del Greco (NA), Campania

RDR S.p.A. S.B. is the fourth largest player in the Integrated Water Service sector, and among them the only company wholly owned by Italian capital specialising in the design, construction, operation and maintenance of waterworks and water treatment plants throughout the Country.

At a time of climate, economic and social emergencies such as these, the company has changed its Articles of Association into a Benefit Company, becoming the first economic operator in its sector to do so. This leadership is a commitment for RDR S.p.A Benefit Company to go beyond the goal of profit and pursue objectives that take into account the common benefit and how our actions and work can contribute to the well-being of all stakeholders and the sustainability of the planet."

RDR recently entered the share capital of Nexus TLC, specialising in the IoT and Artificial Intelligence sectors, with the aim of developing projects in technology applied to services in the water sector. In January 2023, the Puglia-based company LM Tecnologie was acquired to support the consolidation of its national presence.

In perfect harmony with its mission, "to give value to water," RDR offers its services to the market supported by a constant process of technological innovation for greater sustainability of the entire water value chain.

To date, the company covers an area of over 40,000 square metres, including 10,000 m<sup>2</sup> of covered area of its Operations and Office premises in Torre del Greco (NA), as well as operating sites in Calenzano (FI), Guidonia (RM), Elmas (CA), Concorezzo (MB) and Noci (BA), through which it is able to offer its services to Integrated Water Service operators throughout Italy, 24 hours a day.

In 2022, it was recognised as one of Italy's 'Best Managed Companies' for the fourth year running.

Through its 100% control of Darf Srl, which specialises in the construction, maintenance and emergency repair of water and sewerage networks, and Officine RDR Aviomar, which specialises in electromechanical repair and maintenance services, PWC places the group, with a turnover of more than €50 million and a workforce of over 300 employees, among the TOP 500 companies in Campania.

In the course of its evolution RDR has achieved important certifications by adopting an integrated management system: Quality (UNI EN ISO 9001:2015), Environment (UNI EN ISO 14001:2015), Safety (UNI ISO 45001:2018), Energy (ENI CEI EN ISO 50001:2011), Anti-corruption (UNI ISO 37001:2016) and Social Accountability (SA 8000:2014), AGCM Legality Rating ★★★.

**[www.rdr.it](http://www.rdr.it)**

## **KEY FACTS & FIGURES**

### **PADANIA ACQUE S.P.A.**

*The only Integrated Water Service provider in the Province of Cremona*

**Headquarters:** Cremona, Lombardy

The company was founded 70 years ago, in 1953 to be precise, as the 'Consorzio per l'acqua potabile nei Comuni della Provincia di Cremona' (Consortium for Drinking Water in the Municipalities of the Province of Cremona), with the aim of building aqueducts for the population of Cremona after the Second World War. In 1995, it took the legal form of a joint-stock company with total public capital, and since 2014 it has been the in-house provider of the Integrated Water Service, under direct concession for 30 years. Padania Acque S.p.A. is responsible for the Integrated Water Service in all its phases (extraction, potabilisation and distribution, sewerage and purification) throughout the province. Its activity is subordinate to the directives of the Ente d'Ambito of the Province of Cremona in full compliance with the sector regulations dictated by ARERA.

With a staff of approximately 180 employees, Padania Acque serves 113 municipalities, for a total of 160,000 users and 350,000 inhabitants, and manages 2,200 km of distribution network, 68 aqueducts, 2,300 km of sewerage network, 234 sampling wells, 74 potabilisation plants, 107 purification plants, and about 90 water houses. Thanks to its work, 30 million m<sup>3</sup> of water are fed into the water supply network every year (with a water loss rate of 23.5%) and 51 million m<sup>3</sup> of wastewater are treated.

Padania Acque's management has obtained the renewal of ISO 22000 and ISO 9001 certifications, which demonstrate, respectively, the quality and food safety of the drinking water supply systems at all stages of the production process and the quality of the integrated water management system, processes and plants, both of which were also extended last year to the water houses. In addition, the testing laboratory obtained ISO/IEC 17025 certification for 'General requirements for the competence of testing and calibration laboratories'.

Padania Acque has also obtained the Legality Rating, a prestigious national recognition awarded by the Antitrust Authority (AGCM) to companies that meet high ethical and legal standards in terms of quality, social responsibility, legality and transparency in their management activities.

Padania Acque is part of Water Alliance - Acque di Lombardia, the alliance created by the 12 Lombardy public integrated water management companies, and Confservizi CISPEL Lombardia, which represents companies operating in the public utility sectors. It is also associated with Utilitalia and is a member of the association of European public water operators Aqua Publica Europea.

The commitment of Cremona's sole water utility is to pursue sustainability in line with the goals of the UN 2030 Agenda. Efficiency and management quality, investments, technological and digital innovation, an ethical and social vision of the public utility service, the adoption and implementation of green policies and the promotion of a 'water culture' guide Padania Acque's activities.

For greater efficiency, Padania Acque has built a state-of-the-art centralised system, which integrates the SCADA system with remote control in the management of the control and data communication centres to remotely monitor the water plants and networks.

Padania Acque was awarded by ARERA as the top performing Integrated Water Service operator for technical quality in 2018 at national level, based on 5 macro-indicators referring to the years 2018 and 2019.

Fondazione Banca dell'Acqua Onlus, set up in 2015 by the local authorities that are Padania Acque's shareholders, enables people who are unable to pay off the debt they have contracted with the water utility through community projects.



## *KEY FACTS & FIGURES*

### **LIVENZA TAGLIAMENTO ACQUE S.P.A.**

*In Italy for 8 years*

**Headquarters:** Portogruaro, Veneto

Livenza Tagliamento Acque S.p.A. is the public company that supervises integrated water management in 30 municipalities in Friuli Venezia Giulia and in 12 municipalities in Veneto, located in the provinces of Pordenone, Venice and Treviso.

Specifically, this means responding on a daily basis to the needs of 290,000 residents and, in the summer months, being prepared to meet spikes in demand due to the roughly 6 million tourists that arrive annually in the Bibione resort area.

Although recently formed, the company is deeply rooted in the area and has long-standing technical, economic and financial experience dating from the late 1950s. Created in 2014 from the merger of Acque del Basso Livenza S.p.A. and CAIBT S.p.A., in 2017 it acquired Sistema Ambiente S.r.l. to become the second largest in-house Integrated Water Management operator of Friuli Venezia Giulia.

This expansion made the company more competitive and more economically solid while reinforcing its investment capabilities, aspects that are indispensable to ensuring ever-growing quality.

And all this within the context of ties to the local area which, throughout this process, have always been a guiding principle.

The company serves a single area, which however features a range of different aspects and, ideally, can be divided into two areas, i.e., western Friuli and the interregional basin of the Lemene River. This represents an ongoing challenge that means operating in a complex context that requires a structurally elaborate and technologically advanced system.

These include numerous sources with a network of 1,564 km supply, artesian wells with pumping stations for drawing water from underground aquifers; a widespread high-tech network of aqueducts that covers the local area; and management of sewerage services with a network of 1,564 km and 139 waste water treatment plants. In addition, there are the constant monitoring and control of the drinking water distributed and, subsequently, of the waste water.

In 2021, LTA's economic performance recorded positive results, up from previous years, with the value of production reaching €42.3 million, an EBITDA of €6.6 million and an EBIT of €2.8 million, as well as €1.2 million in profit. These are significant figures achieved thanks to the work of the company's 190 employees.

Also significant are the investments in the local area: €22.7 million with an increase of 38% compared to 2020 (average investment per inhabitant served €86), which is estimated to have generated a positive impact on the national economy of €66.5 million and led to the creation of 407 equivalent full-time jobs. The economic and employment impacts have involved about 70% of the Veneto and Friuli Venezia Giulia regions.

[www.lta.it](http://www.lta.it)



## ***KEY FACTS & FIGURES***

### **SIT/METERSIT**

**Headquarters:** Milan, Lombardy

MeteRSit has always sought to be a synthesis of innovation and reliability, being the first on the market to introduce measurement technologies and construction solutions that improve performance at competitive costs, while at the same time strictly following the SIT Group's design and construction criteria.

In just a few years, MeteRSit has established itself as a key player in the markets in which it operates thanks to products that improve the way gas is measured, sold and used, making the relationship between utility and end customer more transparent and improving end customers' awareness of their own consumption.

SIT also oversees the water metering market. Through the acquisition of Janz, a consolidated Portuguese operator that has been part of the Group since the end of 2020, SIT has entered the water market with a view to creating value and protecting the natural resource thanks to its ability to accurately measure, read and transmit data, a know-how that is present thanks to the experience of MeteRSit.

At the end of 2022, SIT and GWF, a pioneer in the development of advanced measurement infrastructure technologies, entered into a strategic partnership for the development, production and distribution of ultrasonic smart water meters for residential applications.

SIT creates intelligent solutions for monitoring environmental conditions and measuring consumption for a more sustainable world. A leading multinational in its markets and listed in the Euronext Milan segment, SIT aims to be the leading sustainable partner for energy and climate control solutions for corporate customers, with a strong focus on experimentation and the use of alternative gases with low environmental impact. The Group has production sites in Italy, Mexico, the Netherlands, Romania, China, Tunisia and Portugal, as well as a commercial structure covering all relevant world markets. SIT adheres to the UN Global Compact and related principles that promote responsible business. SIT is a member of the European Heating Industry and the European Clean Hydrogen Alliance. SIT is committed to the energy and ecological transition and in 2022 presented its 2025 sustainability plan 'Made to Matter':

- Made by Us, which reflects the creation of long-term sustainable value for all stakeholders through international business development, access to ESG-aligned funding sources, and the strengthening of the Group's safeguards for ethical and responsible business conduct;
- Made for Future defines environmental responsibility with a commitment to develop products that reduce energy consumption and emissions as well as limit waste of natural resources;
- Made with Care reflects the company's social responsibility, how SIT interprets its commitment to the development and growth of its target communities, its employees and local stakeholders.

Digitalisation, technological innovation and a lean culture support the transformation and enable the organisational and product development processes of SIT, thus representing cross-cutting and enabling elements of the group's sustainability plan and activities.

**[www.metersit.com](http://www.metersit.com)**  
**[www.sitcorporate.it](http://www.sitcorporate.it)**



L'acqua della Provincia di VARESE

## **KEY FACTS & FIGURES**

### **ALFA SRL**

*Water is our world*

**Headquarters:** Varese, Lombardy

Alfa is a wholly publicly owned company that supervises integrated water management throughout the province of Varese, ensuring access to water resources, the widespread distribution of water to the home tap, sewerage and wastewater treatment to return it to the waterways and the environment. Moreover, it designs and builds new networks and new plants, taking care of the maintenance of existing ones.

All activities are planned in a professional, sustainable and responsible way to ensure the best use of an essential asset that affects the welfare and quality of life of communities. The protection of water quality and quantity is the corporate mission, the very purpose of the activity.

Established in 2015, the company's shareholders are 135 Municipalities in the province of Varese, the Province and 8 Municipalities in neighbouring provinces. Alfa currently manages 103 municipal aqueducts, 302 wells, 338 drinking water reservoirs and 360 springs, supplying drinking water to a population of 656,728 inhabitants with a network of pipes with a total length of 4,303 km for about 85 million m<sup>3</sup> of water withdrawn. There are instead 79 purification plants entrusted to the company, serving 152 municipalities of the province and neighbouring provinces, for a total of 1,179,731 people. The plants treat on average more than 100 million m<sup>3</sup> of sewage every year. On the other hand, 3,730 km of sewer network (along which 355 lifting stations are located) are managed and collect sewage from 137 municipalities, for a total population of 878,094 inhabitants.

The last company financial statements closed with a turnover of about €116 million, while the company's Business Plan provides for investments of over €300 million between now and 2035, largely concentrated in the next four years because the aim is to overcome, by the end of 2025, all EU infringements for the purification and sewerage sectors inherited from previous managements. Alfa wants to enhance the public nature of the water resource and its management through efficient industrial management.

One of the company's objectives is also to actively participate in the dissemination of a correct water culture, so that the water resource is used according to solidarity criteria to safeguard a universal human right and the rights of future generations to use it in quantity, quality and continuity. For this reason, it has already implemented and planned for the future environmental education programmes and events, aimed in particular at schools, which start from the recognition of the high environmental value offered by the natural beauty and landscape of the province of Varese.

Alfa holds Top Employers certifications for HR company policies and strategies, SA8000 which guarantees compliance with regulations and the company's level of social and ethical responsibility towards workers, ISO 45001:2018 for health and safety in the workplace, ISO 9001:2015 for procedures regarding the management of services provided, ISO 14001:2015 for environmental performance and UNI CEI EN ISO/IEC 17025:2018 for the laboratories in Caronno Pertusella, Gavirate and Sant'Antonino Ticino (Lonate Pozzolo).

**[www.alfavarese.it](http://www.alfavarese.it)**



## ***KEY FACTS & FIGURES***

### **BRIANZACQUE SRL**

*In Italy for 20 years*

**Headquarters:** Monza – Vimercate – Cesano Maderno, Lombardy

BrianzAcque SRL is the public company that industrially oversees integrated water management in the 55 municipalities of the Province of Monza and Brianza. Thanks to a particularly challenging path of mergers and acquisitions, today it is among the top 15 Italian operators in the sector. An investee and subsidiary of the 55 partner municipalities according to the in-house providing model, BrianzAcque covers the entire H<sub>2</sub>O chain: aqueduct, sewerage, and purification.

BrianzAcque has completed an ambitious path of growth and consolidation that began with the acquisition of the in-house activities of the municipalities, continued with the merger of Alsi and Idra and the integration of the water branch of Monza from Acsm Agam. The growth path started in 2003 ended with the acquisition of the water and sewerage branches of the Cap Group and of the Villasanta water branch (2018).

Today, BrianzAcque is the public water company of Brianza, directly owned and controlled by the Province of Monza and Brianza and the Municipalities. It is a modern and dynamic reality, socially responsible and 100% eco-sustainable. It is able to exploit economies of scale, establish partnerships with public companies in the water sector, initiate and sustain significant investments, contributing to the support of employment and economic recovery.

Every year, it brings more than 80 million m<sup>3</sup> of water to homes and businesses in the area, collects wastewater and returns it clean to the ecosystem after a complex purification process. The aqueduct distribution networks extend for about 3,146 km, receive 109.3 million m<sup>3</sup> of H<sub>2</sub>O annually and finally, through connections equipped with meters, deliver drinking water to homes and other points of final use.

The sewerage network extends for 2,950 km of pipelines and includes 144 sewage lifting plants and 40 first rain and collection tanks. The former are necessary for the delivery of wastewater to treatment plants, the latter are basins to contain the inconvenience caused by what are now called "water bombs", extremely intense rainfall phenomena that put a strain on the networks of collectors, often saturating capacity, and causing overpressure phenomena.

Finally, the treatment of wastewater from the territory represents an important phase in the management of the water cycle, which, as a final step, returns a precious resource such as water to the environment, contributing to the safeguard of rivers and their state of health. With 67.3 million m<sup>3</sup> of purified water, about 643,959 inhabitants served, the service, concentrated in the two plants of Monza and Vimercate, is an efficient management system that allows high economies of scale.

BrianzAcque is committed daily to meeting the needs of its municipalities and the area in which it operates: it takes care of the maintenance, improvement and innovation of networks, plants and infrastructures, applying rates that are among the lowest in Italy and Europe.

**[www.brianzacque.it](http://www.brianzacque.it)**



## ***KEY FACTS & FIGURES***

### **IRRITEC**

*In Italy for over 45 years*

**Headquarters:** Capo d'Orlando (ME), Sicily

Irritec is an international Group that plays an important role in saving water used for agriculture in over 100 Countries worldwide, offering high-tech, innovative and efficient precision irrigation solutions and transferring the instruments and know-how to implement sustainable agricultural practices. Founded in Capo d'Orlando, Sicily, in 1974, the Company is one of the world leaders in the field of precision irrigation, with an international network of over 800 employees and 16 production and sales offices in Italy, Algeria, Brazil, Chile, Germany, Mexico, Peru, Senegal, Spain and the United States. At the head of the Group, there is the Giuffrè family - Carmelo Giuffrè with his children Giulia and Mauro Giuffrè - together with important and experienced managers, who collaborate in defining the company strategy and business objectives.

Preserving the planet 'drop by drop' and tackling global challenges with a replicable Circular Economy model is Irritec's vision: the company specialises in the design, production and distribution of products and complete systems for open field, greenhouse and residential irrigation. Irritec integrates the principles of Sustainable Development into its strategic vision, organisational culture and daily operations: this is why it chose to join the UN Global Compact, pursuing the goals of the 2030 Agenda. This commitment finds concrete application in the commitment of Giulia Giuffrè, Board member and Sustainability Ambassador, appointed 'SDG Pioneer 2021 for Sustainable Water Management', awarded by the UN Global Compact during the Leaders Summit in June 2021.

Among the various initiatives promoted by Irritec is Green Fields, an eco-sustainability project that is part of the Company's Circular Economy model, launched in 2015 in Italy and 2017 in Mexico: this is a programme aimed at encouraging farmers to properly dispose of irrigation system products (such as plastic drip wings) at the end of their cycle, ensuring a second life.

In its commitment to sustainability and value sharing, the Company has developed "Irritec Academy", a training programme aimed at farmers, agronomists and students. As part of this project, Irritec has developed "Agri-Lab", pilot projects aimed at developing countries to train local farmers and develop future irrigation professionals, while offering a valuable contribution to the communities involved in terms of both social and food development. Agri-Lab is currently active in Senegal, in collaboration with AICS (Italian Agency for Development Cooperation).

**[www.irritec.it](http://www.irritec.it)**



## ***KEY FACTS & FIGURES***

### **CRÉDIT AGRICOLE ITALIA S.P.A.**

**Headquarters:** Parma, Emilia-Romagna

Crédit Agricole Italia is a bank strongly rooted in the territory, originating from local credit institutions, and its history dates back to 1860.

In 2007, Cariparma became part of the Crédit Agricole Group: it was a crucial year for the birth of the Cariparma Crédit Agricole Group. Since then, Cariparma has accelerated its growth in size while maintaining its territorial vocation. In the same year, FriulAdria became part of the new Italian banking Group led by Cariparma, with the aim of expanding its presence to the entire Triveneto area.

The beginning of 2011 saw the entry of Crédit Agricole Carispezia into the Group, following the sale by Intesa Sanpaolo of the entire stake (79.99%) held through Banca CR Firenze in Cassa di Risparmio della Spezia. Then, on December 21<sup>st</sup>, 2017 Crédit Agricole Italia finalised the purchase, from Fondo Interbancario di Tutela dei Depositi - Schema Volontario of 95.3%, of the share capital of Cassa di Risparmio di Cesena S.p.A., Banca Carim - Cassa di Risparmio di Rimini S.p.A. and Cassa di Risparmio di San Miniato S.p.A. (the "Banks").

In 2018, the Casse di Risparmio di Rimini, Cesena and San Miniato were officially integrated into the Crédit Agricole Italia banking Group. This successful path ended with their merger into the parent company Crédit Agricole Italia and a full commercial relaunch. In February 2019, Crédit Agricole Italia took on its current corporate name. This important change was confirmed by the Extraordinary Shareholders' Meeting of Crédit Agricole Italia.

In 2021, the bank went ahead with the acquisition of Credito Valtellinese, and the corporate path ended in 2022 with the merger of Credito Valtellinese and FriulAdria into Crédit Agricole Italia.

## ***KEY FACTS & FIGURES***

### **FISIA ITALIMPIANTI**

*Over 95 years of activity in the water sector*

**Headquarters:** Genoa, Liguria

Fisia Italmimpianti S.p.A is a world leader in the sustainable design and construction of water treatment and desalination plants, producing 6,000,000 m<sup>3</sup>/day of treated water, and 4,800,000 m<sup>3</sup>/day of drinking water from seawater through desalination. The company is part of the WeBuild Group, created in 2020 by Salini Impregilo, a global construction contractor specialised in building large-scale works and complex infrastructures for sustainable mobility, hydroelectric energy, water, green buildings and tunnelling.

Thanks to its experience acquired in over 95 years of activity, Fisia Italmimpianti is one of the most competitive contractors globally in this sector and offers advanced solutions in the following areas: water desalination, water treatment, desalination through renewable sources, environmentally sustainable management of municipal solid waste.

Technological and engineering management, design and planning, supply, construction, and start-up and maintenance of plant and equipment are only some of the services the company provides. Fisia Italmimpianti boasts solid experience and a highly-qualified staff that can satisfy the needs of public entities and authorities, and private companies through state-of-the-art and custom solutions.

Thanks to its vast experience, consolidated engineering and construction know-how and ongoing commitment to R&D with its own department, Fisia Italmimpianti continues to play a major role in global markets and boasts a track record of excellence.

Its knowledge of local markets and ability to satisfy customer requirements has allowed Fisia Italmimpianti to become the world leader in the construction of desalination and water treatment plants.

Plants already in operation and those under construction include projects in areas around the globe, including Saudi Arabia, Oman, United Arab Emirates and Latin America. In fact, in Saudi Arabia, Fisia created and built the Shuaibah 3 Expansion II reverse osmosis desalination plant with a capacity of 250,000 m<sup>3</sup>/day. It was the winner of the Global Water Awards 2020 in the category 'Desalination Plant of the Year', one of the most prestigious awards worldwide in the water treatment and desalination sector. Among Fisia's latest acquisitions in the MENA Region are the two desalination plants in Ghubrah 3 (Oman) and Dakhla (Morocco), using reverse osmosis technology, and the water treatment plant for water injection applications, in Zuluf, Saudi Arabia.

In Latin America, it is currently building a treatment plant in Buenos Aires, Argentina, as part of the Riachuelo System, an infrastructure project key to reducing organic pollution of the Rio de la Plata and it has recently acquired three new water treatment plants in Paraguay for the cellulose industry.



## ***KEY FACTS & FIGURES***

### **I.T.L. SPA**

*In Italy for over 60 years*

**Headquarters:** Caserta, Campania

I.T.L. SPA, is a 100% publicly owned joint-stock company, whose shareholding structure is made up of municipalities in the Province of Caserta, within which it is a strategic player in integrated water management serving over 350,000 inhabitants.

Its public mission, together with a highly streamlined, effective and efficient organisational structure, allows it to provide a service which, in the Campania Region, is offered to all categories of users at the lowest rates proposed by the competent agency and approved by the Authority for Electricity, Gas and the Water System (Autorità per l'Energia Elettrica, il Gas e il Sistema Idrico) thus ensuring maximum protection to residents served.

Thanks to I.T.L. SpA, residents of the province of Caserta can continue to rely on an agency inseparably linked to the local area, including through the presence of its mayors, while at the same time benefiting from the enhanced strength and solidity only a business can assure.

This choice, the use of economies of scale and special territorial synergies, as well as the gradual implementation of Regional Law 15/2015 on the "Reorganisation of the Integrated Water Service and establishment of the Ente Idrico Campano", also aim at significantly expanding the perimeter served in the short to medium term.

Cognizant of playing a key role in safeguarding health and the environment in the province of Caserta, I.T.L. SpA carries out its mission in a serious, committed and precise manner, with the following main objectives always in mind:

- to work for the well-being of the public;
- to offer the entire community quality services at reasonable prices;
- to pursue sustainable use of local water resources;
- to protect the territory from potential pollution related to waste water;
- to invest in innovation and seek maximum efficiency.

In synergy with other players in the local area and in close collaboration with sector associations, I.T.L. SpA is pursuing investment in infrastructure projects and systems in the area of ecological and digital transition that are of strategic importance.

**[www.itlspa.it](http://www.itlspa.it)**



**We Treat Water, We Protect Life**

***KEY FACTS & FIGURES***

**BARCHEMICALS SRL**

*In Italy for over 35 years*

**Headquarters:** Castelnuovo Rangone (MO), Emilia-Romagna

Barchemicals is an Italian company operating in the water disinfection and treatment sector; it was established to satisfy the need to protect people's health. It offers specific services in diagnostics, prevention, water treatment and disinfection.

Barchemicals' philosophy is centred on the concept of biosafety. The term biosecurity refers to the set of procedures, policies and preventive measures, as well as controls and analyses, which ensure the protection and safety of environments, goods and people from - harmful and pathogenic - physical, chemical and especially biological agents by preventing their proliferation and reducing the risks of propagation.

This goal is pursued day after day, with dedication and perseverance, through innovative solutions to improve quality of life, implementing increasingly eco-friendly and bio-sustainable policies with a cognizant use of biocides in compliance with the BPR (EU Regulation 528/2012).

Barchemicals manages the entire biosafety process by collaborating with customers and partners in compliance with national and international biosafety standards and protocols. Barchemicals' philosophy involves a 360° view, with total care of the issue - from supply to delivery - taking into account physical, technological, chemical, biochemical, biological and environmental aspects.

Barchemicals holds patents for biocide control and dosing technologies and is a pioneer in the creation of chemical products specifically formulated to solve problems, minimise their use and respect the environment.

It is ISO 9001 and ISO 14001 certified; it has an accredited analytical laboratory (ACCREDIA No. 1879 L) that coordinates all control and R&D activities through the passion of a team of scientists (chemists, biologists, engineers, agronomists).

The laboratory is on the list of those accredited by the Emilia-Romagna Region for the purpose of self-monitoring of foodstuffs and is currently the only private Italian laboratory accredited for the analysis of *Cryptosporidium* and *Giardia* in water.

It is active - in Italy and abroad - in the water treatment (Legionella, Animal Husbandry, Aqueducts, Agri&Food, Environment&COVID-19) and swimming pool (Professional Line, Detergency, 'I Sali della Vita®' Line) sectors producing chemicals for conditioning and treatment of all types of water.

It also provides specific support services, training courses, and consulting (biological and chemical risk assessment and analysis; risk management protocols; critical issue prevention and resolution).

**[www.barchemicals.it](http://www.barchemicals.it)**



## ***KEY FACTS & FIGURES***

### **CVA GROUP**

*Renewable forever*

**Headquarters:** Châtillon (AO), Valle d'Aosta

CVA - Compagnia Valdostana della Acque, based in Châtillon, has been one of the most important Italian companies active in the green energy sector for over 20 years. The Group qualifies as Italy's only 100% green integrated operator and is entirely controlled by the Valle d'Aosta Region. The production of electricity exclusively from renewable sources from hydroelectric, wind and photovoltaic plants makes the Group a leading player in the energy transition. With its 32 hydroelectric plants with a total capacity of 934 MW, it is the 5<sup>th</sup> largest player in Italy for its contribution to renewable generation from hydropower. Its production park also includes wind farms with a capacity of 157 MW and photovoltaic plants with a capacity of 54 MW.

The Group aims to diversify renewable energy sources for power generation, both by internal and external lines. To this end, it has developed a portfolio of 194 MW of authorised photovoltaic projects, more than 1,100 MW under development and a pipeline of more than 1,400 MW, including 150 MW of agri-voltaic plants, which will be built on land of the BF S.p.A. Group, with which CVA signed an alliance at the beginning of the year for the development of a national pilot project.

The Group operates vertically in the entire energy chain, managing production, distribution and sales through its companies. Hydroelectric production is managed through the companies CVA and Valdigne Energie, and wind and photovoltaic production by CVA EOS. The distribution activity, under concession, is assigned to Deval, while CVA Energie is the Group company that supplies customers in the free market and the protected categories market (under the Enerbaltea brand), active throughout Italy, with both retail and business customers.

The rapid growth of the CVA Group has been driven over the years by a flair for innovation and strong technological know-how, two factors that have enabled it to constantly develop its market potential. The commitment to the new frontiers of energy is confirmed by the recent establishment of the subsidiary CVA Smart Energy. The company will develop integrated energy efficiency services also operating on the market as an ESCo (Energy Service Company) and will implement initiatives in the field of open innovation already started, such as studies aimed at green hydrogen production and energy community design.

Although it operates exclusively in the green energy sector and has always been 'renewable', the CVA Group has defined an integrated strategy to combine corporate growth with environmental and social sustainability by approving the Integrated Plan 2022-2026. With the aim of responding to some of the global challenges identified by the United Nations Sustainable Development Goals, actions were taken in 2022 that allowed, inter alia, to save 897,000 tonnes of CO<sub>2</sub> by producing 2.8 billion kWh from renewable sources alone and generating consolidated net revenues of more than €600 million.

**[www.cvaspa.it](http://www.cvaspa.it)**

## **MADDALENA S.P.A.**

*Historic brand of national interest*

**Headquarters:** Povoletto (UD), Friuli Venezia Giulia

Maddalena S.p.A. is a leading international company in the water and thermal energy measuring instruments sector. Founded in 1919, its corporate structure and meters for domestic and large industrial users have continued to evolve, and today they respond to the needs of leading utilities throughout the world.

The factory in Povoletto (UD) boasts the highest production capacity in Europe under one roof and produces over 3 million instruments each year. In addition to the Friuli site, there is also the production site in Germany, Maddalena GmbH.

Always with an eye on innovation, Maddalena S.p.A. now offers a complete range of smart meters, with mechanical and electronic clockwork, in compliance with recent European metrology and health directives. A forerunner in remote reading technologies, the company keeps abreast of market challenges and is committed to the continuous development of flexible and open data transmission and centralisation solutions according to the new IoT paradigms.

The company was granted the title of *Marchio Storico di Interesse Nazionale* (Historic Trademark of National Interest) as testimony to its worth and role in Italy, and a number of years ago adopted a 231/01 Code of Ethics. Maddalena S.p.A. also has an ISO 9001, 14001, 27001, 45001 certified system and an Accredia 17025:2018 certified calibration laboratory.

Maddalena S.p.A. published its first Sustainability Report in December 2022, continuing a path begun in 2021 by obtaining SA8000 certification and Ecovadis Rating.

In a global scenario in which water is, and will increasingly become, a scarce and precious resource, Maddalena S.p.A. is proud to be a member from its inception and the first in its sector of the Value of Water for Italy Community and works assiduously towards the concept of measurement efficiency with a focus on water conservation, thus making its contribution to meeting Sustainable Development Goal 6 of the 2030 Agenda.

## ***KEY FACTS & FIGURES***

### **ACEGASAPSAMGA S.P.A.**

**Headquarters:** Trieste and Padua, Friuli Venezia Giulia and Veneto

AcegasApsAmga is the first multi-utility in the North-East, active in environmental services, the integrated water cycle, energy distribution and management, and public lighting. An integral part of the Hera Group, it shares the mission of being a business model capable of innovation and strong local roots, while respecting the environment. AcegasApsAmga offers primary utility services in 156 municipalities in Veneto and Friuli Venezia Giulia, for a served area of more than one and a half million people, mainly located in the areas of Gorizia, Padua, Trieste, and Udine. With around 1,800 employees, between AcegasApsAmga and directly controlled subsidiaries, the company operates with a constant focus on service excellence, customer focus and sustainability.

AcegasApsAmga manages the entire integrated water cycle, i.e., the collection, supply, transportation and distribution services of drinking water and the management of the entire sewerage system and wastewater treatment service in the Trieste, Padua and Saccisica areas. It is more than 3,000 km of network to bring water to the homes of 257,000 families.

AcegasApsAmga ensures continuous and efficient monitoring of the water service 365 days a year. Thanks to the analyses carried out by health authorities and Heratech laboratories (a Hera Group company), the water managed is constantly monitored along the entire collection and distribution chain to verify its full compliance with legal parameters.

AcegasApsAmga is adopting water safety plans to ensure the monitoring and prediction of sources of risks in the drinking water distributed in the various territories, with the aim of reducing them. In this sense, there is a sharing with the Veneto and Friuli Venezia Giulia Regions and with the ARPA (Environmental Protection Agency), which is taking the form of joint work to define homogeneous, coordinated plans that conform to the guidelines.

AcegasApsAmga manages the entire sewerage and wastewater treatment system in 16 municipalities in the Trieste and Padua areas. A sewerage network totalling 2,045 kilometres conveys more than 34 million m<sup>3</sup> of domestic and industrial waste water produced in the served areas to the 12 purification plants managed by AcegasApsAmga.

At the end of the integrated water cycle, the treated water is returned to the environment perfectly purified. In Trieste AcegasApsAmga, also thanks to the know-how of the Hera Group, has built one of the most advanced purification plants in Europe: the purifier that talks to the sea. Thanks to biological treatment, the plant is able to listen to the nutrient needs expressed by the sea and dynamically adjust the intensity of treatment accordingly. The heart of the sewerage and purification system in the Padua area, however, is the Ca' Nordio purification plant, which is the subject of a major expansion project currently underway, thanks to which the plant's overall capacity will reach 230,000 population equivalents. This will allow the entire water purification system in the Padua area to be upgraded even in critical weather conditions.

Thanks to the complete digitalisation of the networks made possible by Hergo technology, it was possible to create a virtual and physical subdivision of the water and sewerage networks of Padua and Trieste into small portions (districts). This has allowed us to drastically reduce network losses, identify the most useful measures to prevent flooding, and save considerable amounts of electricity in plant management.

**[www.acegasapsamga.it](http://www.acegasapsamga.it)**

## ***KEY FACTS & FIGURES***

### **UTILITALIA**

*Federation of water, environment and energy companies*

**Headquarters:** Rome, Lazio

Established in 2015, Utilitalia brings together utilities operating in the water, environment, electricity and gas public services, representing them at national and European Institutions. Its historical heritage of experience and expertise dates back to the early 1900s with the founding of the Federazione Aziende Municipalizzate d'Italia (Italian Federation of Municipal Companies).

Today it brings together different entities including corporations, consortia, municipalities, special companies and other entities, totalling about 450 companies with a production value of €40 billion and more than 100,000 employees. The Federation represents almost all companies in the Italian water sector (about 80% of the national population served), more than half of the companies in environmental services (about 55% of the population served) and the gas (30% of the population covered) and energy (15% of the population covered) sectors are also well represented.

Utilitalia is a point of reference for national collective labour agreements and relations with trade unions. The National Collective Labour Agreement (CCNL) for Gas-Water, which Utilitalia signs together with the sector associations of Confindustria, is applied to more than 40,000 workers. It is also a signatory of the CCNL for the electricity sector, applied to more than 13,000 employees of member companies, and is a signatory of the CCNL for environmental services, applied to 47,000 workers of member companies.

The Federation also offers cross-cutting organisational oversight on issues related to the regulatory activity of infrastructures and markets assigned to ARERA (Regulatory Authority for Energy, Networks and Environment) through the monitoring and analysis of the evolution of economic and tariff regulation aspects and the technical and commercial quality of the services regulated in the sectors of interest.

The legal, legislative and fiscal area also carries out a careful monitoring of regulatory and case law changes in the field of local public services of economic importance for member companies, providing the necessary support in resolving interpretative and implementation issues.

The mission of Utilitalia's member companies is to ensure efficient and accessible services to citizens, providing for the protection and enhancement of environmental resources and making a contribution to the modernisation of the Country, in line with other European Countries. In this regard, the Federation is a member, representing Italy, of a number of European and international sectoral bodies such as the European association of public utilities (CEEP), the European federation of national associations of water services (EurEau), the International Water Association (IWA) and Municipal Waste Europe (MWE), among others.



## FONDAZIONE UTILITATIS

*Promoting knowledge, innovation and best practices in the management of local public services.*

**Headquarters:** Rome, Lazio

The Fondazione Utilitatis (Utilitatis Foundation) is the fruit of a journey that began in 1995 with the establishment of the Public Services Research Institute, the then Proaqua, by Federgasacqua (now Utilitalia). Since its inception, it has taken the form of a non-profit consortium aimed at study and research activities of a technical and economic nature, as well as assistance to administrations or companies involved in service reorganisation processes.

In 1999, the institute expanded its research activities, at first focused exclusively on integrated water management, to other local public services, such as the natural gas distribution service and the municipal waste management service, becoming the Public Services Research Centre CRS-PROAQUA.

In 2006, the research centre took its current name, UTILITATIS for water, energy and environment.

In May 2011, the consortium was transformed into a Foundation, consolidating its mission as an entity oriented towards promoting the culture of local public service management and the dissemination of legal, economic and technical content.

In 2021, the promoting founder, Utilitalia, supported the functional redesign of the Foundation, relaunching its study and research activities, bolstering its scientific standing and at the same time developing its business activities with regard to both training and consulting, also outside the federation.

The Foundation's aim is to promote knowledge, innovation and best practices in the management of local public services, improving their quality and efficiency as well as their economic, social and environmental sustainability, orienting the business model towards sustainable success, i.e., the stable creation of long-term value for its shareholders, in a form shared with the relevant stakeholders.

The Foundation's activities focus on the drafting of periodical publishing products in the sector such as the Blue Book and the Green Book, monographs dealing with technical, economic and governance aspects of the water and waste service that report proprietary data of the managers, the Orange Book, dedicated to innovation in public services, the Utilities Sustainability Report, which collects the non-financial performance of Utilitalia members, as well as on collaboration on study and research projects with other Italian and foreign research centres and foundations.

**KEY FACTS & FIGURES****THE EUROPEAN HOUSE - AMBROSETTI**

*In Italy for 58 years*

**Headquarters:** Milan, Lombardy

The European House - Ambrosetti is a Group of approximately 285 professionals operating since 1965, which has grown significantly over the years, thanks to the contributions of many of its partners, developing numerous activities in Italy, Europe and the rest of the world.

The Group has three offices in Italy and a number abroad, in addition to other partnerships around the world. What distinguishes it is its ability to provide support to companies in the integrated and synergic management of the four critical aspects of value creation processes: Seeing, Planning, Achieving and Optimizing.

For over 50 years it has been working alongside Italian businesses and each year it provides consulting to about 1,200 clients, including more than 200 strategic scenarios and studies aimed at Italian and European Institutions and companies, and around 120 projects for family-run businesses. In addition, each year about 3,000 Italian and international experts are involved in the 500 events it organises for over 15,000 managers whom it follows in their personal and professional paths to growth.

The Group offers an invaluable international network of contacts on the highest level in the sectors in which it operates, including top-level decision-makers within multinational institutions and on an individual Country level.

In 2013, The European House - Ambrosetti was named the no. 1 Think Tank in Italy, no. 4 in Europe and among the most respected independent Think Tanks in the world out of 11,175 on a global level in the category "Best Private Think Tanks" (source: "Global Go To Think Tanks Report" of the University of Pennsylvania). The European House - Ambrosetti was recognised by Top Employer Institute as one of the 141 Top Employers 2023 in Italy. For additional information, please visit the website [www.ambrosetti.eu](http://www.ambrosetti.eu) and follow us on [twitter.com/Ambrosetti\\_](https://twitter.com/Ambrosetti_)



## **KEY FACTS & FIGURES**

### **VALUE OF WATER FOR ITALY COMMUNITY**

**Headquarters:** Milan, Lombardy

Established by The European House - Ambrosetti in 2019, the Value of Water for Italy (Valore Acqua per l'Italia) Community is a multi-stakeholder platform dedicated to water resource management as a driver for competitiveness and sustainable industrial development, with the aim of submitting proposals to the Government and the Country System.

An efficient and sustainable water value chain is a 'system' issue, with implications for the Country's growth and the everyday life of citizens and businesses. Based on this reflection, The European House - Ambrosetti founded the Value of Water Community three years ago, with the aim of involving the various players of the extended water value chain (network operators, service providers, representatives of the world of agriculture, industrial players, technology providers, software developers, etc.) and the relevant Institutions, with a view to a constructive and permanent dialogue. Community closed-door meetings represent opportunities to discuss, learn and share experiences and draw up proposals to bring to the attention of the various Italian and European institutional stakeholders.

The mission of the Value of Water for Italy Community is: *"To be the Think Tank of reference for the development of scenarios, strategies, best practices and policies for the extended water value chain in Italy and the optimisation of its development at the national, regional and municipal level so that the Country can become a benchmark in Europe and worldwide."*

Given the very positive reactions collected following the first three editions, The European House - Ambrosetti has decided to make the Observatory of the Value of Italy Community permanent and to launch the fourth edition of the initiative. The fourth edition of the Value of Water Community brings together 33 of the main actors of the extended water value chain in Italy: A2A, ACEA, Hera, Celli Group, Iren, Intesa Sanpaolo, Intesa Sanpaolo Innovation Center, Acquedotto Pugliese, MM, SMAT, ANBI - National Association of Consortia for the Management and Protection of the Territory and Irrigation Waters, Schneider Electric, Suez, Engineering, Xylem, IWS, SOTECO, RDR, Padania Acque, Livenza Tagliamento Acque, SIT, Alfa Varese, Brianzacque, Irritec, Crédit Agricole, Fisia Italimpianti, Consorzio Idrico Terra di Lavoro, Barchemicals, CVA, Maddalena, AcegasApsAmga, Utilitalia, and Utilitatis.

Altogether, the Value of Water Community represents around €20 billion in turnover, more than 300,000 workers, 60% of the Italian citizens served and 200,000 km of water network.

[www.ambrosetti.eu/communityacqua](http://www.ambrosetti.eu/communityacqua)

## THE VALUE OF WATER FOR ITALY COMMUNITY: OBJECTIVES, ACTIVITIES AND PROTAGONISTS OF THE FOURTH EDITION 2022/2023

### MISSION, RATIONALE AND WORKING METHOD OF THE FOURTH EDITION OF THE VALUE OF WATER FOR ITALY COMMUNITY

Water is an **essential element** for human societies and natural environments to continue to thrive over time. Water is the foundation of civilisation as well as of human history, past, present and future. The summer of 2022 brought the topic of water resources back to the front pages of Italian and international newspapers, and of how, even today, despite technological and economic progress, our society and economic system are still strongly linked to and influenced by the availability of water.

From prehistoric times to the present day, humankind's relationship with the resource water has been fundamental to the development of societies and economic systems: the first civilisations arose along watercourses, and it was precisely water resource management that called upon the best engineering and architectural skills in the first human settlements. To talk about water, therefore, is to talk about culture, and a **serious and in-depth debate on the resource water can no longer be put off**.

Precisely on the basis of this consideration, in 2019 The European House - Ambrosetti, together with the Top Management of the extended Italian water value chain, decided to found the **Value of Water for Italy Community**, a platform for constructive and permanent debate among stakeholders dedicated to the management of water resources as a driver of sustainability, competitiveness and industrial development, with the aim of submitting proposals to the Government and to the Country System.

The Value of Water for Italy Community gathers representatives of the **entire extended water value chain** composed of players who use water as a primary production input (agriculture, water industries and energy sector companies) the operators of the extended water cycle, i.e., players of the Integrated Water Management and input suppliers for the water value chain and, from this fourth edition, the banking and insurance sector.

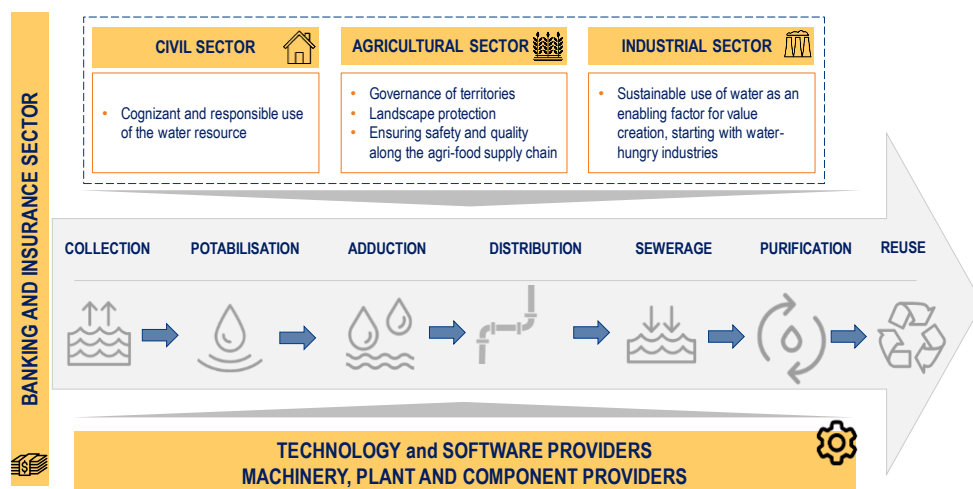


Figure I. The extended water supply chain. Source: elaboration The European House - Ambrosetti, 2023.

The **mission** of the Value of Water for Italy Community is:

Being a **multi-stakeholder Think Tank** to develop scenarios, strategies and policies to support the **extended water value chain in Italy** and its development helping the Country to become a **European and global benchmark**

The **development vision** for the Country System that the Value of Water for Italy Community has intended to promote, since its first edition, is:

To establish Italy as a **sustainable Country**, starting from the **efficient, local and circular management of the water resource**, which is committed to the comprehensive mitigation of the risk linked to the resource, capable of attracting investments and technological innovations along the extended value chain, with an authoritative influence at a European level, and which makes the sustainable management of the water resource a **competitive and development asset**.

Moving from **21<sup>st</sup> place** in the 'Water Sustainable Development Index' to **19<sup>th</sup> place by 2022** (target achieved in 2022, Italy ranks 18<sup>th</sup>), **13<sup>th</sup> place by 2025** and **10<sup>th</sup> place by 2030**.

The Value of Water for Italy Community has the following **objectives**:

- **To reach shared positions** on priority issues for an efficient and sustainable management of the water resource in Italy;
- To develop **qualified advocacy** at the **Italian and European level**, bringing authoritative and reasoned content and proposals to the table;
- To produce **new ideas and knowledge** on the extended water value chain in Italy and Europe;
- To facilitate the **exchange of experience** and **qualified networking** between the members of the Community and relevant external stakeholders;
- To produce **formalised content** to support the objectives of the Community;
- To develop **education activities** targeting both actors in the extended water value chain and the general public;
- **To authoritatively communicate** the theses and positions of the Community, raising awareness among the business community, policymakers and civil society;
- To map, approach and engage the world's leading players with **successful technologies** and **experiences**.

The work of the fourth edition of the Value of Water for Italy Community was carried out between April 2022 and March 2023, through a series of interconnected activities according to a **multi-level working method** that integrated moments of debate, listening and awareness-raising, intelligence and proposals.

Community members met in periodic meetings, which represented moments of discussion and brainstorming on priority and topical issues related to the development of the extended water value chain in Italy and the optimisation of its development. On these occasions, the partner companies of the Community and the external guests

involved in the various meetings shared their experiences and expertise, and The European House - Ambrosetti Working Group produced and developed specific research.

It should be noted that for the fourth edition 2022/2023, The European House - Ambrosetti has reached an agreement with the Utilitatis Foundation for a **scientific partnership** with reference to the Integrated Water Management dimension. At the same time, the Value of Water for Italy Community will contribute as a **partner to the drafting of the Blue Book 2023**, which will be presented together with the White Paper 'Value of Water for Italy'. Both documents will be presented as part of the Community's final event on World Water Day (22 March 2023).

It is also worth pointing out that the fourth edition introduced for the first time a stage (the third, held on Friday 25<sup>th</sup> November 2022) in **Brussels** with the aim of delving into the main challenges at European level for the extended water value chain and analysing the opportunities of the European Taxonomy for the water sector. The meeting was attended by representatives of the partner companies, the heads of the European Institutions and associations involved in the topics of the meeting.

Also confirmed for the second consecutive year were **two Focus Groups** on vertical issues, strategic for the optimisation of the extended water value chain: the first focused on the **circularity of the water resource** for efficient management of the extended water value chain ("Circular water" Focus Group held on 28<sup>th</sup> October 2022 in Rome, at the ANBI offices) and the second focused on the role of **smart e digital technologies** for the efficiency of the extended water value chain ("Smart&Digital Water" Focus Group, held on 16<sup>th</sup> January 2023 in Milan). The Focus Groups were attended by representatives of the partner companies of the Value of Water Community, guests from the Italian and international business community, experts and witnesses of benchmark cases on the topics covered at the two meetings.



Figure II. The path of the fourth edition of the Value of Water for Italy Community of The European House - Ambrosetti. Source: elaboration The European House - Ambrosetti, 2023.

Specifically, the fourth edition of the Community focused on **five work areas**:

- **Value of Water for Italy Observatory**, which saw the elaboration of Facts&Figures on the reference scenario of the water resource in the world, in Europe and in Italy, an in-depth study of the challenges for sustainable use of water and the adaptation of territories to climate change, a survey of Italian citizens on the perception of the value of water and consumption habits, an in-depth study of the authorisation procedures for the construction of water infrastructures, the sharing of some considerations on the circular transition of the water value chain, the updating of the mapping of the extended water supply chain in Italy with the addition of the value generated by operators managed directly by local authorities, the in-depth study of smart&digital technologies for the efficiency of the supply chain, the investigation of the opportunities offered by the diversification of water supply sources, such as desalination, the updating of the analysis of the contribution of efficient and sustainable management of water resources to the 17 Sustainable Development Goals of the United Nations 2030 Agenda;
- **international network**, with the mapping of best practices at global and European level and the engagement of representatives of other Countries and European Institutions, in particular the involvement of a Saudi Arabian delegation at a meeting to explore the benchmark case of Saudi Arabia on desalination;
- **10 action proposals for Italy**, through an intelligence activity on the current barriers to the development of the extended water value chain and the development of tangible proposals and actions for the Country System;
- **network with Italian and European Institutions**, through the expansion of relations with European (in particular, by organising a stage of the work activity in Brussels), national, regional and local Institutions and their involvement in the Community's activity;
- the **#ValoreAcqua communication strategy**, with a targeted activity on traditional channels (print media) and social networks, the updating of the website dedicated to the Community, the organisation of a press conference for the preview presentation of the results of the survey carried out among Italian citizens on the perception of the value of water and consumption habits, the announcement of the pilot project with schools and the presentation of the challenges and opportunities for the extended water value chain (February 9<sup>th</sup>, 2023) the final event for the presentation of the 2023 White Paper "Value of Italy for Italy" (*Valore Acqua per l'Italia*) as part of World Water Day (March 22<sup>nd</sup>, 2023), the monitoring of the World Days linked to the issue of water and sustainability, the launch of the #ValoreAcqua podcasts, participation in third party events outside the Value of Water for Italy Community and the publication of an Ambrosetti Club Letter entirely dedicated to the issue of water.

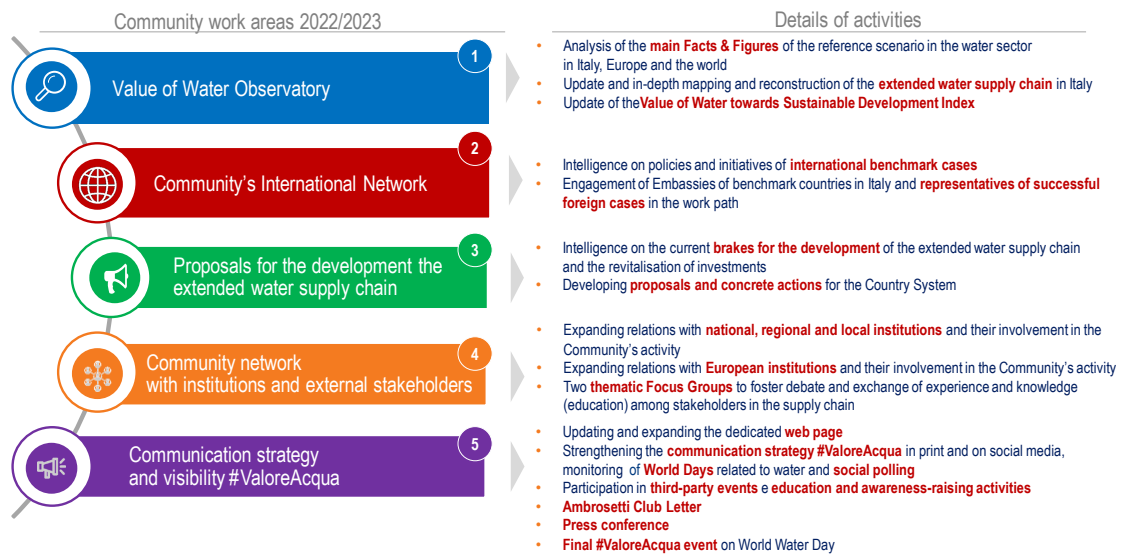


Figure III. The main work areas of the fourth edition of the Value of Water for Italy Community. *Source: elaboration The European House - Ambrosetti, 2023.*

Below is a summary of the main work areas and activities carried out by the Community during the third edition 2022/2023.

### The network of relations established by the Value of Water for Italy Community with the Country's decision makers

With a view to sharing experiences and reflections on the topic, selected representatives from the institutional, political and business/associative worlds in Europe and Italy are met and/or invited to speak at Community meetings.

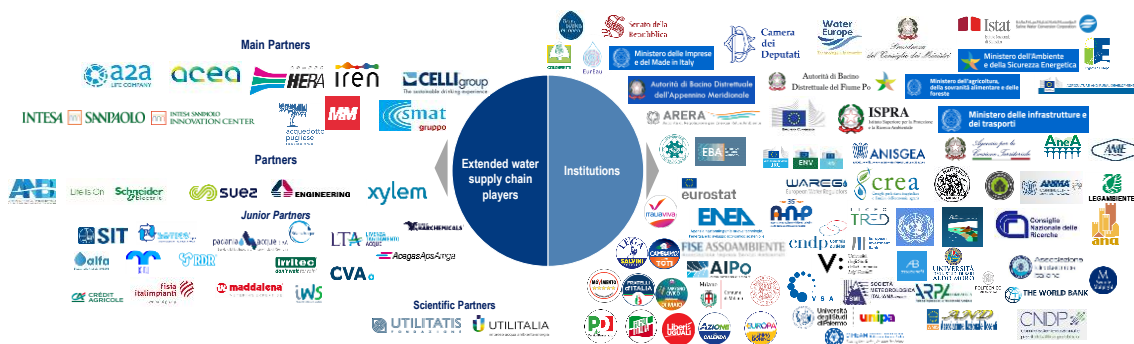


Figure IV. The network of the Value of Water for Italy Community: partner companies, Institutions and public and private representatives involved in the activities of the fourth edition of the Value of Water for Italy Community. *Source: elaboration The European House - Ambrosetti, 2023.*

### The international network of the Value of Water for Italy Community

In the fourth edition of the Value of Water for Italy Community, **in-depth discussions** continued, at various levels, on the **main experiences related to** models, tools and solutions tested in **other European and non-European Countries** for the efficient and sustainable management of water resources, also thanks to the testimonies of guests at the Community meetings. In particular, the fourth edition of the Value of Water for Italy Community saw a strengthening of the participation of **European Institutions**.



One meeting was dedicated to the challenges and opportunities for the extended water value chain in the European context, including a stop in Brussels. In this context, Aqua Publica Europea, the European Commission (DG Agriculture and Rural Development, DG Environment and DG Research and Innovation), the European Investment Bank, the European Irrigation Association, the International Desalination Association, Irrigant's D'Europe and Water Europe were involved.

### **The Value of Water for Italy Observatory**

Through the **Value of Water for Italy Observatory**, The European House - Ambrosetti Working Group is observing the evolution of the reference scenario of the extended water value chain in the world, in Europe and in Italy on a permanent basis.

During the fourth edition of the Value of Water for Italy Community, the Observatory developed a number of **methodological and analytical tools** to monitor Italy's performance in comparison with its main international competitors and to assess the contribution of the water resource to Italy's efficiency and Sustainable Development:

- **Facts&Figures** on the reference scenario in the world, Europe, and Italy<sup>I</sup>;
- **updated mapping of the extended water supply chain** in Italy by updating a database containing the multi-year economic data of all the companies operating in the extended water value chain (agricultural sector, 'water-intensive' industries, energy sector, Integrated Water Management, technology and software providers and suppliers of machinery and plants), for a total of 66 million observations and about 2 million companies<sup>II</sup> and extending the analysis also to the value generated by operators managed directly by local authorities;
- update of the **Sustainable Development Goals of the United Nations 2030 Agenda and individual targets** impacted by efficient and sustainable management of the water resource and analysis of the contribution of the water resource on selected individual Goals<sup>III</sup>;
- analysis of Italy's strengths and weaknesses compared with other European Countries, by means of a **Country positioning index for each of the impacted Sustainable Development Goals** and a cumulative summary index ("**Value of Water Towards Sustainable Development**" index), as a premise for the development of proposals for action for policymakers<sup>IV</sup>;
- in-depth exploration of the opportunities offered by **diversification of water supply sources**, such as desalination;

<sup>I</sup> See Parts 1 and 2 of the White Paper "*Why we need to talk about water today*" and "*A snapshot of water management in Italy and the value of the extended value chain: the findings of the National Value of Water Observatory*," respectively, for further details.

<sup>II</sup> See Part 2 of the White Paper "*Why we need to talk about water today*" and "*A snapshot of water management in Italy and the value of the extended value chain: the findings of the National Value of Water Observatory*" for further details.

<sup>III</sup> See Part 4 of the White Paper, "*What contribution of the water resource to the sustainable recovery of Italy and Europe*" for further details.

<sup>IV</sup> See Part 4 of the White Paper, "*What contribution of the water resource to the sustainable recovery of Italy and Europe*" for further details.

- analysis of the role of **sustainable finance and of the European Taxonomy** to promote a sustainable transition of the extended water value chain, also through an *ad-hoc survey* administered thanks to the collaboration with Utilitalia and the Utilitatis Foundation, to operators in the water sector<sup>V</sup>;
- in-depth examination of the **authorisation procedures** necessary for the construction of water infrastructures and the factors hindering the release of investments;
- **survey conducted on Italian citizens** on their perception of the value of water and consumption habits<sup>VI</sup>;
- analysis of some of the **pillars of the circular transition** and of the water value chain from a **smart&digital** perspective<sup>VII</sup>.

### **The integrated communication campaign #ValoreAcqua of the Value of Water for Italy Community**

To contribute to the knowledge of the benefits associated with efficient and sustainable management and responsible use of the water resource, the Value of Water for Italy Community and its partners have implemented an **integrated communication strategy**, based on the following tools

- dedicated **website**;
- communication campaign in **traditional media**;
- communication campaign on **social media**;
- communication to **decision-makers**.

The dedicated website of the Value of Water for Italy Community has been updated (<https://www.ambrosetti.eu/le-nostre-community/community-valore-acqua-per-litalia/>). The site offers a detailed description of the Community and its initiatives, also highlighting articles dedicated to the Community and those in which it is mentioned. For the fourth edition of the initiative, following on the previous editions, several activities were carried out. In particular:

- recording of **podcasts** on the value and challenges of the extended water value chain in Italy with the protagonists of the Value of Water for Italy Community, such as top management of partner companies and institutional representatives (<https://open.spotify.com/show/6cHmoe1JlzA1gkcDn7huwY>);
- monitoring of **World Water Days** established by the United Nations;
- holding of a **press conference** (Thursday, February 9<sup>th</sup>, 2023);

<sup>V</sup> See Part 5 of the White Paper, '*What enabling factors for strengthening the extended water supply chain in Italy*', for further details.

<sup>VI</sup> In the White Paper 2023, there is no *ad hoc* part on the results of the survey, however, evidence is presented whenever the subject matter is relevant to the results obtained.

<sup>VII</sup> See Part 3 of the White Paper '*How to promote a new water culture: the Circular Water and Smart&Digital Water paradigms*' for further discussion.

- interventions in **third-party events** to give visibility to the content developed by the Value of Water for Italy Community.

In addition to continuing communication activities on **social networks** (Twitter, Instagram, YouTube, Facebook and LinkedIn), through the **#ValoreAcqua** hashtag created in the first edition and in the **traditional media** (print media and online magazines), with the publication of 200 articles in the fourth edition, the integrated communication strategy also included the maintenance of the **#ValoreAcqua** page on **Spotify** and the recording of a series of podcasts to convey the key themes associated with the efficient management of water resources in Italy and Europe. A total of **17 podcasts** were recorded<sup>VIII</sup>.

Finally, during the edition 2022/2023 of the Value of Water for Italy Community, **the World Days** dedicated to the issue of water **were monitored** and promoted through the social channels of The European House - Ambrosetti.

Another important novelty of the fourth edition was the launch of a **pilot project with a group of selected schools** to foster a new water culture in Italy starting with the new generations.<sup>IX</sup>

The results of the work carried out in the third year of activity of the Value of Water for Italy Community are summarised in this **White Paper**, which, in a spirit of positive contribution to the improvement of the Country System, aims to provide a detailed picture of Italy's international positioning and to propose some lines of action to optimise the development of the country's extended water supply chain<sup>X</sup>.

The presentation and discussion of the results and proposals of the Community, on the occasion of the **press conference** (Thursday, February 9<sup>th</sup>, 2023) and the **final event presenting the White Paper "Water Value for Italy"** (Wednesday, March 22<sup>nd</sup>, 2023) will allow a further discussion with business leaders and reference institutions, in the spirit of teamwork and developing actions for the benefit of the Country System.

In addition, the results and proposals emerging from the third edition of the Community will be summarised in an **Ambrosetti Club Letter** that will be addressed to a confidential mailing list of 3,000 decision-makers in the Country.

<sup>VIII</sup> We would like to thank Massimo Gargano (ANBI), Mauro Gallavotti (Celli Group), Meuccio Berselli (Autorità di Bacino Distrettuale del Fiume Po), Erasmo D'Angelis (Autorità di Bacino Distrettuale dell'Appennino Centrale), Vittorio Panzeri (Schneider Electric), Simeone Di Cagno Abbrescia (Acquedotto Pugliese), Paolo Romano and Elisa Brussolo (SMAT), Federico de' Stefani (SIT), Franco Masenello (IWS), Claudio Cosentino and Alberto Trotta (ACEA Ato 2), Giulia Giuffrè (Irritec), Tullio Montagnoli (A2A Ciclo Idrico), Francesco Hensemberger (MeterSit), Ramona Magno (IBE Drought Observatory, CNR - Italian National Research Council), Giordano Colarullo and Francesca Mazzarella (Utilitalia and Utilitatis Foundation, respectively) and Umberto D'Angelo and Davide Ciano (Engineering).

<sup>IX</sup> See Part 6 of the White Paper '*What to do to bolster the development the extended water supply chain: the Agenda for Italy*' for further details.

<sup>X</sup> See Part 6 of the White Paper '*What to do to bolster the development the extended water supply chain: the Agenda for Italy*' for further details.

## MEMBERS OF THE VALUE OF WATER FOR ITALY COMMUNITY AND OTHER ACTORS OF THE INITIATIVE

The Value of Water for Italy Community is composed of:

Main Partners:

- A2A: **Tullio Montagnoli** (Chief Executive Officer, A2A Ciclo Idrico), **Matteo Tassi** (Head of Monitoring, Reporting and Environmental Health and Safety Development, A2A Ciclo Idrico) and **Alberto Hrobat** (Head of Customer Management and Relations with Authorities, A2A Ciclo Idrico);
- ACEA: **Claudio Cosentino** (President, ACEA ATO 2) and **Stefano Raffaello Songini** (*Head of Investor Relations and Sustainability*);
- ACQUEDOTTO PUGLIESE: **Domenico Laforgia** (President), **Francesca Portincasa** (General Manager), **Antonio Braccio** (Chief Financial Officer) and **Luigia Troiano** (Head of Local Information Systems);
- CELLI: **Mauro Gallavotti** (President and Chief Executive Officer), **Guido Broggi** (Demand Generation Director) and **Cecilia Manenti** (Group Marketing Communications Manager);
- HERA: **Susanna Zucchelli** (Water Director) and **Francesco Maffini** (Head of Asset Management, Water Division);
- INTESA SANPAOLO: **Giada Monti** (project coordinator – Institutional Affairs Department) e **Laura Campanini** (scientific coordinator – Research Department)
- IREN: **Alessandro Cecchi** (Regulatory Affairs Director) and **Vito Cannariato** (Head of Environmental and Water Regulation);
- MM: **Francesco Moscolo** (Chief Executive Officer) and **Lorenzo Persi** (Director of Administration, Finance, Control and Regulation);
- SMAT: **Paolo Romano** (President) and **Armando Quazzo** (Chief Executive Officer).

Partners:

- ANBI - NATIONAL ASSOCIATION OF CONSORTIA FOR MANAGEMENT AND PRESERVATION OF LOCAL AREAS AND IRRIGATION WATER: **Francesco Vincenzi** (President), **Massimo Gargano** (General Manager), **Caterina Truglia** (Deputy Director) and **Adriano Battilani** (Senior Management Technical Staff);
- ENGINEERING: **Umberto D'Angelo** (Market Growth Director, Energy& Utilities) and **Davide Ciano** (Sales Consultant Manager);
- SCHNEIDER ELECTRIC: **Alain Dedieu** (Global President, Water & Waste Water), **Vittorio Panzeri** (Vice President South Europe & East North Africa) and **Donato Pasquale** (Water Sector Manager) and **Sergio Vidal** (Regional Sales Manager Iberia, Schneider Process Automation);
- SIT: **Federico De' Stefani** (President and CEO), **Francesco Hensemberger** (Sales & Marketing Director, MeterSit) and **Camilla Fontana** (Marketing Manager Metering, MeteRSit);

- SUEZ: **Massimiliano Bianco** (Chief Executive Officer), **Mario Adamo** (Business Development Smart & Environmental Solutions) and **Cesare Boari** (Proposal Engineer);
- XYLEM: **Elisabetta Anastrelli** (Marketing Director Water Industry), **Giacomo Solbiati** (Managing Director, Water Solution Italy), **Marcello Di Vincenzo** (Head of Business Development & Partnerships) e **Domenico Santoro** (Marketing and Communication Manager).

*Junior Partners:*

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- ALFA VARESE: **Paolo Mazzucchelli** (President), **Elena Alda Bardelli** (Chief Executive Officer), **Paolo Bernini** (Head of Press and External Relations) and **Nicoletta Poroli** (Web content editor);
- BARCHEMICALS: **Corrado Barani** (President), **Paolo Botti** (Regulatory Services and Tender Services) and **Alessandro Dicastro** (Head of Area Centre-South Italy);
- BRIANZACQUE: **Enrico Boerci** (President), **Enrico Colnago** (Head of Management Control Area) and **Giuseppe Mandelli**;
- CONSORZIO IDRICO TERRA DI LAVORO: **Maurizio Desiderio** (General Manager);
- CRÉDIT AGRICOLE: **Carlo Piana** (General Manager, Crédit Agricole FriulAdria);
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- RDR: **Alessandro Di Ruocco** (President) and **Luca Serena** (Chief Executive Officer);
- SO.T.ECO: **Valeria Barletta** (Chief Executive Officer).

*Scientific Partners*

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- FONDAZIONE UTILITATIS: **Stefano Pareglio** (President), **Francesca Mazzarella** (Director), **Andrea Bordin** (Senior Analyst), **Andrea Di Piazza** (Senior Analyst), **Alessandro Fessina** (Analyst), **Edoardo Agostini** (Analyst) e **Federica Vitiello** (Assistant).

The Community is managed and coordinated by The European House - Ambrosetti. The European House - Ambrosetti Working Group consists of:

- **Valerio De Molli** (Managing Partner & CEO);
- **Benedetta Brioschi** (Associate Partner, Head of Food&Retail and Sustainability and Project Leader);
- **Nicolò Serpella** (Consultant, Scenarios and Intelligence Area, Project Coordinator);
- **Mirko Depinto** (Consultant, Business and Policy Impact Area);
- **Giulia Tomaselli** (Consultant, Scenarios and Intelligence Area);
- **Alessandra Bracchi** (Consultant, Scenarios and Intelligence Area);
- **Alberto Maria Gilardi** (Analyst, Scenarios and Intelligence Area);
- **Laura Basagni** (Director Brussels Office);
- **Fabiola Gnocchi** (Communication Manager);
- **Erika Panuccio** (Content and Social Media Manager);
- **Manijeh Merlini** (Event Manager);
- **Simonetta Rotolo** (Assistant);
- **Alice Vertemati** (Assistant);
- **Annalisa Pinto** (Assistant);
- **Walter Adorni** (IT manager).

The Community's work involved a constructive exchange of views and opinions with representatives of Italian and European institutions and organisations.

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- **H.E. Abdullah Abdulkarim** (Governor, SWCC - Saline Water Conversion Corporation);
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- **Manal Almadi** (Gm SWCC *International Partnership*, SWCC - Saline Water Convesion Cooperation);
- **Ali Alomarey** (First Secretary, Royal Embassy of Saudi Arabia);
- **Carlo Alberto Amadei** (Water Specialist, World Bank);
- **Panagiotis Balabanis** (Head of Sector Water, Unit Healthy Planet, DG Research and Innovation - European Commission);

- **Silvia Bartolini** (Head of Unit, Marine Environment and Clean Water Services, DG Environment - European Commission);
- **Meuccio Berselli** (Director, Interregional Agency of the River Po – AiPo);
- **Francesca Bizzotto** (Head of Communication, Italian National Association of Head Teachers);
- **Edoardo Borgomeo** (Water Resources Management Specialist, World Bank Group);
- **Chiara Braga** (Member of Parliament and Head of Ecological Transition, Sustainability and Infrastructure, Partito Democratico, former Member of the 'Environment, Territory and Public Works' Commission, Italian Chamber of Deputies);
- **Alessandro Bratti** (Secretary General, Po River District Basin Authority, Italian Ministry of the Environment and Energy Sovereignty);
- **Federica Brignone** (Professional skier and environmentalist; Overall World Cup winner in women's alpine skiing);
- **Furio Cascetta** (Functional Pro-Rector, University of Campania);
- **Marco Casini** (Secretary General, Central Apennines Basin Authority, Italian Ministry of the Environment and Energy Security);
- **Angelica Catalano** (Director, Directorate General for Dams and Water Infrastructure, Italian Ministry of Infrastructure and Transport);
- **Pasquale Coccaro** (Official, Southern Apennine Basin Authority);
- **Andrea Colombo** (Head of Hydraulic Risk Assessment and Management, Po River District Basin Authority, Italian Ministry of the Environment and Energy Sovereignty);
- **Chiara Corbari** (Full Professor, Department of Civil and Environmental Engineering, Hydraulic and Maritime Constructions and Hydrology, Politecnico di Milano);
- **Sandro Cruciani** (Director – Environmental and Regional Statistics Central Department (DCAT), Istat);
- **Federica Daga** (Former Member of the 8th Commission 'Environment, Territory and Public Works', Insieme per il Futuro, Italian Chamber of Deputies);
- **Laura D'Aprile** (Head of Department, Sustainable Development Department, Italian Ministry of the Environment and Energy Security);
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- **Andrea Duro** (Official, Italian National Civil Protection Department);
- **Milo Fiasconaro** (Executive Director, Aqua Publica Europea);
- **Paola Frassinetti** (Undersecretary, Ministry of Education);
- **Elena Gallo** (Deputy Director - Water Systems Directorate, ARERA - Italian Regulatory Authority for Energy Networks and Environment);
- **Maria Alessandra Gallone** (National Head of the Environment Department, Forza Italia);

- **Filippo Gavazzeni** (M.U.F.P. Secretariat Unit, City of Milan);
- **Antonello Giannelli** (President, Italian National Association of Head Teachers);
- **Enrico Giovannini** (Scientific Director, Italian Alliance for Sustainable Development (ASVIS); former Minister of Sustainable Infrastructure and Mobility);
- **Maurizio Giugni** (Sole Extraordinary Commissioner for the implementation of urban wastewater collection, sewerage and purification projects, Office of the President of the Italian Council of Ministers);
- **Orazio Giustolisi** (Full Professor, Politecnico di Bari);
- **Francesco Greco** (President, Italian National Association of Teachers);
- **Todd Layland** (Strategic Advisor, SWCC- Saline Water Convesion Cooperation);
- **Nicola Lamaddalena** (Deputy Director, Bari Institute, International Center for Advanced Mediterranean Agronomic Studies);
- **Valeria Lattanzi** (Project Manager, ELIS);
- **Francesco Lollobrigida** (Agriculture, food autonomy and forestry Minister);
- **Juan Bofill Maestre** (Senior Water Engineer, Water Division, European Investment Bank);
- **Andrea Magarini** (Director Food Policy Area, Municipality of Milan);
- **Ramona Magno** (Researcher and Head of the Drought Observatory IBE-CNR - Italian National Research Council);
- **Marijana Mance** (Team Leader for Multilateral Realtions, DG Environment - European Commission);
- **Marco Mancini** (Full Professor, Department of Civil and Environmental Engineering, Hydraulic and Maritime Constructions and Hydrology, Politecnico di Milano);
- **Veronica Manfredi** (Director for Zero Pollution, DG Environment - European Commission);
- **Maurizio Martina** (Special Advisor and Deputy Director General, FAO - Food and Agriculture Organisation of the United Nations);
- **Stefano Masini** (Head of Environment and Territory, Coldiretti);
- **Alessandro Mazzei** (Technical and Scientific Coordinator for the Integrated Service, Italian Association of Area Authorities and Bodies);
- **Rosario Mazzola** (Consultant and member of the Special Committee of the High Council of Public Works, Italian Ministry of Infrastructure and Transport);
- **Luca Mercalli** (President, Italian Meteorological Society);
- **Andrea Minutolo** (Scientific Officer, Legambiente);
- **Bruno Molle** (Executive Advisor, European Irrigation Association - EIA);
- **Andrea Montanino** (Chief Economist and Sector Strategy and Impacts Director, Cassa Depositi e Prestiti);
- **Fernanda Moroni** (Head of Land Monitoring, Planning and Development, Italian Ministry of the Environment and Energy Security);
- **Arianna Notaristefano** (Project Manager Scuola Impresa System, ELIS);
- **Roberto Occhiuto** (President, Calabria Region);

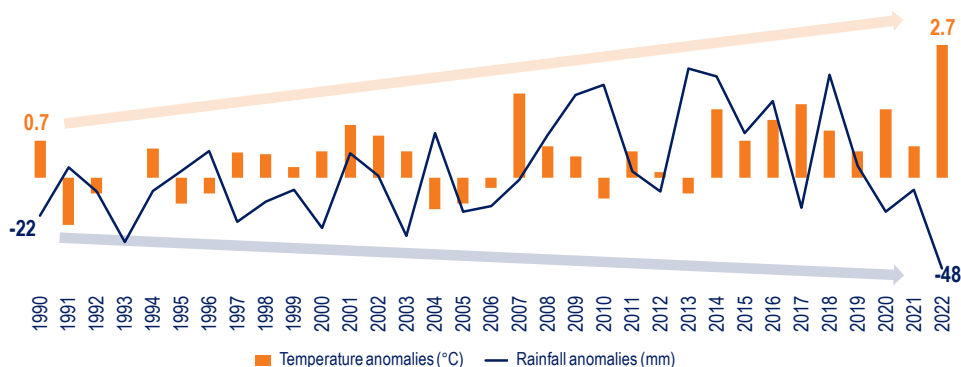


- **Silvio Oliva** (Board Member, International Desalination Association - IDA);
- **Giusy Palladino** (*Association Manager, Anima Confindustria*);
- **Luigi Petta** (Head, Technology Laboratory for the efficient use and management of water and wastewater, ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development);
- **Alberto Pistocchi** (Scientific Officer, Water Resources Unit, Joint Research Center, European Commission);
- **Mariangela Pira** (Journalist, SkyTG24);
- **Ettore Prandini** (President, Coldiretti);
- **Nicola Procaccini** (Head of Environment and MEP, Fratelli d'Italia);
- **Alberto Luca Recchi** (Sea Explorer);
- **Fabio Roggiolani** (Co-founder, Ecofuturo);
- **Emanuele Romano** (Researcher, Water Research Institute - CNR - Italian National Research Council);
- **Matteo Salvini** (Italian Minister of Infrastructure and Transport);
- **Sandra Scicolone** (Vice-President, National Head Teachers Foundation);
- **Anna Scavuzzo** (Deputy Mayor and Councillor for Education, City of Milan);
- **Alberto Spotti** (Technical Area Officer, Anima Confindustria), **Giusy Palladino** (*Association Manager, Anima Confindustria*);
- **Stefano Tersigni** (First Researcher, Central Directorate for Socio-demographic and Environmental Statistics, Head of the Census of Water for Civil Use, ISTAT);
- **Claudia Topalli** (Board Member, Water Europe);
- **Attilio Toscano** (Strategic Advisor, Mission Technical Structure, Italian Ministry of Infrastructure and Transport);
- **Elena Ugolini** (Head of the Technical, Scientific and Educational Committee, Liceo TRED - Applied Sciences for Ecological and Digital Transition and Director, Malpighi Schools; former Italian Deputy Secretary for Education);
- **Valentino Valentini** (Vice minister of Industry and Made in Italy);
- **Thomas van Gilst** (Head, Water Security and Resilience Division, Environment and Natural Resources Department, European Investment Bank);
- **Gelsomina Vigliotti** (Vice-President, European Investment Bank);
- **Andrew Walker** (Special Projects Advisor, SWCC - Saline Water Conversion Corporation);
- **Seble Woldeghiorghis** (Assistant, Assobenefit);
- **Marcello Zinno** (Association Marketing Manager&Project Manager, Anima Confindustria).

## THE 10 KEY MESSAGES OF THE WHITE PAPER 2023

### 1. The effects of climate change increasingly highlight the vulnerability of the Italian water supply system. A serious and in-depth debate on water resources can no longer be put off

- Water is an **essential element** for human societies and natural environments to continue to thrive over time. It is the foundation of civilisation as well as of human history, past, present and future. Even today, societies and economic systems are strongly linked and influenced by the availability of water. **Water consumption** increased **6-fold** during the 20<sup>th</sup> century, accompanied by a progressive **decrease of 1%** in the global storage capacity of reservoirs, linked to their over-exploitation. The stress placed on the water resource contributes to placing the water crisis among the **main global risks**.
- In this context, the recent culmination of the effects of **climate change** has highlighted the vulnerability of the Italian water supply system. The year 2022 was the "**annus horribilis**" for Italy's climate, being the **hottest and least rainy year in the Country's history**, with temperature anomalies that reached +2.7 °C compared to the 1981-2010 average and rainfall anomalies that amounted to -48 mm compared to the average for the same period.



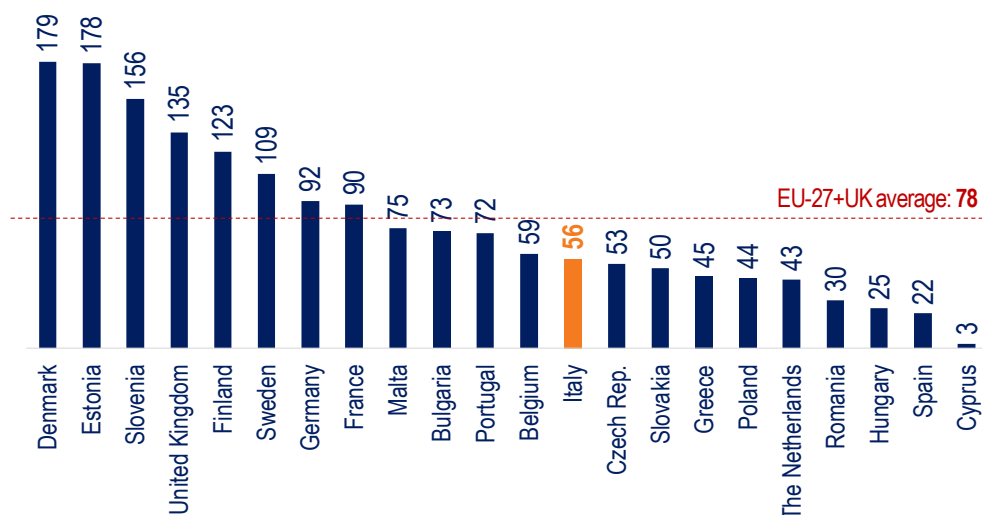
**Figure V.** Temperature anomalies and annual rainfall anomalies compared to the average in the 1981-2010 period in Italy (change in °C and mm), 1990-2022. *Source: elaboration by The European House - Ambrosetti on data from European Commission, Copernicus, European Centre for Medium-Range Weather Forecasts, CNR-ISAC, Climate Change Service and Coldiretti, 2023.*

- Due to its position in the centre of the Mediterranean, Italy is among the Countries that are suffering the most tangible consequences: the Country ranks **1<sup>st</sup>** in Europe by extension of territory with a **water stress rate of more than 80%** and **2<sup>nd</sup>** by the number of days characterised by climate anomalies, amounting to **36%** of the year.
- While there is a reduction in the frequency and quantity of rainfall across the country, its intensity is increasing. **Heavy rainfall** in Italy has increased by **+45.4%** annually over the past 15 years and **flooding** in cities has increased by **+27.7%** annually.

- **Agriculture** was the sector most affected by climate change in 2022. The damage caused by drought and extreme weather phenomena in the agricultural sector amounted to **€6 billion** in 2022, or about **10%** of the current production value of the entire industry.
- The drought of 2022 also led to **restrictions in access to water** for Italian citizens and the service sector: **40%** of the population was exposed to water shortages. In addition, **five Regions** declared a **state of emergency due to drought** during the year: Emilia-Romagna, Friuli Venezia Giulia, Lombardy, Veneto and Piedmont.

## **2. Analyses by the Value of Water for Italy Observatory show that the management of water resources in Italy still presents some 'grey areas'**

- Today, Italy is confirmed to be one of the **most water-hungry** Countries in **Europe**, both in absolute terms with over **9 billion m<sup>3</sup>** of water withdrawn each year for civil use (**no. 1 Country** in the European Union), and in relative terms on the population, where water withdrawn for drinking use per inhabitant reaches **154 m<sup>3</sup> per inhabitant** (**no. 2 Country** in the European Union).
- After being drawn, water is distributed to citizens and businesses locally through a dense water network. However, Italy's infrastructure is old and inefficient: **60%** of the network is **over 30 years old**, **25%** is **over 50 years old**, and the percentage water loss rate during distribution reaches **41.2%** (**fourth** worst Country in EU-27+UK) and the loss rate along pipelines **9,072 m<sup>3</sup>/km/year** (**worst** Country in the EU).
- Infrastructure gaps are also caused by limited investment in integrated water management. According to the findings of the **Blue Book 2023**, included in the White Paper "Value of Water for Italy," thanks to a scientific partnership activated between The European House - Ambrosetti and Utilitatis Foundation and Utilitalia, the *per capita* investments of the industrial operators of the Integrated Water Service in Italy amounted to **€56 per inhabitant** in 2021, equal to **72%** of the EU-27+UK average of €78. To align with the European average of investments in the integrated water management, Italy would require an additional **€1.3 billion** per year in investments and about **€3 billion more per year** to reach the average of the three European peer Countries (i.e., France, Germany and the United Kingdom).



**Figure VI.** Investment rate in integrated water management in the EU-27+UK Countries (Euro per inhabitant), 2021 or last available year. *Source: elaboration The European House - Ambrosetti, 2023.* NB The figure is not available for EU Countries not shown in the graph (source EurEau).

- Although the volume of investments per inhabitant of the operators in the sector is **increasing** in comparison with previous years (+70% compared with 2012), the contribution to the growth of investments is nevertheless limited by the presence of numerous **operators managed directly by local authorities**, especially in the south of Italy, whose average value of investments has been around **€8 per inhabitant** over the last five years.
- One of the main reasons for the still low level of investments in integrated water management is the **water tariff**, which in Italy 'finances' about **80%** of the investments by the operators. To date, the Italian water tariff of **€2.1/m<sup>3</sup>** is **half** of France's and **40%** of Germany's.
- A low price for drinking water may also lead to **lower awareness** among Italian citizens regarding their consumption of the resource, thus **reducing their sense of responsibility**. Not only is the Country among the most water-intensive in Europe when considering total water withdrawals, but it also tops the **household water consumption** ranking: with a consumption of **220 litres per inhabitant per day**, Italy ranks **first** in Europe for this indicator, compared to a European average of 165 litres.
- The **average size** of companies is a further brake on investment. In the Italian extended water cycle, consisting of the seven phases of integrated water management and the related input producers, **97.7%** of the companies in the sector are **small and medium-sized enterprises**, i.e., with a turnover of less than €50 million. Of these, the vast majority are **small enterprises**, which, though accounting for **87.5%** of the total number of enterprises in the sector, **contribute only 15.7% to revenues**. In contrast, **large** companies only account for 3.3% of the total number of companies in the sector, but generate **63.5%** of revenues.

### 3. Italy can leverage some strengths in water resource management: the extended water value chain generates 18% of Italian GDP

- Now in its fourth edition, the Value of Water Community has updated, fine-tuned and enriched the mapping and dimensioning of the **extended water value chain** in Italy, a key sector for the Country's industrial competitiveness: the water resource is linked to a long and articulated value chain, involving **26 sectors** (2-digit ATECO codes) and **74 sub-sectors** (3-digit ATECO codes).
- Water is a primary production input for **1.5 million** agricultural businesses, around **330,000** water-intensive manufacturing companies and more than **9,000** companies in the energy sector.
- In 2021, the extended water cycle generated added value of **€9.4 billion**, with an average annual growth of **+4.3%** over the period 2010-2021 (10 times the Italian manufacturing), and employed **92,400 people** (average growth of **+1.2%** over the same period). The sector recorded a value added equal to **94%** of that of the **pharmaceutical** industry, **1.1 times** that of the **clothing** industry and **2.2 times** that of the **beverage** industry (including wine).
- In quantifying the value generated by the water supply chain, for the first time, the economic contribution generated by **operators managed directly by local authorities** was calculated, reaching **€491 million** of added value in 2021, of which **61.5% is concentrated in the South and Islands**.
- To complete the supply chain's contribution to the creation of value for the Country, the **indirect and downstream** impact resulting from the activation of supply and sub-supply chains was calculated: the more than 3,400 companies operating in the extended water cycle generate a total added value of **€25.5 billion**, due to an **economic multiplier of 2.6**, and produce almost **270,000 jobs (employment multiplier of 2.9)**.
- In 2021, overall, water was the catalyst for the generation of **€320 billion** in added value in Italy, **12% more** than the previous year on a like-for-like basis. In other words, without the water resource, **18%** of Italy's **GDP** could not be generated.

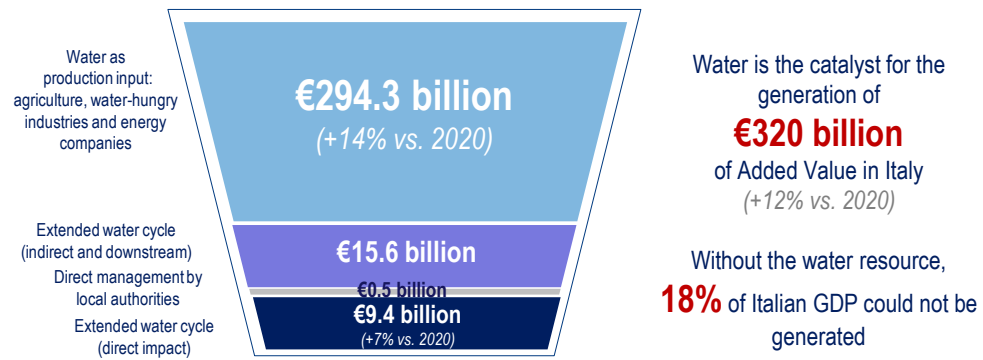


Figure VII. Added value generated by the extended water value chain in Italy, 2021. Source: elaboration The European House - Ambrosetti on data from Istat and Aida Bureau Van Dijk, 2023.

#### 4. The 'Circular Water' paradigm based on the '5Rs' (Recycle, Restore, Reuse, Recover and Reduce) is crucial to address the increasing pressure on the water resource

- In light of the infrastructural conditions of the extended Italian water value chain and the increasing pressure on the water resource, heightened by the impact of climate change, the transition to a circular water resource management model is a crucial step to be taken to **mitigate water supply security issues**.

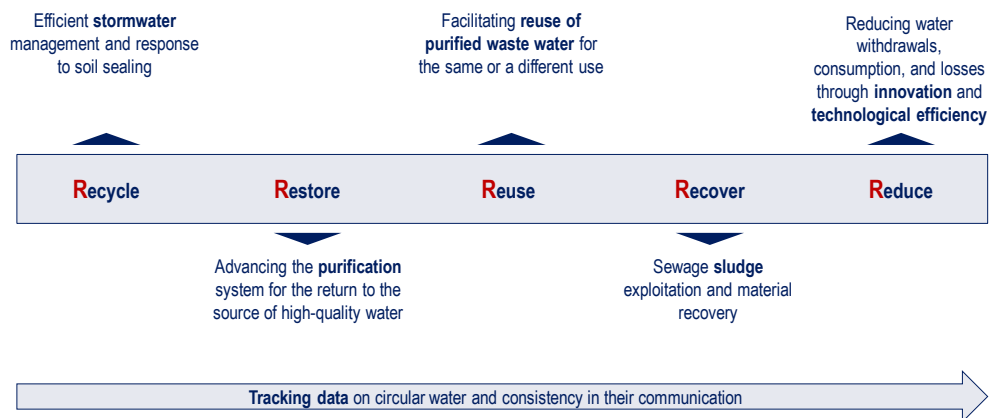


Figure VIII. The '5Rs' for the transition to the 'Circular Water' model, 2022. Source: elaboration The European House - Ambrosetti on data from World Bank, 2023.

- To enable the transition to a resilient and lasting system of resource control, the adoption of the **Circular Water** resource management model to address climate change mitigation and adaptation strategies and to adopt a pathway for the sustainable transition of the extended water value chain. The model consists of 5 priority actions, summarised in the formulation of the '**5Rs**' (**Recycle, Restore, Reuse, Recover and Reduce**):
  - **Recycle**, i.e., to provide an answer to soil sealing and efficient management of **rainwater**, today only **11%** of the total **rainwater** falling on the national territory is recovered;

- **Restore**, i.e., to develop **purification** systems to return high quality water to its source: to date, **1.3 million** citizens are still without the service, **80%** of whom are concentrated in the South and Islands;
  - **Reuse**, i.e., to facilitate the reuse of purified wastewater for the same or a different use: today, only **4%** of the wastewater produced in Italy is reused directly, compared to a potential of **23%**;
  - **Recover**, i.e., to exploit **sewage sludge** and the subsequent recovery of matter or energy. Still, **53.4%** of the sludge managed in Italy is sent to disposal;
  - **Reduce**, i.e., to contain withdrawals of new resources through **efficient water use** in all areas (civil, industrial and agricultural) and a reduction in **network losses** through innovation, digitalisation and technological efficiency.
- Cutting across the activities listed above, the circular transition requires increasing investment in **data tracking** throughout the water sector and in the consistency and timeliness of their reporting.

## 5. Efficiency and sustainability along the extended water value chain are enabled by the 'Smart&Digital Water' paradigm, which enables the reduction of water withdrawal, consumption and waste through technological innovation and efficiency

- Efficient and sustainable management of water resources also means adopting the "**Smart&Digital Water**" paradigm. The paradigm emphasises the **reduction** of water withdrawals, consumption and waste through innovation and technological efficiency and is pursued through the **digitalisation and integration of infrastructure and production assets** of the extended water value chain.

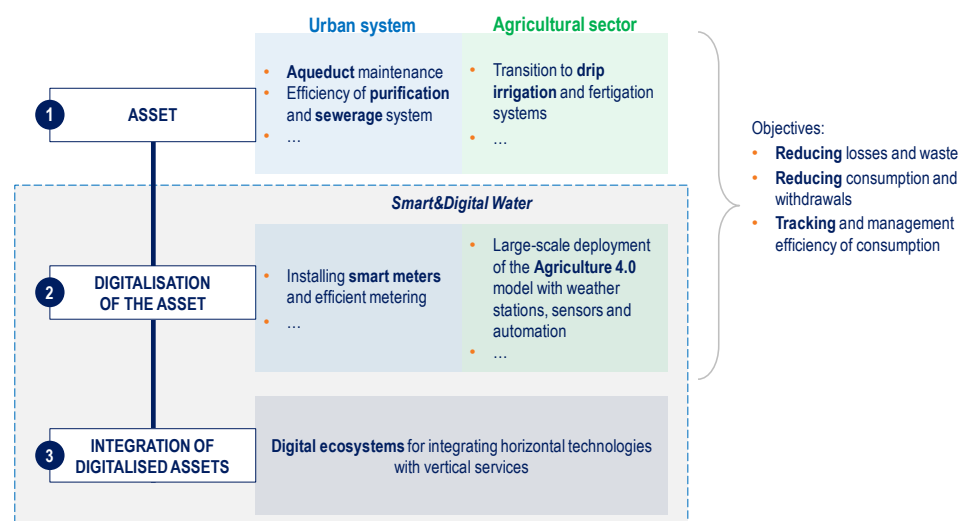


Figure IX. The 'Smart&Digital Water' Paradigm. Source: elaboration The European House - Ambrosetti, 2023.

- First of all, it is necessary to upgrade water infrastructure in the civil, industrial and agricultural sectors in order to lay the foundations for the **smart transformation** and **digitalisation** of the extended value chain. Also due to limited investments, the replacement rate of Italian water networks is **3.8 metres per km per year**: at this rate, **250 years** would be needed for their complete maintenance.
- The extended water value chain is still **poorly digitalised**, suffice it to say that **50%** of water meters in Italian homes are **more than 20 years old**. This results in a penetration of **smart meter** in the Country that is very low, equal to **4%** of the total number of meters and more than **12 times lower** than the EU average (49%). The current scenario is an opportunity to be seized as, if all homes had smart meters, up to **€2.4 billion** could be saved per year and water demand reduced by **513.3 million m<sup>3</sup>** (about 10% of annual civil water consumption).
- The potential of digitalisation of water infrastructures involves all dimensions of integrated water management: examples are the integration of network-connected sensors based on the **Internet of Things**, data analysis through **Artificial Intelligence**, the traceability of the resource promoted by **Blockchain** management and storage of data in the **cloud**.
- The agricultural sector could also benefit from increased use of digital solutions, so-called **Agriculture 4.0** ensures widespread optimisation of production processes, improving product quality. The main benefits of the Agriculture 4.0 model include a **-30% reduction in the demand for external inputs**, water and fertilisers, and a **+20% increase in productivity**. Although the market for digitalised agriculture has been growing at an average annual rate of **+74%** since 2017, reaching a value of €1.6 billion in 2021, its penetration is still limited to **6%** of the cultivated agricultural area in the Country.

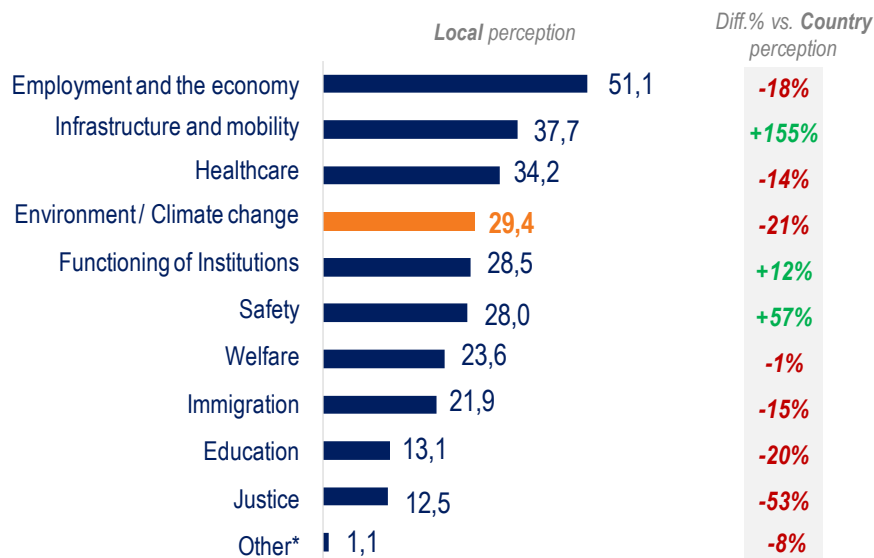
## **6. Proper management of water resources also depends on Italian citizens. However, they continue to show a lack of awareness of the value of the resource: the Value of Water Observatory survey has revealed 10 paradoxes on the perception of the value of water and consumption habits**

- Analysis of the results of the second survey of Italian citizens administered to 1,000 citizens representative of the national population showed that Italians' awareness of the water resource is still limited. In this sense, the Value of Water Observatory has identified **10 paradoxes** on citizens' perception of the water resource<sup>XI</sup>:

<sup>XI</sup> The following Report illustrates the paradoxes in the different Parts and will not be the subject of an ad-hoc Part.



- **The 'NIMBY' paradox of climate change.** Climate change is the Country's **no. 3 priority** for Italian citizens (it was in second place last year), but it is **still** a problem **far from one's backyard**.



**Figure X.** Answers to the question "What are the top 3 problems affecting your area of residence?" (% of total, multiple choice of up to 3 options), 2022. Source: Survey Value of Water for Italy Community to Italian citizens, September 2022. (\*) These are examples of "Other": Organised crime, waste management and disposal.

- **The paradox of the citizen in crisis.** Despite the year of inflationary crisis, a sharp drop in household purchasing power and an increasingly evident climate crisis, Italian citizens are **less concerned about the economy, employment and the environment** than in 2021. On the contrary, **health concerns are growing** even though the pandemic emergency is slowly receding.
- **The paradox of the climate crisis.** Although citizens are aware that 2022 was the hottest and driest year in Italian history (and have often experienced the consequences), they say they are **less concerned about extreme weather phenomena** than last year.
- **The paradox of the sustainable consumer.** Almost all Italian citizens claim to adopt sustainable behaviour. However, drinking tap water, one of the most sustainable activities for the management of the resource, is not a widespread activity: **less than 1/3 of them habitually drink tap water**.
- **The paradox of scarce safety of tap water.** Safety of water quality is the **number one** fear that hinders the choice **not to drink** tap water, in one of the Countries with the **highest mains water quality** in Europe.
- **The paradox of the irresponsible citizen.** Even though almost all citizens claim to be **concerned** about the responsible use of the water resource, almost **3/4 underestimate its actual consumption**.

- **The paradox of high expenditure.** Faced with an **underestimation** of their daily consumption, **9 out of 10 Italians** overestimate their actual spending on water bills in the Country with one of the lowest tariffs in Europe, a perception that has worsened since last year.
- **The paradox of the (almost) unknown bonus.** Although they consider that they have high water bills, there is a **low level of knowledge** about the **economic relief** instruments provided in water bills, although there is an improvement compared to last year.
- **The paradox of Integrated Water Management.** Citizens are aware that **they pay** for some key services in the water cycle, but they **do not know** that those who perform them are part of **Integrated Water Management**.
- **The paradox of ineffective metering.** Although citizens are not aware of their actual water consumption, **monitoring tools** such as smart meters are **little known** (partly due to their limited diffusion) and, for those who do know them, considered **ineffective**.

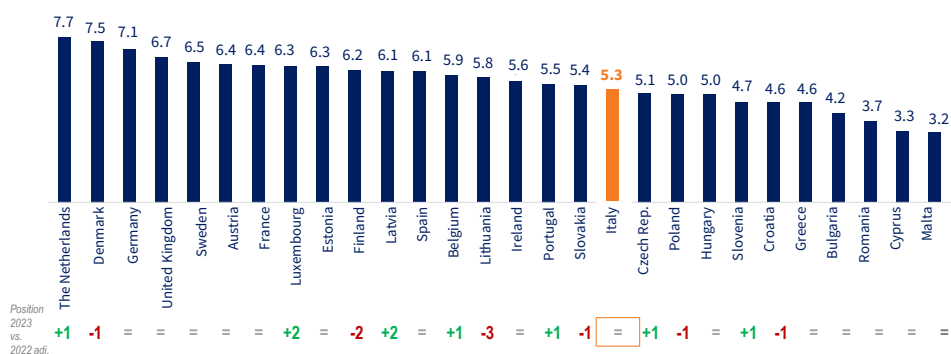
**7. Education on the value of the water resource starts from the younger generations: in its fourth edition, the Value of Water for Italy Community has launched a pilot project in Italian schools to promote a new culture of water among the new generations**

- Currently in Italy, domestic consumption accounts for about **20%** of total freshwater use. To encourage responsible consumption of the resource, a new water culture needs to be fostered. According to Community survey respondents, the preferred target group for strategies to foster water education are **middle school students** for **74.8%** of Italians and **secondary school students** for **58.1%**. **Nine out of ten Italians** believe that it is important to educate young people about a new water culture in **civic education** courses in schools.
- With the aim of taking concrete action, the Value of Water for Italy Community started a **pilot project in Italian schools**. The project involved the creation of a "**Water Kit**" designed to disseminate the knowledge developed by the Community on the water value chain and the importance of responsible and cognizant consumption styles, with reading keys suitable for young people. The 'Water Kit' aims to become the **reference manifesto to foster a new water culture in Italian schools**.
- The project will last about **a year** and is involving the network of 27 **TRED secondary schools** (Experimental Secondary School for Ecological and Digital Transition) and the Italian **National Head Teachers' Association** (7 all-inclusive institutes in the South of the Country), with a total of over 5,000 students. In the process, a survey was administered to measure students' preliminary level of awareness of the water resource and their

consumption habits; the survey will be administered again to understand whether the effects of education can actually foster more sustainable habits.

## 8. Water impacts 10 of the 17 UN Sustainable Development Goals and Italy ranks 18<sup>th</sup> in the European Union in the 'Value of Water Towards Sustainable Development' 2023 index

- Also for the fourth edition of the initiative, the Observatory of the Value of Water for Italy Community carried out an in-depth work of data collection, analysis and mapping to assess how **efficient and sustainable management of the water resource impacts on the 17 Sustainable Development Goals** (and their 169 targets) of the UN 2030 Agenda. This in-depth study was carried out with a comparative perspective for Italy in relation to other European Countries (EU27+UK).
- Starting with the 2030 Agenda, goals and targets directly impacted by the water resource were identified: **10 of the 17 Sustainable Development Goals** and **53 of the 90** related **targets** are influenced by efficient and sustainable water management.
- The analysis of Italy's strengths and weaknesses compared with other European countries (EU-27+UK) involved the identification of **41** objective **Key Performance Indicators** (KPIs) measurable over time<sup>XII</sup>.
- Based on the resulting elaborations, Italy is **18<sup>th</sup> out of the 28 countries** considered in the "Value of Water towards Sustainable Development 2023" index, with a score of **5.3** on a scale of 1 (lowest value) to 10 (highest value), a position unchanged from last year.



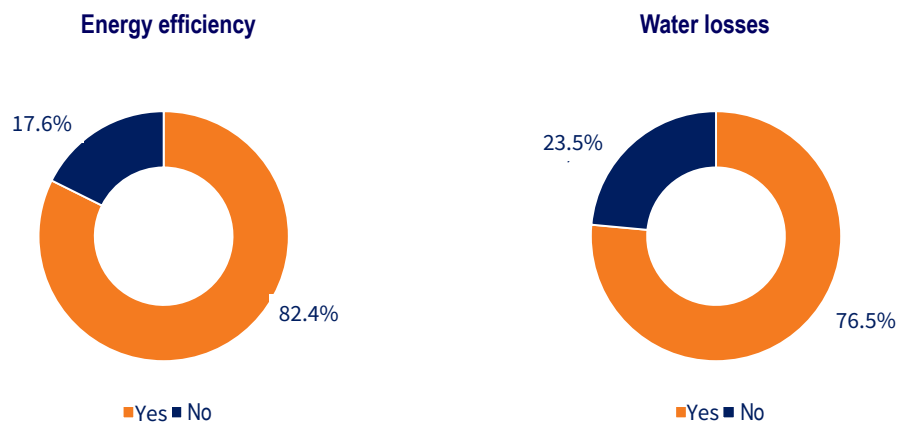
**Figure XI.** Value of Water to Sustainable Development Index (VASS) 2023 and change in position of the Value of Water to Sustainable Development 2023 index vs. adjusted Value of Water to Sustainable Development 2022 index. *Source: elaboration The European House - Ambrosetti, 2023.*

<sup>XII</sup> The composite index 'Value of Water Towards Sustainable Development 2023' has been updated to provide an overview of the overall contribution of efficient and sustainable management to the achievement of the UN 2030 Agenda. Nine KPIs were removed from the last edition of the index due to the impossibility of collecting up-to-date data in line with the suggestions of the Community partners. In order to improve the stability of the index, 10 new KPIs, which refer to dimensions that enable efficient water resource management but are not directly related to it, were added.

- Analyses show that Italy **still** has a **long way** to go to make water resource management more efficient and encourage a transition towards more sustainable and conscious consumption, protection and preservation models. Moreover, while the VASS 2022 index had recorded a leap of 2 positions, the VASS 2023 index shows no signs of improvement over the previous year, indicating a **setback in the positive direction taken last year**.

## **9. Access to sustainable finance is an enabling factor for investments in the water sector: 60% of Integrated Water Management companies are already integrating the application of the European Taxonomy Criteria**

- In 2020, spending on water supply and sanitation infrastructure in the EU-27+UK amounted to **€100 billion**. In order to meet the requirements of the Drinking Water Directive, the Urban Waste Water Treatment Directive and the Leak Reduction Directive, and in the light of socio-demographic developments and the exacerbation of climate change phenomena, the European Commission has estimated that an almost **three-fold** increase (+**189%**) in this amount **by 2030** will be necessary, reaching an amount of **€289 billion**.
- Precisely with the aim of supporting growth that is actually in line with the declared dictates of the UN Sustainable Development Goals, the Commission worked to clearly determine **what investments can be defined as sustainable** and these were included in the **European Taxonomy for Sustainable Finance**.
- The Value of Water for Italy Community, as a privileged observatory on the extended water value chain and the trends affecting the sector with a view to sustainable development, decided to investigate the **perception of Italian Integrated Water Management operators on the European Taxonomy**. The activity of listening to the operators was made possible by administering a survey to the partners of the Community and **Utilitalia member companies**.
- The findings identify **access to sustainable finance as an enabling factor** for investments. About **60%** of the Integrated Water Management operators are already integrating the application of the European Taxonomy Criteria in their investment plans. However, **82%** of the operators claim to have experienced **difficulties in applying** the European Taxonomy **criteria** with reference to **energy saving** and **76.5%** claim difficulties in complying with the Technical Criterion for **water losses**.



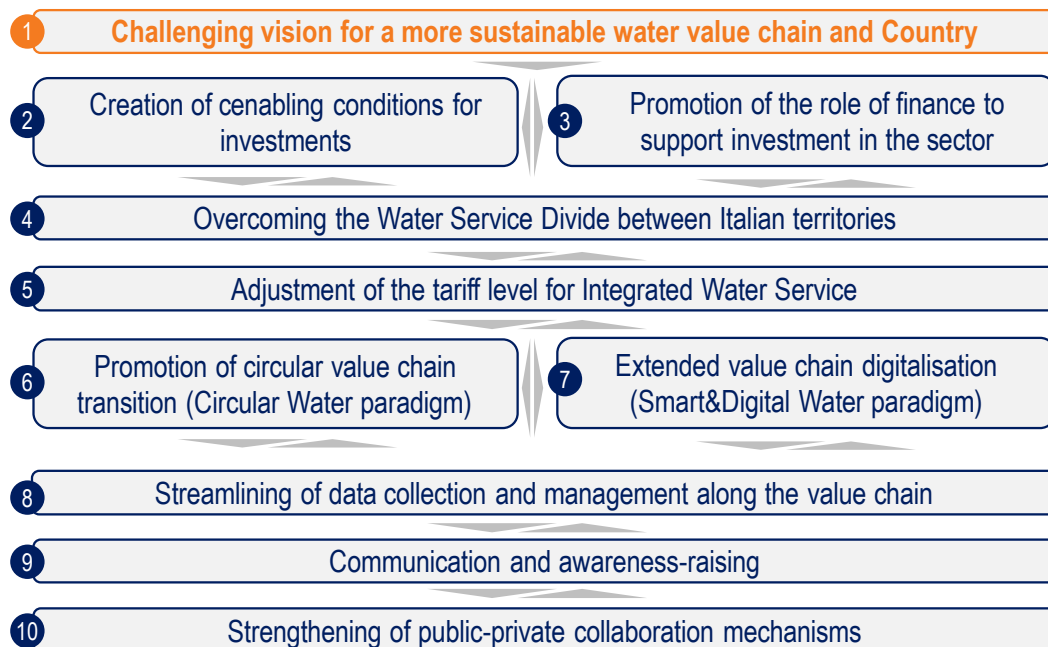
**Figure XII.** Answers to the question "Have you found any criticalities in verifying compliance with the Technical Screening Criteria in the area of energy savings?" - left - and answers to the question "Have you found any criticalities in verifying compliance with the Technical Screening Criteria in the area of water losses" - right - (% of total), 2023. Source: Value of Water for Italy Community survey among Italian Integrated Water Management operators, 2023.

- Despite the difficulties that emerged, **62.5%** of the operators of the Integrated Water Service stated that they have allocated **specific investment lines** in their future business plans **to meet the Technical Screening Criteria**. Importantly, among those who do not plan an investment line, 66% have already verified and achieved them.
- The companies that have created specific investment lines expect to reach the thresholds set by the Technical Criteria **by 2030**, with cumulative resources allocated by operators in the period between **€60 and €100 million for energy consumption**, and between **€150 and €200 million for water losses**.

**10. The fourth edition of the Value of Water for Italy Community has renewed the ten proposals for action to promote the development of the water value chain and encourage efficient and sustainable water management**

- The main findings of the fourth edition of the Value of Water for Italy Community highlight that **systemic action at national level** that can affect the hindering factors and enhance the accelerating factors for the development of the extended water value chain and the efficient and sustainable management of the resource is needed, building a system with the contributions of all the players.
- In the first three editions, the Community responded to this need with **10 proposals and concrete actions for the Country System**. Following on the work carried out in the previous three years, in the fourth edition the ten proposals for the Country were renewed, maintained and expanded, also monitoring the recommendations of the previous editions that were **implemented**.

- Following on the work done, in the fourth edition the ten proposals for the Country have been renewed, maintained and expanded. In all the proposals, a **key and proactive role of the government** is crucial in terms of leadership of action and finding a synthesis and balancing the interests of the various stakeholders, starting with the actors of the extended water value chain in Italy.



**Figure XIII.** The ten policies of the fourth edition of the Value of Water towards Sustainable Development Community. Source: *elaboration The European House - Ambrosetti, 2023.*



