THE WATER COMMITMENT

Safeguarding resources, empowering communities

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Contents

Water stewardship, building the future

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In a world where water conservation is becoming an increasingly critical issue, there is an urgent need for a concrete, shared commitment to protecting this vital resource. Water is essential for humanity, ecosystems, and economic activity; without it, development and sustainable growth are simply impossible. For industry, water is an enabler—used for cooling, as an energy carrier, in production processes, and to ensure safe working conditions.

This is precisely why Eni has been engaged for years in practical projects aimed at optimizing water use throughout the value chain. We prioritize water sources that do not compete with local civil, agricultural, or environmental needs, while promoting reuse and efficient consumption. Furthermore, guided by our strong sense of responsibility, a significant portion of Eni's development projects is dedicated to progressively expanding access to safe drinking water and sanitation services. Our goal is to contribute improving living conditions and health, especially in areas where this fundamental human right is severely restricted or entirely absent.

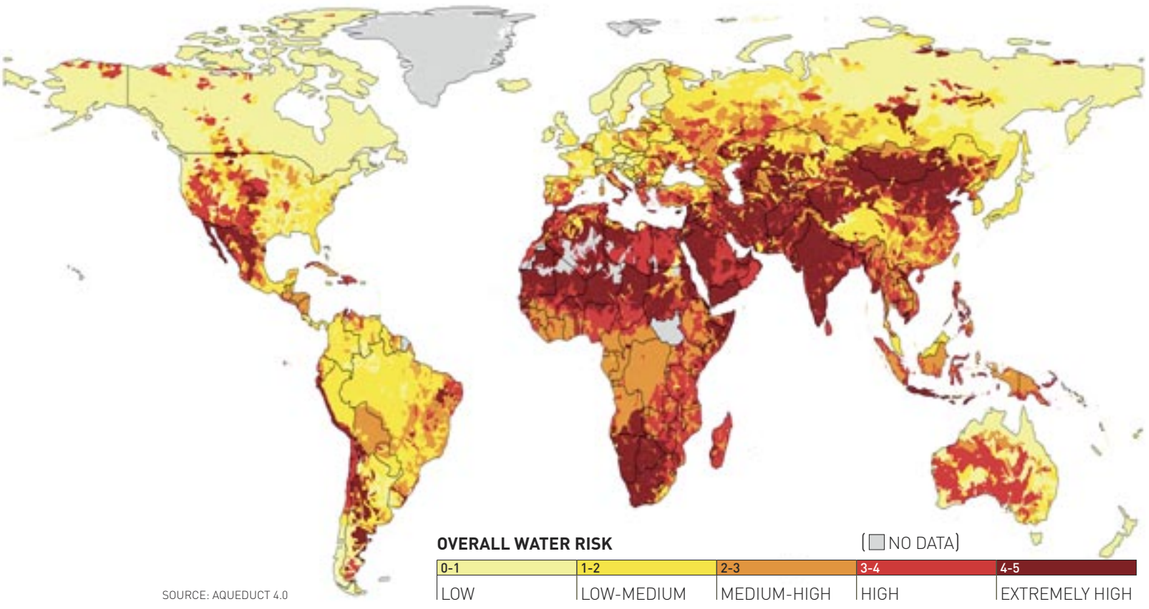
These projects include constructing wells, installing water treatment systems, upgrading water networks, and improving distribution systems. These efforts are complemented by the development of sanitation infrastructure, hygiene education programs, initiatives targeting schools and communities, and training courses for the community-based management of water systems. Our continuous collaboration with industry associations allows us to share experiences, establish guidelines, and develop increasingly advanced best practices. At the same time, dialogue with global institutions and our focus on technical and scientific research facilitate innovation in identifying effective, measurable solutions for water stewardship.

Eni was among the first energy companies to embrace the concept of "positive water impact" promoted by the CEO Water Mandate, which we endorse. We are at the forefront of responsible water management, pursuing concrete benefits aligned with the needs of the regions in which we operate, with a view to achieving water positivity by 2050.

This publication strongly reaffirms our commitment to water resilience. This commitment is rooted in our industrial history while looking forward with confidence to a future where water is valued and managed equitably, given its vital importance to humanity and the planet.

THE WATER CHALLENGE

Water is an essential resource that is under increasing pressure. Amid infrastructure shortages, growing demand and climate change, the world faces a profound imbalance that demands new strategies for management and investment



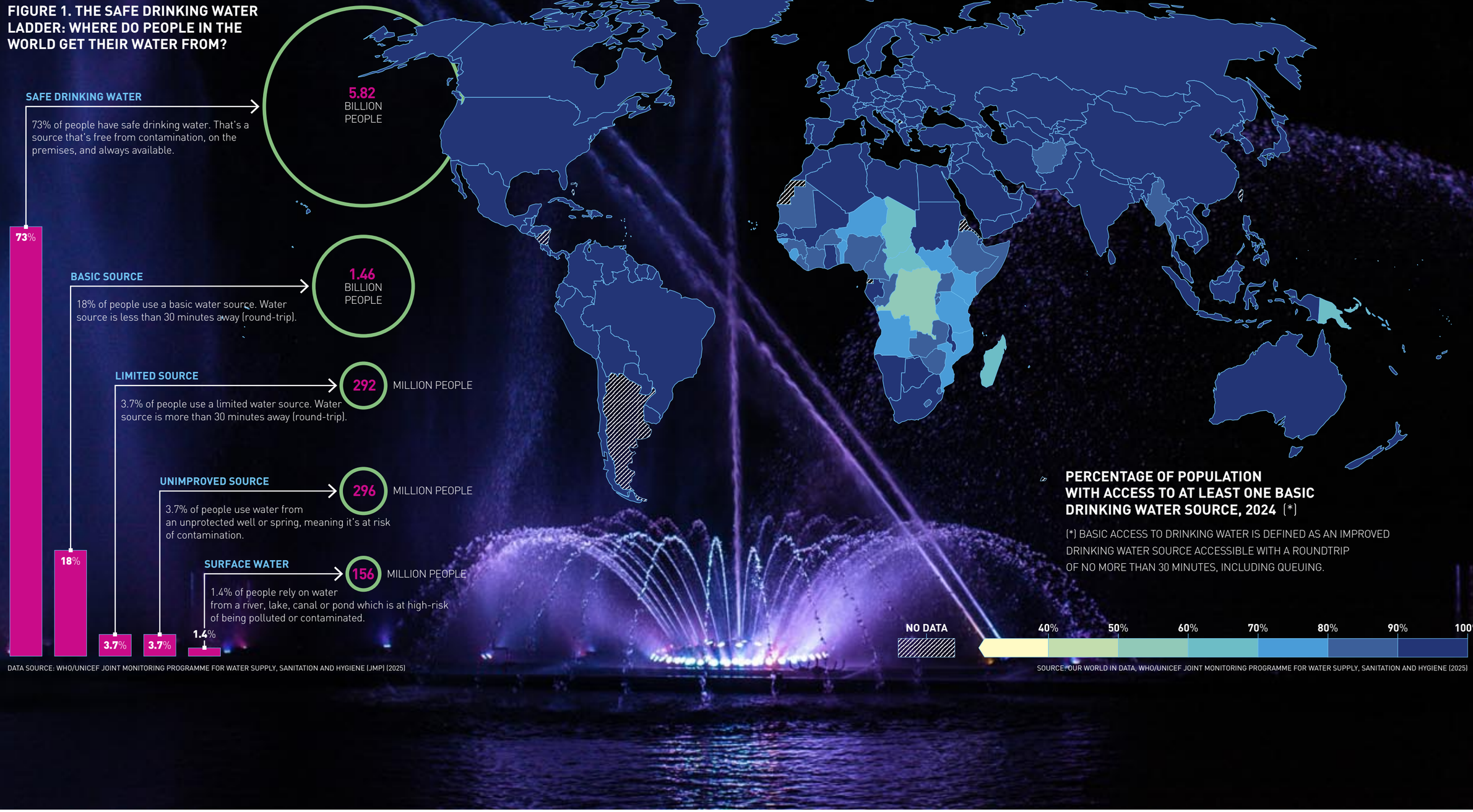
SOURCE: AQUEDUCT 4.0

WATER plays a vital role in public health, economic growth, and environmental sustainability. However, in many parts of the world, water and sanitation services remain unreliable, inaccessible, or unsafe. These shortcomings generate costs that disproportionately affect the poorest and most vulnerable populations, particularly women and children. This challenge is further exacerbated by population growth, climate change, urbanization, and systemic inefficiencies that pressure infrastructure, with potential repercussions for economic productivity and development.

As shown in Figure 1, which illustrates access to drinking water on a global scale, segments of the population remain in critical or "intermediate" categories regarding their water security. In particular, an estimated 700 million people worldwide still rely solely on surface water sources—which carry a high risk of contamination—making them significantly vulnerable.

Ensuring a safe and reliable water supply remains an ongoing challenge in both urban centers and rural areas. In cities, response capacity often fails to keep pace with aging infrastructure, high volumes of "unaccounted-for" water, and rapid suburban expansion. Meanwhile, rural communities tend to rely on poorly maintained systems or informal service arrangements that

FIGURE 1. THE SAFE DRINKING WATER LADDER: WHERE DO PEOPLE IN THE WORLD GET THEIR WATER FROM?



DATA SOURCE: WHO/UNICEF JOINT MONITORING PROGRAMME FOR WATER SUPPLY, SANITATION AND HYGIENE (JMP) (2025)

SOURCE: OUR WORLD IN DATA, WHO/UNICEF JOINT MONITORING PROGRAMME FOR WATER SUPPLY, SANITATION AND HYGIENE (2025)

are often unreliable. In both contexts, service gaps hit women, children, and marginalized groups hardest, while public investment remains well below the levels needed to meet increasing demand.

A key issue lies in the need for structural reform. Many operators struggle with insufficient funding, an inability to recover costs, and weak institutional capacity; currently, few water management companies can even cover their basic operating and maintenance costs.

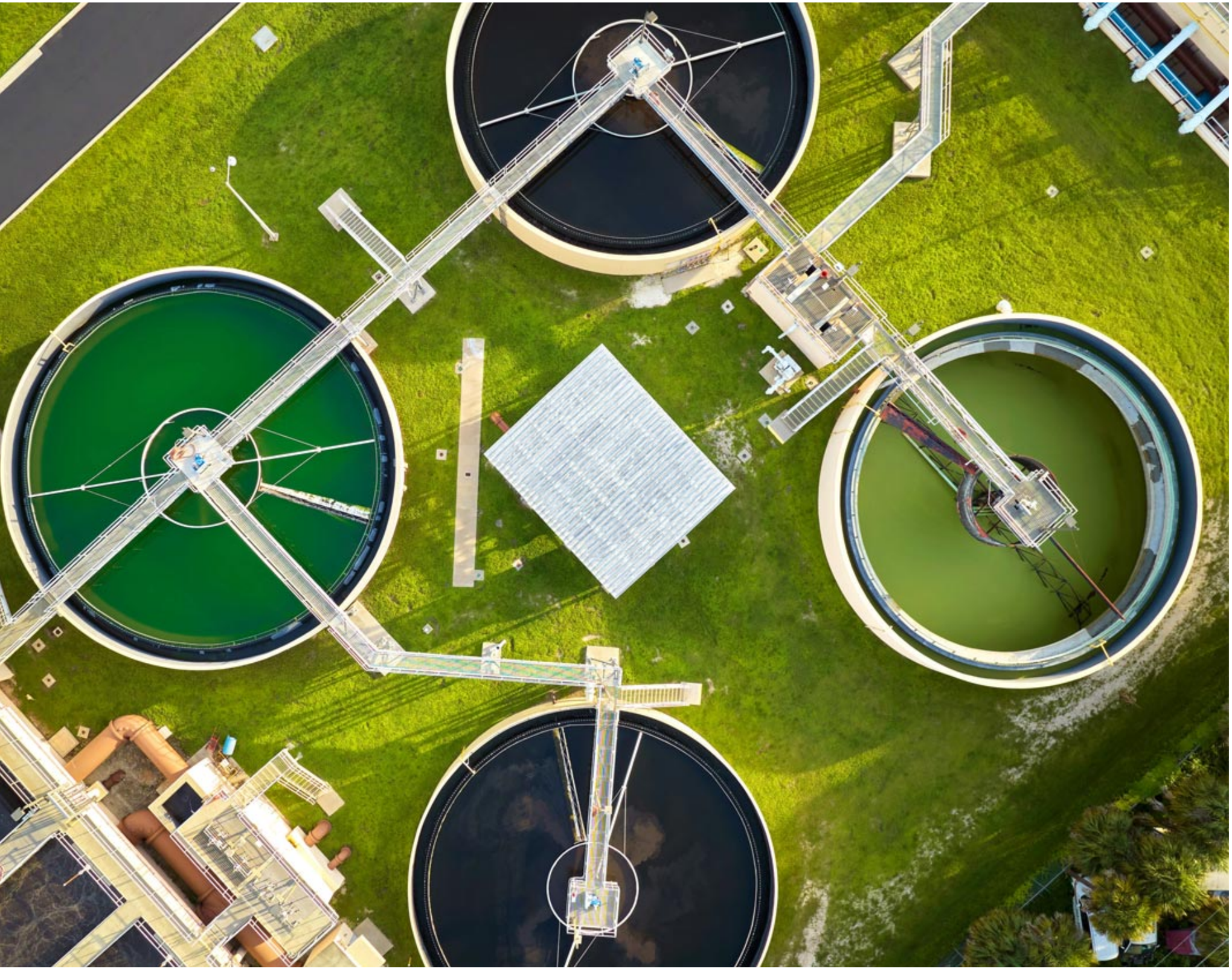
The sanitation sector remains one of the most underdeveloped globally. Nearly half of those without access to essential services live in rural areas, where many still lack private facilities. In urban areas, the lack of comprehensive sanitation continues to impact public health, the environment, and economic growth.

Against a backdrop of rapid technological change, the priority remains improving the reliability, quality, and accessibility of services in underserved areas. These efforts are essential to achieving the Sustainable Development Goals (SDGs), promoting equity, and strengthening resilience.

In this context, private operators must follow a structured approach to efficient water management. The goal is to both reduce potential impacts and implement initiatives in collaboration with local stakeholders, paying particular attention to the needs of the most vulnerable communities.

WATER IN ENI'S BUSINESS

Protection of water resources is one of the pillars of Eni's sustainability strategy, with priority actions in the most water-stressed areas. Starting in 2024, the company aims for water positivity by 2050, reducing withdrawals and promoting concrete benefits at the basin level, in line with SDG 6



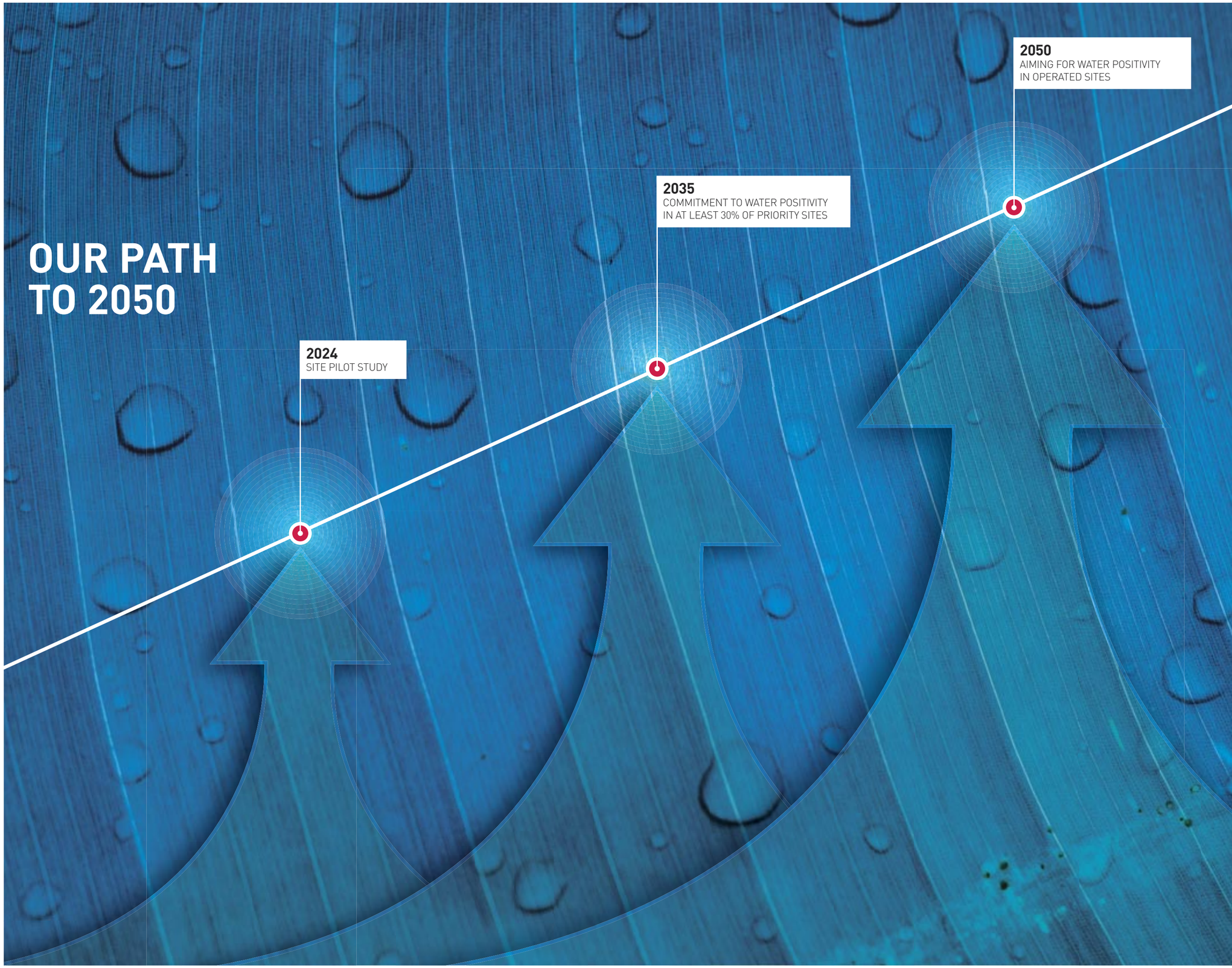
CONTRIBUTING to water stewardship is a fundamental part of Eni's sustainability objectives. Our work in this area involves planning and implementing a range of measures for increasingly responsible and efficient water management, focusing on operational sites located in water stressed areas and maintaining ongoing monitoring of our activities. We take steps to reduce the withdrawal of high-quality freshwater (surface water and groundwater) and to replace it with water from secondary sources (such as rainwater, remediated groundwater, treated wastewater, or desalinated water), in an attempt to minimize the effects on local communities and ecosystems.

Eni's position on water is aligned with the basic principles of the CEO Water Mandate, which we joined 2019, in line with the United Nations Sustainable Development Goals (SDGs). Transparency in pursuing these objectives is integral to all our actions.

OUR AMBITION FOR WATER POSITIVITY

AT THE END of 2024, Eni declared its water positivity ambition, taking a significant step towards protecting this vital resource. The sites we will prioritize for action represent over 90 percent of Eni's total high-quality freshwater withdrawals in water-stressed regions in 2023. Water positivity[1] involves ensuring that, at the basin level, water management initiatives generate benefits that outweigh the impacts associated with the presence of an operational site, such as critical issues related to withdrawals required for industrial processes or the quality of water returned to the environment. Inspired by the Positive Water Impact (an approach to water management in which a company or organization returns more freshwater to the water system than it consumes) developed by the CEO Water Mandate, water stewardship activities are structured in three pillars: Minimizing operational impacts, balancing the water footprint, and collaborating with the local community. Each pillar addresses the challenges associated with the three dimensions of water stress: Availability, quality and accessibility. This approach is in line with Eni's commitment to achieving SDG 6.

1. Find out more at ceowatermandate.org



OUR PARTNERSHIPS

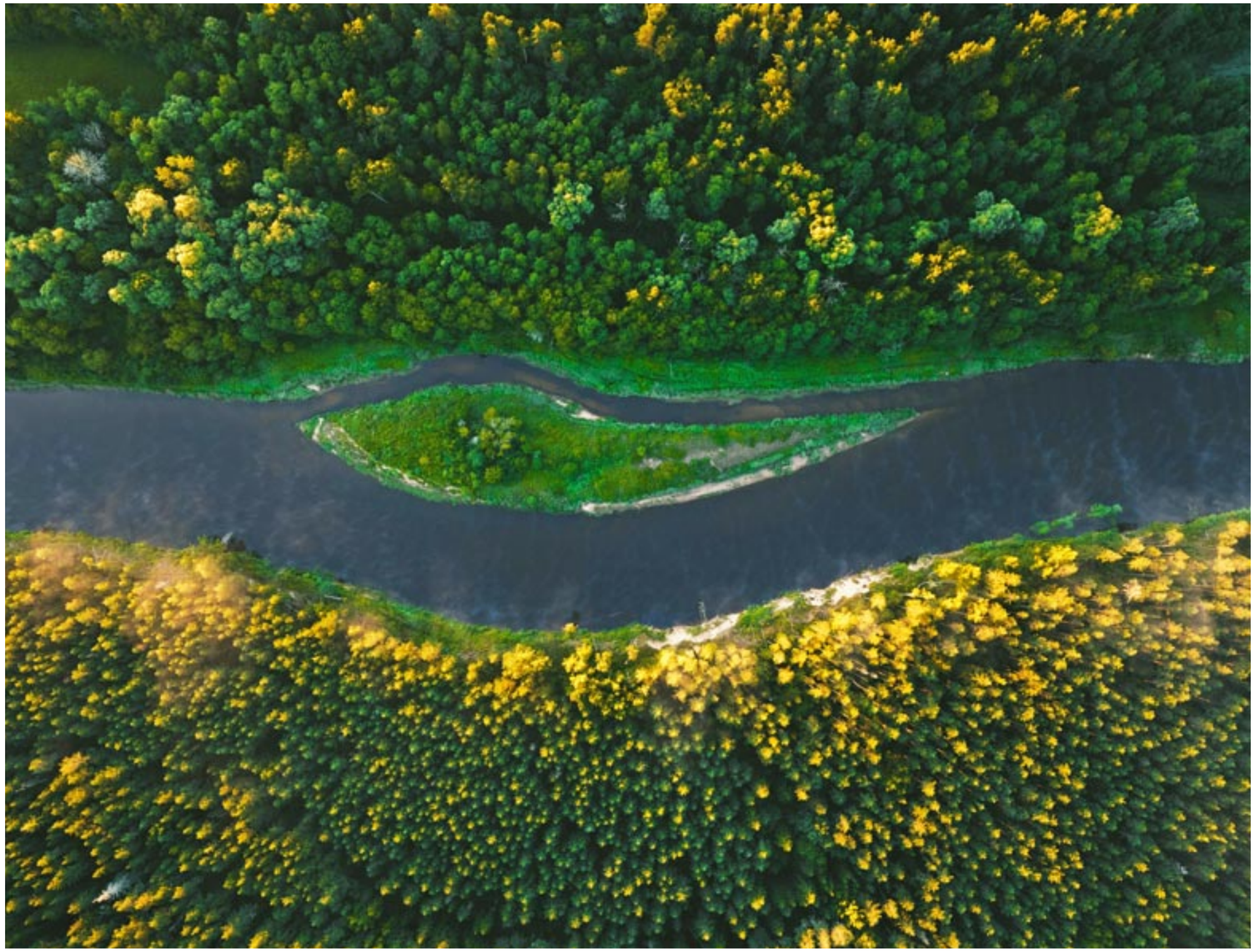
IN 2019, ENI JOINED the CEO Water Mandate[1], a United Nations initiative established in 2007 dedicated to water stewardship. Endorsing the Mandate implies the recognition and progressive application of the six fundamental principles of good water stewardship, ranging from the commitment to optimal use of water in direct operations, to engaging local communities, contributing to the development of policies supporting effective water conservation and management, and the commitment to transparency.

The companies endorsing to the Mandate are committed to optimal water management in all six areas of endorser commitment:

1 Efficient use in their direct operations and commitment to eliminating the impacts of their activities on ecosystems.

2 Identification of targets consistent with a water conservation strategy and "clean" production processes, including through technological levers and the introduction of concepts of sustainable water use in every decision-making area.

3 Engaging suppliers in the informed and sustainable management of water at the basin level.



4 Collective action at the river basin level, including in collaboration with global initiatives, such as those promoted by the United Nations.

5 Contributing to the development of water stewardship policies, in collaboration with institutions, governments, and businesses.

6 Developing initiatives to improve access to water and sanitation for local populations.

Eni is also a member of Ipieca, the global oil and gas association for advancing environmental and social performance across the energy transition. It brings together members and stakeholders to lead in integrating sustainability by advancing climate action, environmental responsibility and social performance across oil, gas and renewables activities. Ipieca, jointly with the International Association of Oil and Gas Producers (IOGP), works to responsibly integrate the management of biodiversity and ecosystem services into the life cycle of oil and gas and alternative energy operations and decision making. The non-lobby status has enabled Ipieca, to remain the industry's principal channel of engagement with the United Nations, to build trusted relationships throughout the UN system, and develop impactful partnerships across the IGO, NGO and academic worlds. Ipieca's work on biodiversity and ecosystem services is underpinned by the UN Convention on Biological Diversity, in which Ipieca has official observer status. The Water Working Group operating within Ipieca actively promotes good practices, exchanges knowledge and experience among peers and develops guidelines on sustainable water stewardship. In 2013, Ipieca, the International Council on Mining and Metals (ICMM) and the Equator Principles Association established the Cross-Sector Biodiversity Initiative (CSBI) to provide leadership in developing and sharing good practices related to biodiversity and ecosystem services in the mining industry. The initiative explores and develops practical tools and shares good practices for the effective application of the Mitigation Hierarchy[2], as referenced in the International Finance Corporation's (IFC) Performance Standard 6 on biodiversity conservation.

1. The CEO Water Mandate is a United Nations initiative launched in 2007 and linked to the Global Compact, which is itself based on 10 principles that outline a set of corporate values regarding Human Rights, Labor, the Environment and Anti-Corruption.
2. It calls for the adoption of measures to avoid/reduce, recycle/reuse, and restore water resources.

PROJECTS AROUND THE WORLD

Sustainable water management is one of the most concrete areas by which the industry's ability to balance operational continuity, environmental protection and value for local communities is measured. In the different contexts in which it operates, Eni has developed integrated models aimed at reducing withdrawals from primary sources, increasing the reuse of treated water and strengthening access to water in the most vulnerable areas

GELA (SICILY): A MODEL OF CIRCULAR ECONOMY

WITHIN the framework of environmental challenges that are redefining the relationship between industry and the local area, water management is one of the most strategic and sensitive issues. In Gela (Sicily), this principle is translated into an advanced water treatment and reuse system, in which Eni Rewind—Eni's environmental subsidiary—has leveraged a well-established heritage of technical expertise, research and innovation.

In terms of groundwater management, over the years, Eni Rewind has developed a methodical approach to selecting and deploying the most effective technologies for removing various categories of contaminants, with the aim of optimizing plant performance and protecting the integrity of industrial assets. A key role is played by the team of hydrogeology experts, who use advanced subsurface modeling to precisely define the volumes and characteristics of the groundwater to be treated. This work allows us to establish optimal flow rates to ensure the hydraulic protection of sites under remediation, maintaining a strict balance between production needs and environmental protection. In 2025, Eni Rewind managed a total of 40.1 million cubic meters of water, of which 9.9 million were reused. This result confirms the ability to combine operational continuity with greater environmental responsibility, returning high quality water to surface waterways and groundwater aquifers. The reuse of treated water is, in fact, one of the most effective tools for reducing pressure on natural water bodies and promoting an increasingly circular industrial model.

A prime example of this approach is the project implemented at the Enilive Biorefinery in Gela for reusing low-quality water. In response to recent droughts that have affected the region, a water reuse plant was designed and commissioned to meet the biorefinery's water needs, complementing the existing Groundwater Treatment Plant (GTP).

The plant is fed by treated water from the municipal wastewater treatment plant operated by Eni Rewind, significantly reducing withdrawals from the local reservoir and minimizing environmental impact.

The new system enables the pretreatment of water exiting the municipal biological treatment plant, making it suitable for feeding into the demineralized water production lines already existing in the biorefinery. This goes to replace water normally drawn from the local reservoir, making use of an already available resource and reducing the consumption of high-quality water. The new system, with a flow rate of 200 cubic meters per hour, ensures a constant, reliable and sustainable supply over time, helping to make the entire water cycle more efficient.

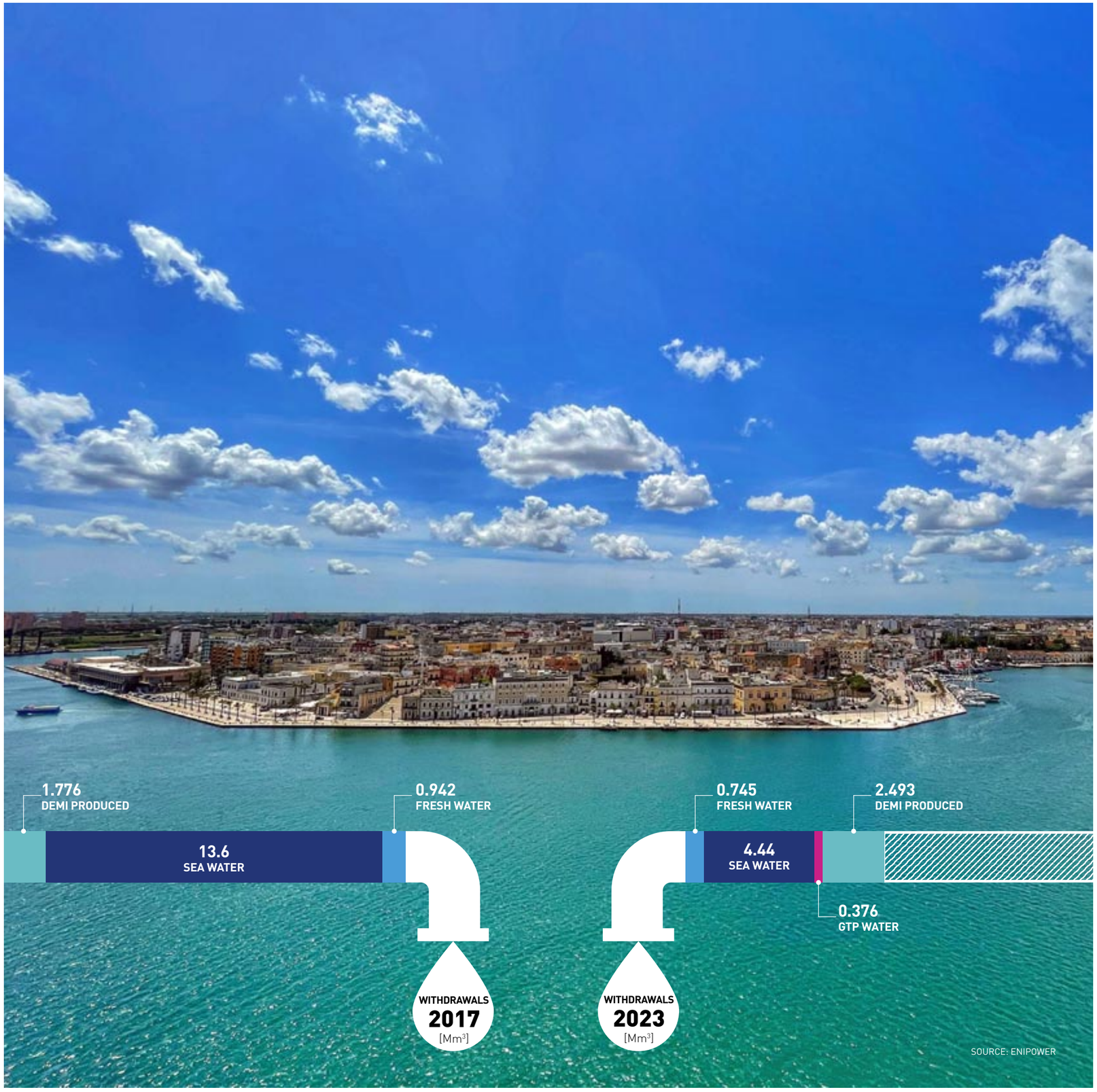
The integrated approach taken by Eni Rewind and Enilive in Gela represents a virtuous model of circular economy: water management is extended far beyond treatment and return, achieving the valorization of the resource through its reuse in water-intensive industrial processes. This yields tangible benefits, in terms of both reduced environmental impact and the efficiency and competitiveness of the plant.

Reducing the water footprint, the responsible use of natural resources, and contributing to a more sustainable future are the pillars of the corporate strategy. In Gela, these principles are applied daily in a system that transforms water from an element to be treated into a resource to be regenerated: a continuous cycle that returns value to the local area in terms of water management.

BRINDISI (APULIA): A NEW WATER CYCLE

BETWEEN 2016 and 2017, at the Enipower plant in Brindisi, a new seawater-fed reverse osmosis membrane plant was installed—a project that represents a major milestone in the site's journey towards innovation and sustainability. The plant became operational in the second half of 2018, paving the way for a more efficient water management model with a lower environmental impact.

With a view to optimizing resources and progressively transitioning toward a circular economy, a second phase of the project was subsequently developed: to supply the new plant not only with seawater but also with water from the groundwater treatment plant (GTP) operated by Eni Rewind. The modification—submitted in July 2018 and approved by the Ministry of the Environment in April 2019—made it possible to reuse a flow that would otherwise have been discharged into the sea, transforming it into a strategic resource for the production of demineralized water. The new plant configuration became fully operational in 2020.



The objective was clear from the start: to progressively reduce groundwater withdrawals—particularly valuable in the Brindisi area—to decrease the use of freshwater, and to optimize the use of seawater, thanks to greater efficiency in the reverse osmosis process. This set of measures has improved the site's sustainability while ensuring stable, high-quality production of demineralized water. The results achieved clearly demonstrate the value of the initiative. The integration of GTP water has, in fact, reduced the overall demand for primary water resources, demonstrating how an advanced technological approach can translate into tangible benefits both in terms of greater environmental protection and for the plant's operations. The Brindisi project thus stands as a significant example of how innovation, efficiency, and a commitment to safeguarding natural resources can go hand in hand, creating a model that can be replicated in other industrial contexts.

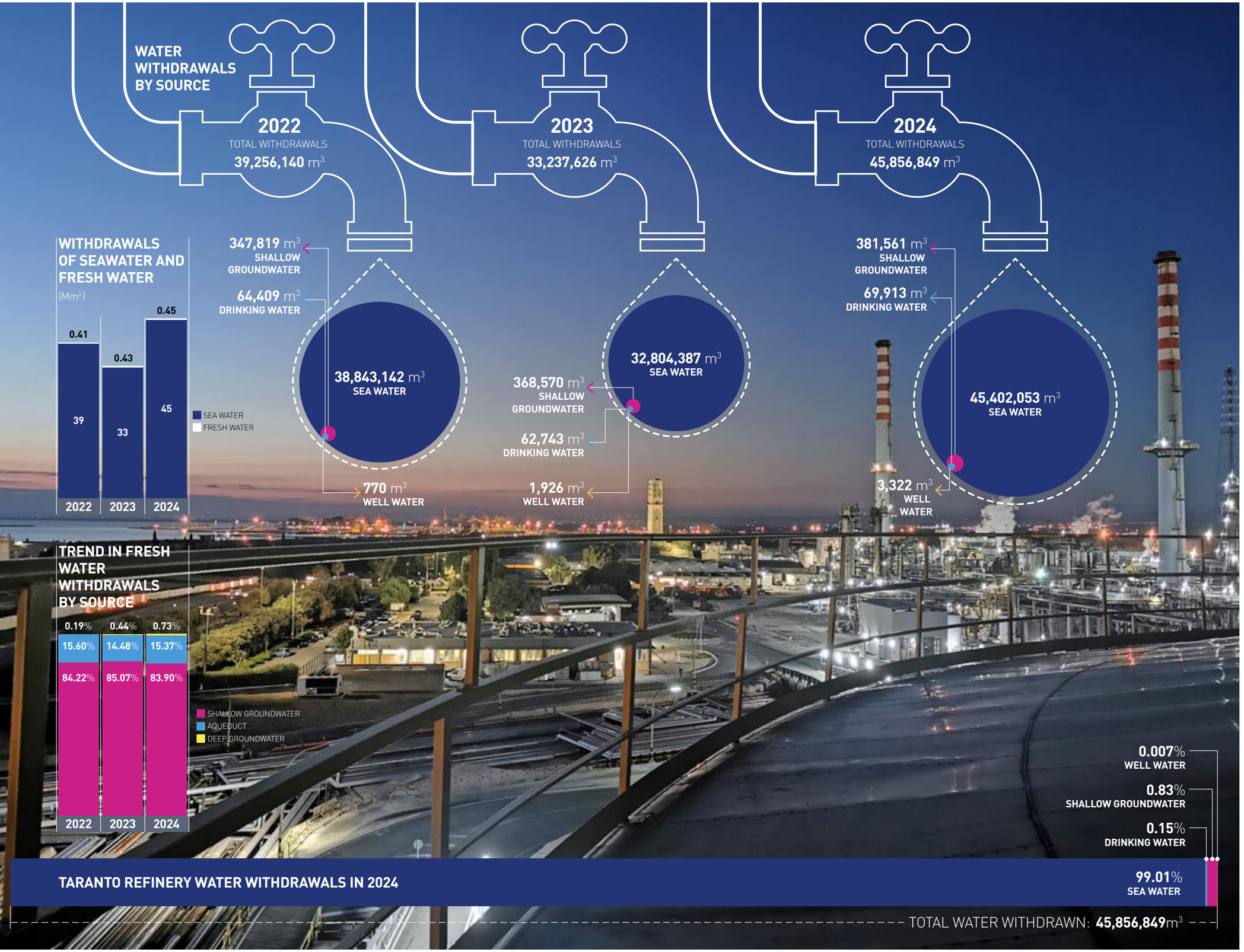
Adjusting the 2017 withdrawals (i.e., using the same percentage yields), to achieve the same production of demineralized water (DEMI) as in 2023, 1.322 Mm^3 of freshwater and 19.1 Mm^3 of seawater would have had to be withdrawn, representing savings of 44% and 77%, respectively.

TARANTO (APULIA), WATER MANAGEMENT AS A DRIVER OF EFFICIENCY AND GREATER SUSTAINABILITY

OVER THE YEARS, the Taranto Refinery has developed a water resource management model aimed at greater environmental protection and the gradual reduction of freshwater withdrawals. The goal is to protect a precious resource for the region, prioritizing the use of lower-quality water sources and maximizing water recovery within the production cycle.

Within the site, water is used for various essential functions, foremost among them the cooling of process equipment and the production of demineralized water for steam generation. This demand is met through a variety of sources—with seawater playing a predominant role—managed to optimize consumption and reduce reliance on higher-quality resources. Wastewater generated by production processes is treated in dedicated facilities and, where possible, reused internally, contributing to significant water savings. Only the non-recoverable portion is discharged into the Mar Grande in Taranto, in full compliance with the limits set forth in the site's Integrated Environmental Authorization (AIA). The adoption of advanced treatment systems ensures that treated effluent consistently complies with regulatory requirements.

To ensure continuous and efficient monitoring of the entire water cycle, the Refinery has also developed an internal "Water Balance" system: a tool that precisely analyzes the consumption, recovery, and final destination of water, facilitating operational management and the identification of further opportunities for optimization.



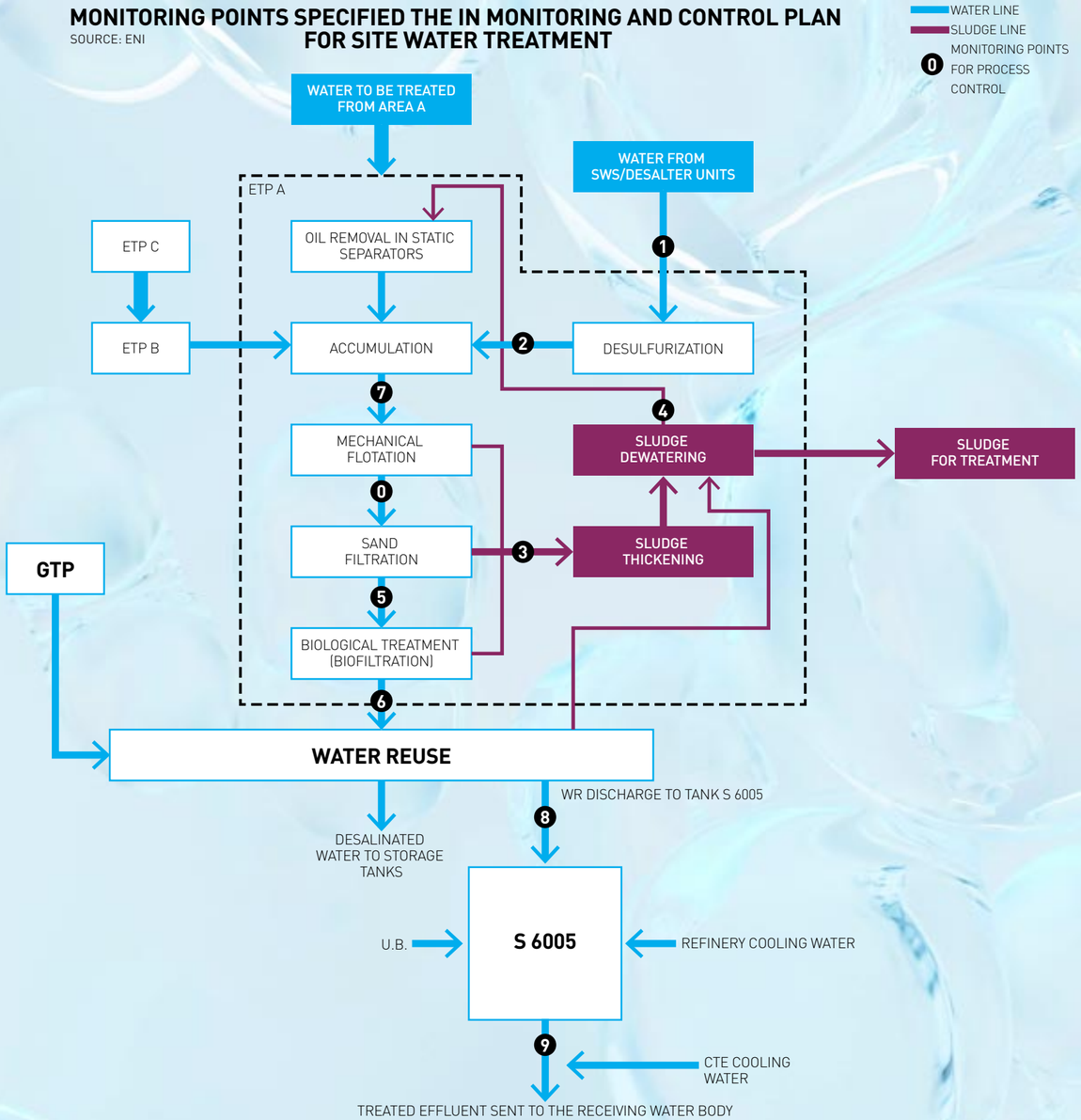
SITE WATER SOURCES: A DIVERSIFIED AND CONSERVATION-ORIENTED SYSTEM

The water supply for the Taranto Refinery is based on different sources, each used according to the needs of the production cycle. Specifically:

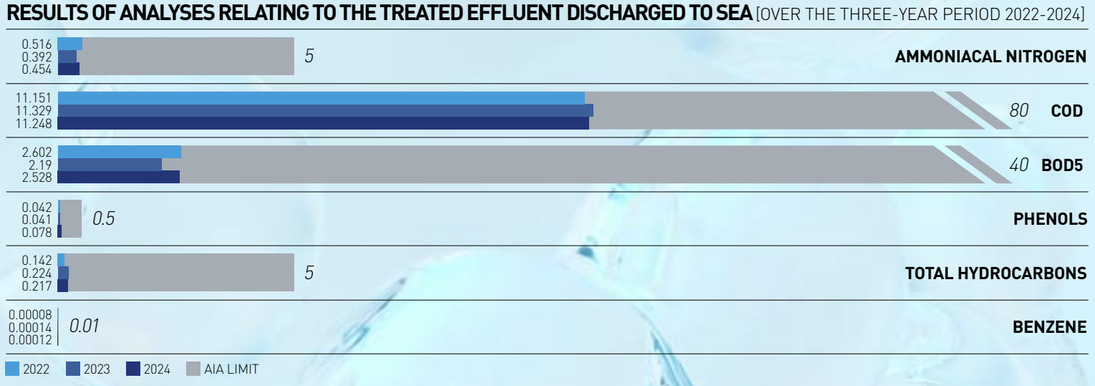
- Sea water: Drawn from the Mar Grande via submersible pumps, it represents the site's primary water source. It is used for cooling, in fire suppression systems, and, in part, as raw water for the production of demineralized water through the desalination plant.
- Shallow groundwater: Extracted from the refinery's drainage systems, it is sent through a dedicated network to the Groundwater Treatment Plant (GTP) to be subsequently reused in internal processes, following specific treatment in the Water Reuse plant.
- Drinking water: drawn from the aqueduct, is used exclusively for sanitary purposes.
- Well water: taken from five deep groundwater wells on the site and used for specific industrial needs.

MONITORING POINTS SPECIFIED THE IN MONITORING AND CONTROL PLAN FOR SITE WATER TREATMENT

SOURCE: ENI



RESULTS OF ANALYSES RELATING TO THE TREATED EFFLUENT DISCHARGED TO SEA [OVER THE THREE-YEAR PERIOD 2022-2024]



WATER TREATMENT: AN INTEGRATED SYSTEM TO MAXIMIZE REUSE

The Taranto Refinery does not simply draw water from various sources; a key part of its management model involves reclaiming water that has already been used, treating it, and feeding it back into the production cycle. This approach significantly reduces dependence on primary resources and makes the site's water system increasingly efficient and circular.

To achieve this goal, the Refinery utilizes three specific plants, each with a well-defined role:

- **ETP – EFFLUENT TREATMENT PLANT**

  This treats all wastewater generated by site operations. Through a combination of chemical, physical, and biological processes, the plant purifies the water until it is suitable for discharge into the Mar Grande.

- **GTP – GROUNDWATER TREATMENT PLANT**

  Groundwater collected by the site's drainage systems flows into this plant, where it undergoes two main treatment stages: sand filtration and activated carbon filtration. After this pretreatment, the water is sent to the Water Reuse plant for further refinement.

- **WR – WATER REUSE**

  This is the heart of the Refinery's water recovery system. It receives the pretreated water from the GTP and, through advanced processes—ultrafiltration, reverse osmosis, and activated carbon filtration—transforms it into demineralized water ready for reuse in production cycles. A portion of the water treated by the ETP is also directed to the Water Reuse plant, allowing for the recovery of additional volumes that, without this plant, would otherwise flow into the receiving water body (Mar Grande).

Thanks to the integration of these units, the Refinery is now able to reduce significantly its freshwater withdrawals and build a more self-sufficient and increasingly sustainable water system.

PROTECTION MEASURES: CONSTANT MONITORING TO ENSURE QUALITY AND SAFETY

All treated water undergoes thorough testing in accordance with the Monitoring and Control Plan required by the site's Integrated Environmental Authorization (AIA). The analyses, conducted at various points in the treatment process and of the final treated effluent, are performed by an accredited external laboratory and allow us to monitor the quality of the water returned to the sea and compliance with legal limits. Thanks to this structured monitoring, the Refinery ensures maximum transparency and consistent compliance with environmental standards.

EGYPT: WATER RESOURCES AS A FRONTIER FOR DEVELOPMENT

IN EGYPT water is not just a natural resource: it is a strategic issue. With a population of over 100 million concentrated largely along the Nile valley and delta, the country is almost totally dependent on a single water source, while the desert areas, which make up the majority of the territory, suffer from chronic water scarcity. Population pressure, rising temperatures, increasing climate variability and the intensification of agricultural practices make water management one of the country's main
challenges.

In this context, strengthening the resilience of rural communities means taking action on multiple fronts: access to drinking water, availability for irrigation, energy efficiency, technical training, and social inclusion. It is with this integrated approach that two initiatives—focused on sustainable agriculture and access to water in the Matrouh and South Sinai Regions—were launched in 2023 and have now been completed. These initiatives spanned 24 months and had a total budget of approximately one million dollars (value of Eni's contribution).

The goal: To increase farmers' resilience to water stress in desert regions, while simultaneously helping to improve the living conditions of local communities.

SOUTH SINAI: WELLS AND ENERGY FOR RESILIENCE

The South Sinai project focused primarily on access to safe drinking water for local communities. The initial plan involved drilling a well, building a desalination unit, and constructing a reservoir for water distribution. During the project, the technical committee decided to expand the scope of the initiative to address the needs of the various communities more comprehensively.

The final result exceeded expectations:

- drilling of a groundwater well;
- construction of 5 desalination units in 5 communities, with a total capacity of 110 m^3 per day;
- access to safe drinking water guaranteed for 3,135 people, compared to the 1,422 initially planned.

In addition to domestic use, the project also significantly increased water availability for agriculture. The amount of water allocated for irrigation rose from 480,000 to nearly 699,000 cubic meters per year, thanks to the construction of a 15.24-cm pipeline 2.2 kilometers long to transport water from an existing well.

The energy component is also fundamental: a 54 kW/h photovoltaic system provides the necessary electricity, reducing operating costs and making the system more sustainable in the long term. In an area where access to energy can be intermittent, the integration of water and renewable energy represents a key element of resilience.

MATROUH: DECENTRALIZED INFRASTRUCTURE AND A FOCUS ON COMMUNITIES

In the Matrouh area, the project followed a similar approach but with a strong focus on decentralized infrastructure and community-based resource management.

Through in-depth technical assessments, field analyses, and direct community engagement, suitable water sources were identified and infrastructure was built to support grazing land and irrigated agriculture. The project:

- upgraded 75 water systems, providing access to water for 2,625 people;
- expanded an existing Roman cistern and provided maintenance training;
- completed 4 deep wells;
- 22 cisterns and 10 water reservoirs (300 m^3 each).

These actions increased water availability for approximately 268 hectares of grazing land and 200 new agricultural plots, helping to support both agriculture and livestock farming. A comprehensive maintenance plan was also established to ensure the long-term functionality of the infrastructure, strengthening local management capacity.

Here too, the energy dimension was integrated into the design: five solar panel units were installed to support more efficient irrigation systems, helping to reduce costs and improve the environmental sustainability of the farms.

BEYOND WATER: SUSTAINABLE AGRICULTURE AND INCLUSION

In both areas, access to water was accompanied by the introduction of agricultural techniques that are more sustainable and productive in desert climates. The goal was twofold: To increase yields and protect natural resources, in an environment marked by water stress and high temperatures.

Special attention was also given to reducing inequalities through literacy and training courses aimed at local communities. Strengthening basic and technical skills was considered an integral part of the resilience process.

Thanks to the support of local partners, a portion of agricultural products will gain access to new markets through quality certifications related to biodiversity and organic farming, opening up more stable economic prospects for small-scale producers.

ZOHR: INDUSTRIAL EFFICIENCY AND PROTECTION OF LOCAL RESOURCES

Alongside initiatives benefiting rural communities, sustainable water management also applies to industrial activities. In a country where every cubic meter is critical, reducing pressure on freshwater resources means taking direct action on production processes by rethinking their supply sources.

It is within this context that we find the Zohr field project, where Eni—through the Petrobel Joint Venture—has achieved a significant milestone: The complete elimination of freshwater withdrawal for civil and industrial uses. This result was made possible by the construction, in 2020, of a new desalination plant and the drilling of three high-salinity brackish water wells, which have been operational since May 2021. The water drawn from the wells is conveyed to a supply tank, pumped through seven multimedia filters, and treated via three reverse osmosis systems, with a current production of approximately 1,770 m^3 per day. The water obtained is primarily intended for internal site use: production of demineralized water, power plant supply, and fire suppression systems. The demineralized water is in turn reused for steam generation in the Sulfur Recovery Unit (SRU) and Monoethylene glycol Regeneration Unit (MRU) processes, as well as for condensate stabilization, helping to ensure operational efficiency and production continuity.

The impact is measurable: A net savings of approximately 1,700 m^3 of freshwater per day and the complete elimination of the need to draw on local water resources. In a context of growing water stress, the Zohr experience demonstrates how technological innovation can reduce the water footprint of industrial activities, complementing local initiatives as part of a comprehensive strategy for improved water stewardship and responsible water use.

LIBYA: ESSENTIAL INFRASTRUCTURE AND HEALTH PROTECTION

IN LIBIA, strengthening basic infrastructure is a crucial driver or social stability and local development. In a context marked in recent years by institutional fragility and shortcomings in public services, access to reliable water and sanitation systems is a priority not only for the environment, but also for public health and social well-being. Safe wastewater management, particularly in hospitals, is a fundamental element in protecting public health and improving the quality of life for communities. It is within this context that we find the project to upgrade the sewage treatment plant serving Nalut General Hospital, in northwestern Libya, about 270 km west of Tripoli.

AN INFRASTRUCTURE IN NEED OF RECONSTRUCTION

The Wastewater Treatment Plant (WWTP)—operational since October 1993—had suffered progressive technical deterioration over time. The obsolescence of the equipment and increasing maintenance difficulties have resulted in frequent operational failures, with repercussions on the hospital environment and on the surrounding residential areas. The situation had led to recurring complaints from the local community, concerned about potential environmental and health risks.

In light of these critical issues, the need arose for a complete replacement of the plant, which was no longer able to guarantee adequate standards of safety and reliability.

In collaboration with the National Oil Corporation (NOC) and as part of the 2017 Memorandum of Understanding for development initiatives in health and education, Eni North Africa launched a comprehensive upgrade project, installing a modern unit capable of treating up to 250 m^3 of wastewater per day.

IMPROVED ENVIRONMENTAL EFFICIENCY AND CONTINUITY OF HEALTHCARE SERVICES

The new system has significantly reduced environmental pollution and health risks associated with inadequately treated wastewater, restoring safe conditions in the hospital area and surrounding neighborhoods.
The reliability of the wastewater treatment process is now an essential component for the full operation of the healthcare facility, helping to raise hygiene and sanitation standards and ensure safer working conditions for medical and paramedical staff.
The project has also opened the door to reusing treated water for non-potable purposes, promoting a more efficient use of water resources and reducing pressure on local water supply systems.
From an operational standpoint, the new unit has minimized the interruptions and breakdowns that characterized the old plant, ensuring greater stability for both hospital operations and the surrounding residential area.

Beyond the technical aspects, the project had a major social impact. The upgrading of a critical infrastructure—long perceived as problematic—has reinforced within the Nalut community the perception of a concrete commitment to environmental protection and the improvement of essential services. The project thus represents not only a technical solution to a long-standing critical issue, but also a tangible contribution to collective well-being and the resilience of healthcare infrastructure in a complex context such as Libya's.

IVORY COAST: SAFE WATER FOR COMMUNITIES

THE IVORY COAST possesses significant water resources thanks to a substantial river network and vast reserves of freshwater groundwater, common throughout sub-Saharan Africa. However, water quality is threatened by pollution and urbanization. Precisely in light of this critical situation, the provision of drinking water was a fundamental component of the "Access To Health" community health project, implemented in the South-Comoé region in collaboration with the Ministry of Health, local authorities, community leaders, healthcare workers, faculty, and Hospital Management Committees, and lasted just over two years, from April 1, 2023 to April 30, 2025.

THE PROJECT, WITH THE WASH (WATER, SANITATION, AND HYGIENE) ACTIONS

The project, in its entirety, aimed to address persistent gaps in access to quality health services, particularly regarding maternal, neonatal, and child health. Specifically, regarding water-related aspects, two lines of action were planned:

- Development of community knowledge and practices related to water, sanitation, and hygiene;
- Promotion of menstrual hygiene management and improvement of sanitation and hygiene in schools.

THE RESULTS: TRAINING AND COMMUNITY RESPONSE

Over two years, the project has consolidated the use of more sustainable practices in the health and hygiene sectors, thereby laying the groundwork for sustained progress even beyond its conclusion.

In particular, community awareness-raising activities reached over 6,600 people regarding WASH practices, thanks in part to specific training provided to community health workers.

Schools were also involved: school WASH infrastructure was analyzed and upgraded in 7 institutions. Specifically, 731 students participated in sessions devoted to menstrual hygiene and health. These results were positively received by local communities, as evidenced by an overall satisfaction rating with health services rising from 67% to 90%. Communities reported improved access to maternal and child health services, greater trust in healthcare facilities, and increased adoption of preventive measures.

IRAQ: A NEW LEASE OF LIFE FOR TREATMENT PLANTS

OVER THE PAST ten years, Iraq has seen a worsening structural water crisis, fueled by reduced flows in the Tigris and Euphrates rivers, a series of droughts, rising temperatures, and the progressive deterioration of water quality. The decline in available resources has significantly impacted civilian water supplies, agricultural irrigation, and natural ecosystems, particularly in Mesopotamian wetlands.

The most severe effects are observed in the South of the country, in the Basra Governorate, where salinization and contamination of water networks have compromised access to safe drinking water, with health, social, and economic repercussions. In response, the Iraqi government launched a program of reforms and investments aimed at upgrading water treatment facilities, protecting resources, and strengthening regional dialog on transboundary river basins. Within this context, Eni Iraq BV introduced projects in collaboration with the Basra Water Directorate aimed at ensuring clarified and potable water for the local population, while contributing to mitigating the effects of the water crisis.

Pictured: the Al Baradhiya plant.

PROJECTS AT AL BURJASIA AND AL BARADHIYA

The first project involved the Al Burjasia reverse osmosis treatment plant in Zubair district. It was launched in 2019 and consisted of two stages: between 2019 and 2022, the existing plant was restored, while in 2023 the upgrading of the pipelines connecting to the national network was completed. The plant has a production capacity of 400 cubic meters per hour and currently supplies drinking water to approximately 38,400 people.

The second project involved the Al Baradhiya plant, located in the urban area of Basra. This project also involved the modernization of a reverse osmosis system, comprising two treatment lines of 400 cubic meters per hour each, for a total capacity of 800 cubic meters per hour. Also launched in 2019, the project ended in 2025 with the completion of the second line. The plant now serves over 100,000 people and has already supplied more than 3 million cubic meters of drinking water to the city's network.

Through these initiatives, Eni is making a tangible contribution to strengthening water infrastructure in one of the country's most vulnerable areas, supporting access to a resource essential for public health, social stability, and economic development.

THE ROLE OF R&D IN WATER MANAGEMENT

Research and Development (R&D) plays a crucial role in advancing water treatment technologies and driving progress toward greater sustainability and resource efficiency

ENI'S R&D initiatives focus on enhancing the reuse of water, not only to address the challenge of growing global scarcity but also to recover and valorize salts from wastewater streams according to a "zero-waste" approach. These efforts contribute to Eni's long-term goal of achieving a "Positive Water" impact, ensuring that water is recovered wherever possible, used more efficiently, and returned to the environment of a higher quality.

The R&D projects cover a wide range of water-related challenges, ranging from the treatment of water production and upstream wastewater streams to the improvement of groundwater quality, including joint initiatives with Eni Rewind.

Within the framework of these efforts, advanced desalination processes represent a strategic pillar, extracting fresh water from seawater, while simultaneously recovering valuable salts for reuse. These technologies enhance circularity and support more efficient resource management, contributing to improved sustainability and optimized operations. To accelerate technological progress, R&D leverages a broad set of enabling technologies. The integration of cutting-edge materials, high-performance membranes, innovative oxidation processes, and systems powered by renewable energy is transforming treatment technologies and making them increasingly efficient, resilient, and sustainable.

At the same time, R&D is actively exploring new modular, hybrid, and highly flexible treatment processes capable of adapting to different water qualities, operating conditions, and circularity targets, thereby enabling scalable and long-lasting solutions.

AI IN SUPPORT OF THE CIRCULAR ECONOMY

IN A RAPIDLY expanding innovation landscape, R&D is faced with the challenge of evaluating an ever-increasing number of start-ups, technology providers and innovation-driven companies. It is precisely in this context that Eni conceived and developed AquaInnoBase—a platform that provides a robust and intelligent framework for identifying, screening, classifying, evaluating, and prioritizing the most promising innovations in the water sector.

Specifically, the tool consolidates information on emerging technologies, assesses their maturity and technology readiness, maps their applicability across various treatment scenarios, and supports R&D teams in identifying the most suitable solutions for water reuse, desalination, and circularity pathways.

The system is further enhanced by an application based on generative Artificial Intelligence (AI), which improves the entire innovation workflow; it enables rapid technology mapping, automates benchmarking, assesses regulatory compliance and risk readiness, and explores different scenarios. Thanks to modular and scalable architecture, it integrates seamlessly with various datasets and decision-making frameworks, as well as easily extending to multiple sectors.

PHOTOS

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Safeguarding resources, empowering communities

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