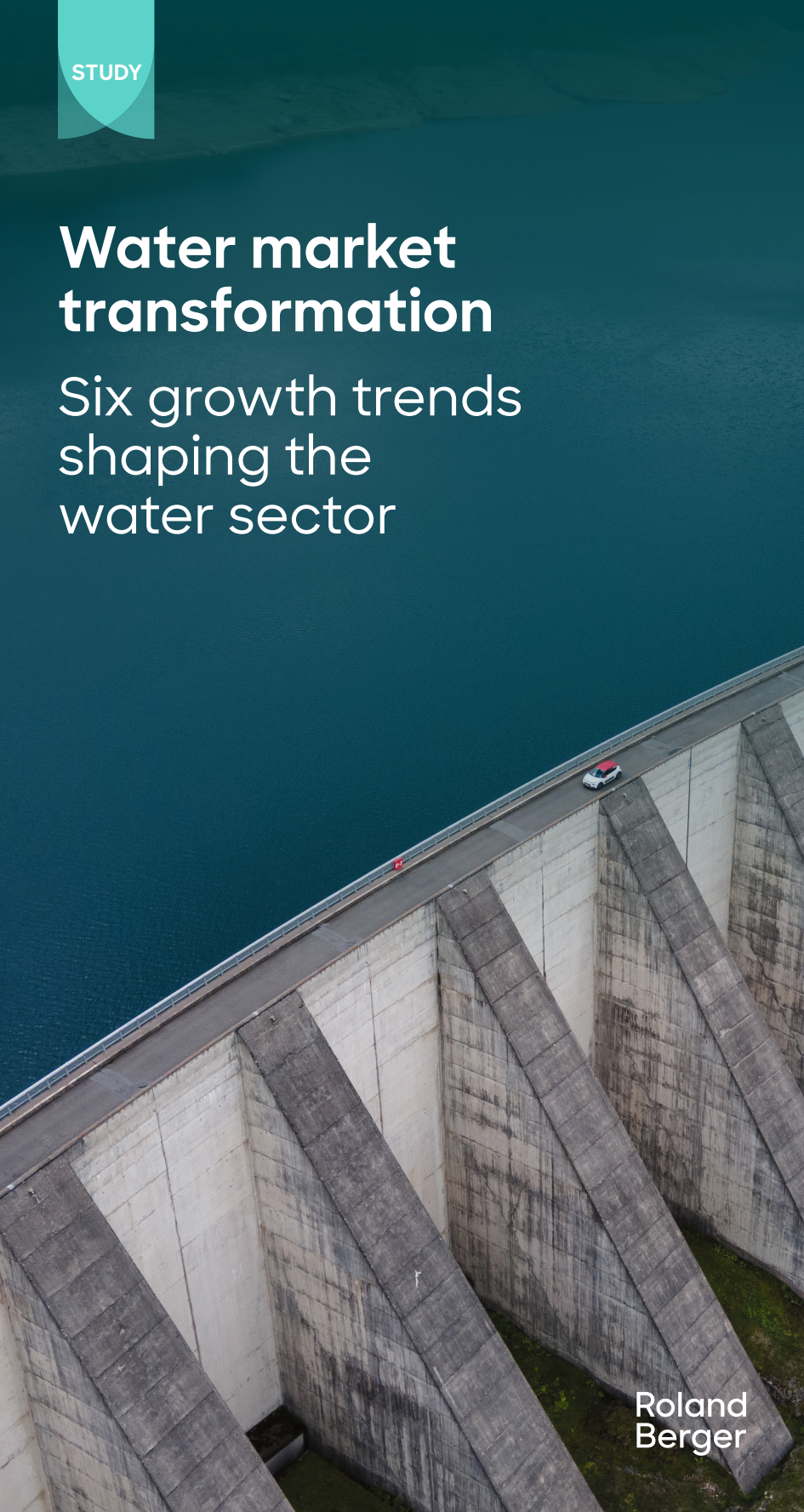




STUDY

Water market transformation

Six growth trends
shaping the
water sector

Roland
Berger

The global water industry stands at a critical crossroads, shaped by unprecedented challenges and technological opportunities. Climate change, aging infrastructure, population growth, and increased regulatory scrutiny are converging to drive innovation across the water sector.

According to recent analysis by our global Water team, the water market is poised for significant growth, with several key segments expanding at rates well above global GDP. These six high-growth trends represent not just the future of water management but also substantial investment opportunities.

For utilities, technology providers, and investors, understanding these interconnected developments is essential in addressing 21st-century water challenges. The following analysis explores these six transformative trends and provides strategic recommendations for industry participants navigating this rapidly changing landscape.

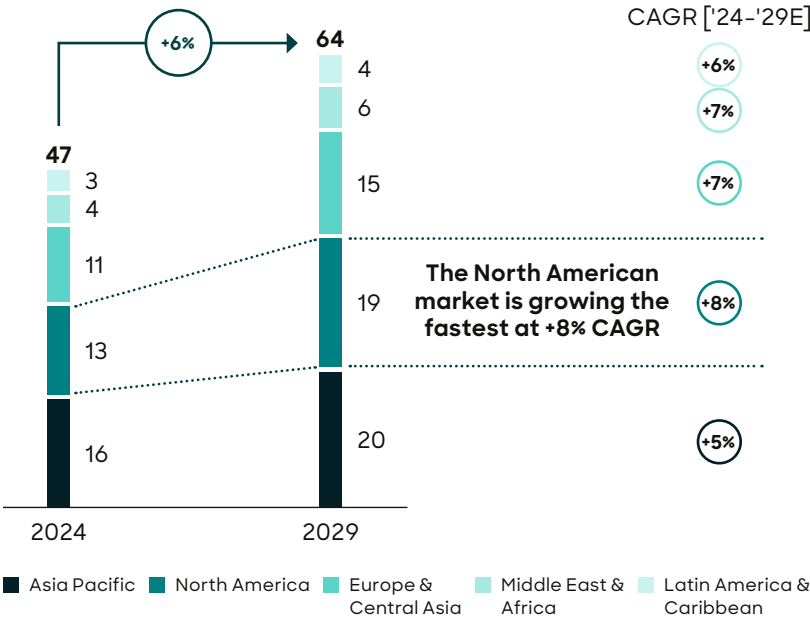
Smart Analytics: The intelligent water revolution

Smart water technology encompasses everything from basic sensors to sophisticated AI-powered analytics platforms that enable predictive maintenance, leak detection, and operational optimization.

These technologies are becoming essential as utilities face workforce challenges – particularly in North America and Europe where an aging labor force is creating knowledge gaps that digital tools can help bridge. The integration of IoT devices throughout water networks creates digital twins that simulate operations, allowing utilities to test scenarios before implementing changes in the real world.

The global smart water solutions market is projected to reach USD 65 billion by 2029, growing at a 6% CAGR. North America leads with the fastest growth rate (8% CAGR), driven by efforts to optimize water management, modernize aging infrastructure, and address labor shortages through automation.

Global smart water solutions¹ market size [2024–2029, USD bn]



1 Includes the following technology types: Physical parameter sensors, Data management/analysis, Control systems and SCADA, Customer meters, Condition assessment, Laboratory equipment and services, Water quality sensors

Source: GWI Waterdata; Roland Berger

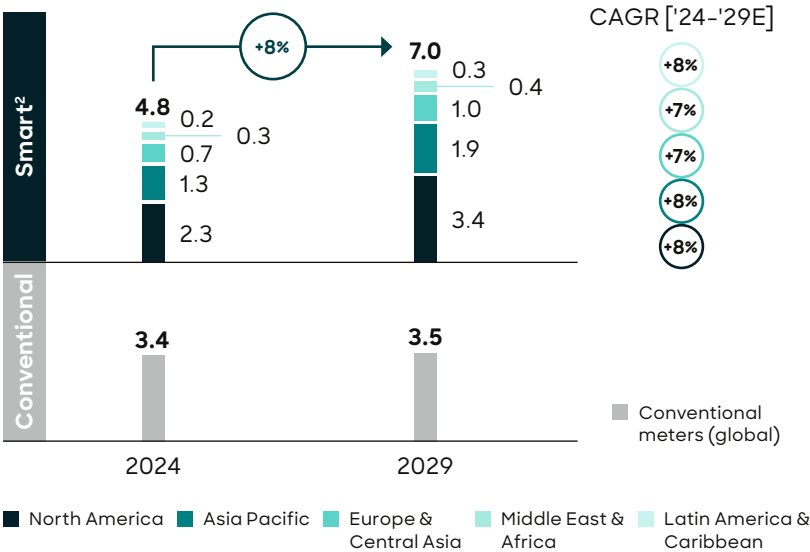
Smart Metering: Beyond consumption tracking

Smart water meters are rapidly replacing conventional meters, with the market expected to grow at 8% CAGR to reach USD 7 billion by 2029—doubling the size of the conventional meter market. By 2029, smart meters will dominate the global market as utilities recognize their multifaceted benefits.

These advanced metering systems transcend basic consumption measurement by providing real-time data on water usage patterns, pressure anomalies, and potential leaks. Utilities gain enhanced revenue capture by preventing water loss, while consumers benefit from better visibility into their usage.

The technology ranges from basic automated meter reading (AMR) systems that allow drive-by data collection to advanced metering infrastructure (AMI) that enables two-way communication between utilities and consumers. The strongest growth is occurring in regions with strict regulatory mandates to address water losses (North America and Europe) and in water-scarce regions seeking technological solutions (Middle East, Africa, and parts of Asia).

Global water meters market size¹, growth [2024–2029, USD bn]



1 Meter hardware only. Does not include data analysis/management technologies
2 Includes AMR / AMI enabled water meters

Source: GWI Waterdata; Roland Berger

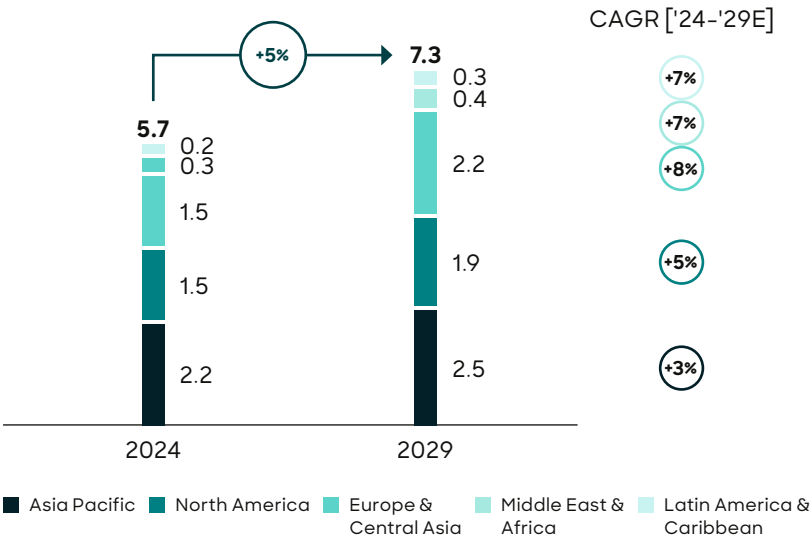
Stormwater Management: Tackling urban flooding

As climate change intensifies rain events and aging infrastructure struggles to cope, the digital stormwater management market is growing at 5% CAGR and is expected to reach USD 7.3 billion by 2029. Europe leads with 8% CAGR growth, followed by Middle East & Africa and Latin America (both at 7%).

Modern stormwater management goes far beyond traditional drainage systems. It now incorporates real-time monitoring, hydraulic modeling, and automated controls that can anticipate flooding events and adjust system operations accordingly. These digital tools enable utilities to meet increasingly stringent compliance requirements while improving urban resilience to extreme weather.

The value chain spans from equipment manufacturers and software developers to consulting engineers and system operators, with the most significant growth opportunities in real-time operations, hydraulic modeling, and compliance reporting technologies.

Global digital stormwater solutions¹ market size
[2024-2029, USD bn]



¹ Includes spend on Sensors, Testing/analysis, Automation/control, Control systems and SCADA, Meters, Physical parameter sensors, Water quality sensors, Laboratory equipment and services, Data networks, Data management/analysis, GIS & Mapping services, In-pipe inspection equipment and services for utility wastewater applications only

Source: GWI Waterdata; Roland Berger

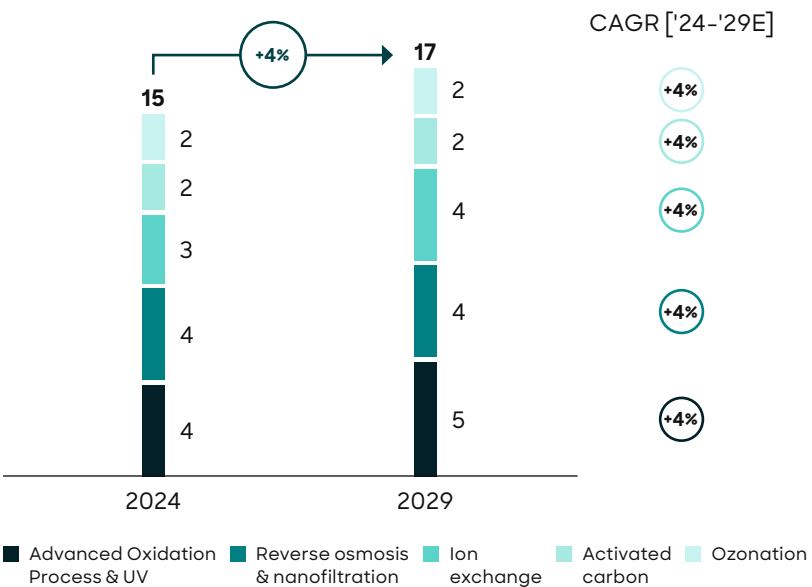
Emerging Contaminants: The PFAS challenge

With growing concerns about “forever chemicals” and pharmaceuticals in water supplies, the market for advanced contaminant removal technologies is expected to reach USD 17 billion by 2029 (4% CAGR). This growth is being propelled by increasing public awareness and stricter regulations, including new EU-wide limits on PFAS coming into effect in 2026.

Treatment solutions span a spectrum of technologies, each suited to specific contaminants. Granular activated carbon (GAC) and ozone treatments remain the most widely used, while newer destructive technologies that can break down rather than merely remove complex contaminants are gaining attention, despite limited scalability.

Regional priorities vary significantly: North American growth is primarily driven by PFAS removal initiatives, while Europe focuses on a broader range of contaminants, and Asia places proportionally more emphasis on pharmaceutical products in water supplies.

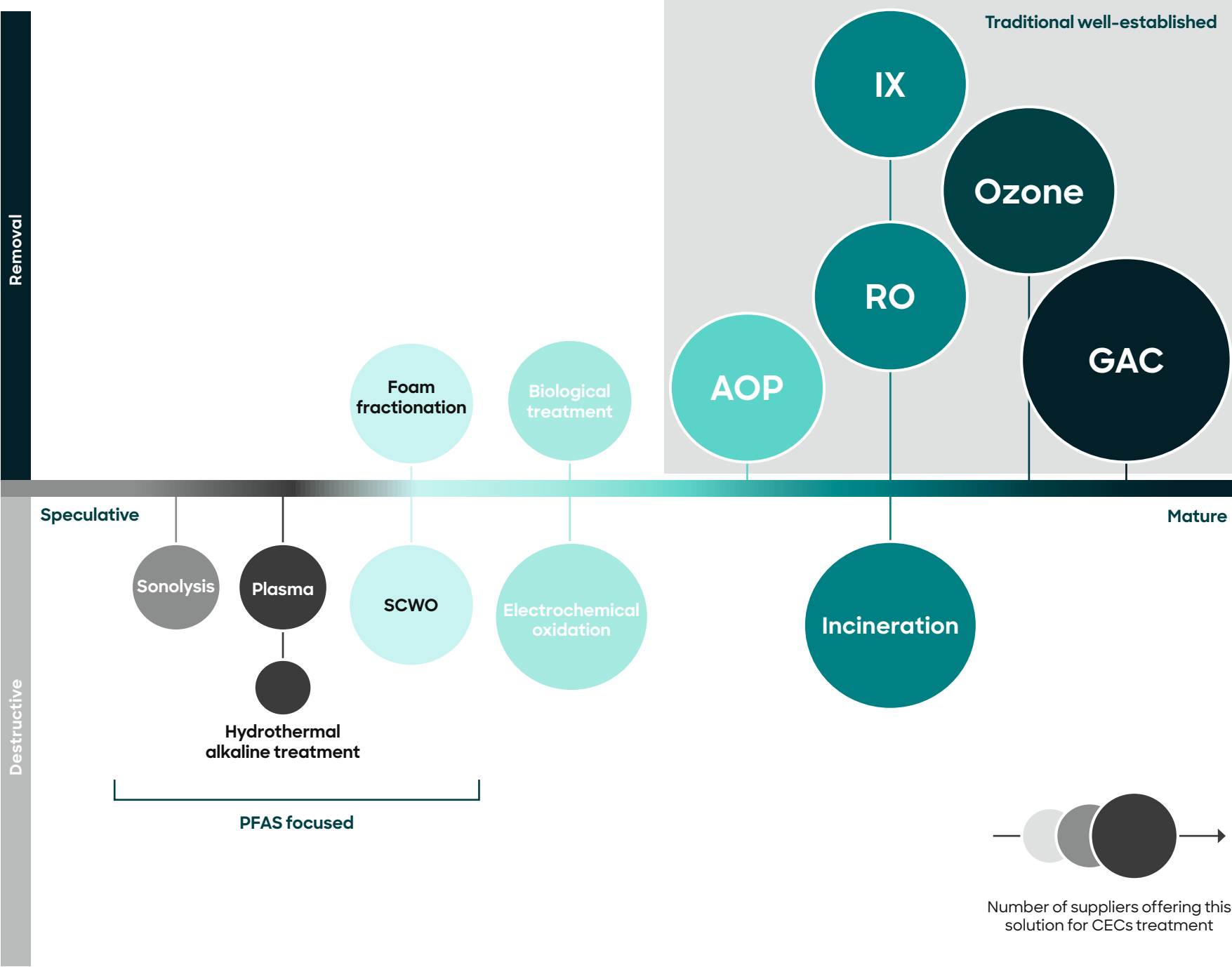
Global treatment technologies for contaminants¹ market size
[2024-2029, USD bn]



¹ Includes listed technologies for all applications (industrial and utility, and water and wastewater) except for desalination (only affects RO / NF market size)

Source: GWI Waterdata; Roland Berger

Emerging contaminant treatment technologies landscape



Regulation is still largely removal oriented and destructive technologies are expensive (high energy consumption) and not mature yet at a large scale

Source: GWI, Interviews with market experts, Roland Berger

AOP = Advanced Oxidation Process; RO = Reverse Osmosis; GAC = Granular Activated Carbon; IX = Ion Exchange Resins; PPCPs = Pharmaceuticals and personal care products

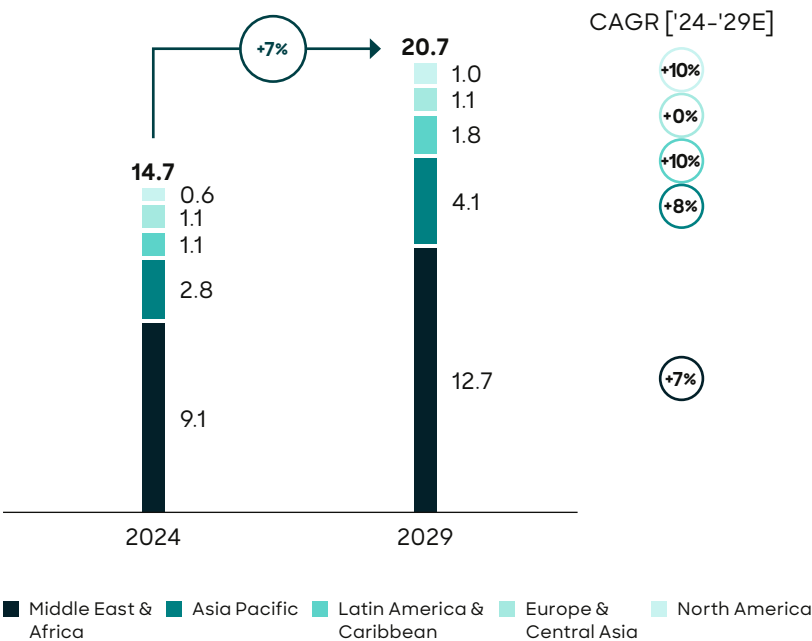
New Water Supplies: Beyond traditional sources

Water scarcity is driving innovation in alternative water supplies. The global desalination market is growing at 7% CAGR to reach USD 21 billion by 2029, with over 60% of activity centered in the Middle East and North Africa, where freshwater is especially limited.

Meanwhile, water reuse capacity is growing at an impressive 13% CAGR globally, led by Asia Pacific (particularly China) which accounts for 72% of new installed capacity over the past decade.

Despite this impressive growth, only about 1% of wastewater is currently reused globally, signaling enormous growth potential as cultural barriers diminish. Other emerging solutions include atmospheric water harvesting – extracting water directly from air – and sophisticated water transfer systems that move water from areas of abundance to areas of scarcity. Together, these technologies are redrawing the map of water availability.

Global desalination¹ market size
[2024-2029, USD bn]

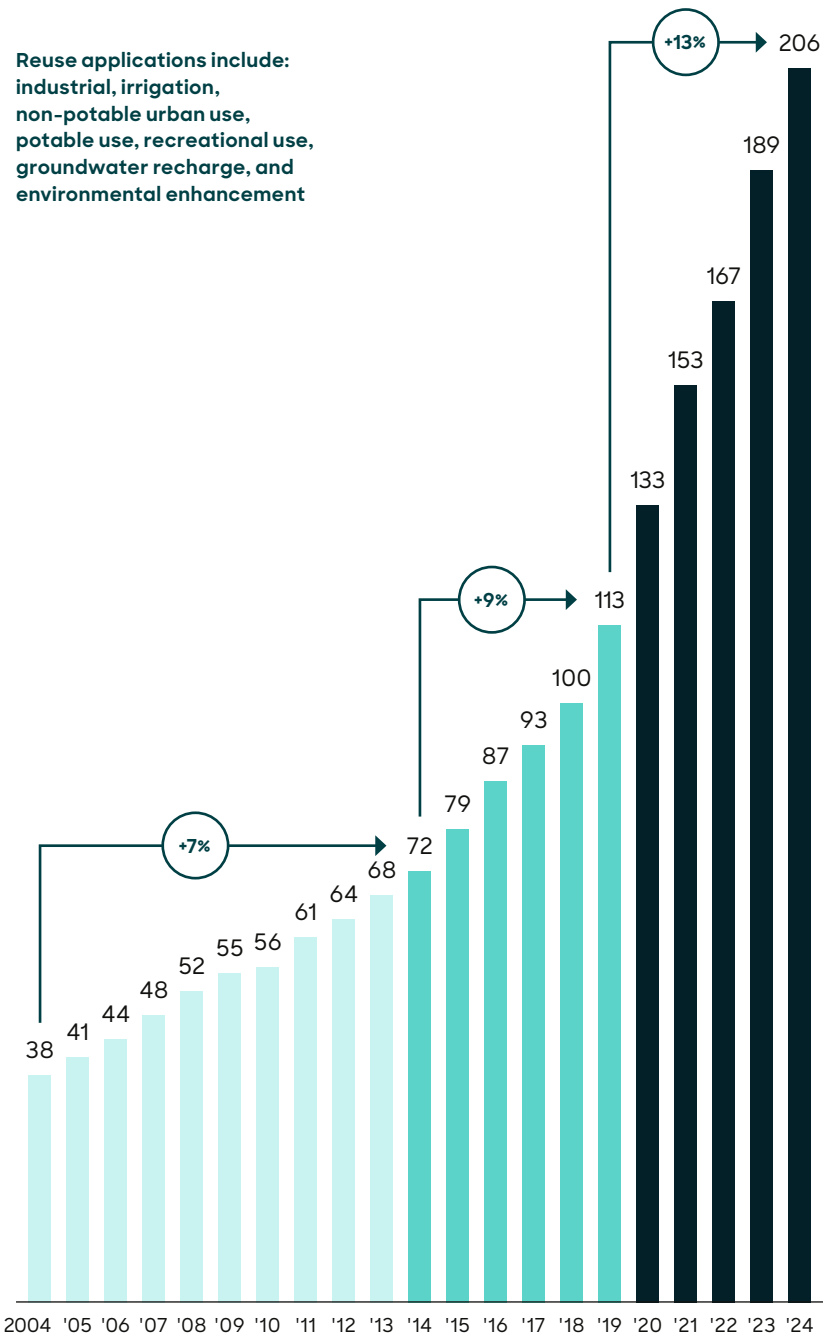


1 Includes seawater and brackish desalination for both utility and industrial sectors

Source: GWI Waterdata; Roland Berger

Global cumulative installed reuse capacity¹
[2004-2024, million m³/day]

Reuse applications include:
industrial, irrigation,
non-potable urban use,
potable use, recreational use,
groundwater recharge, and
environmental enhancement



1 Municipal water reuse market

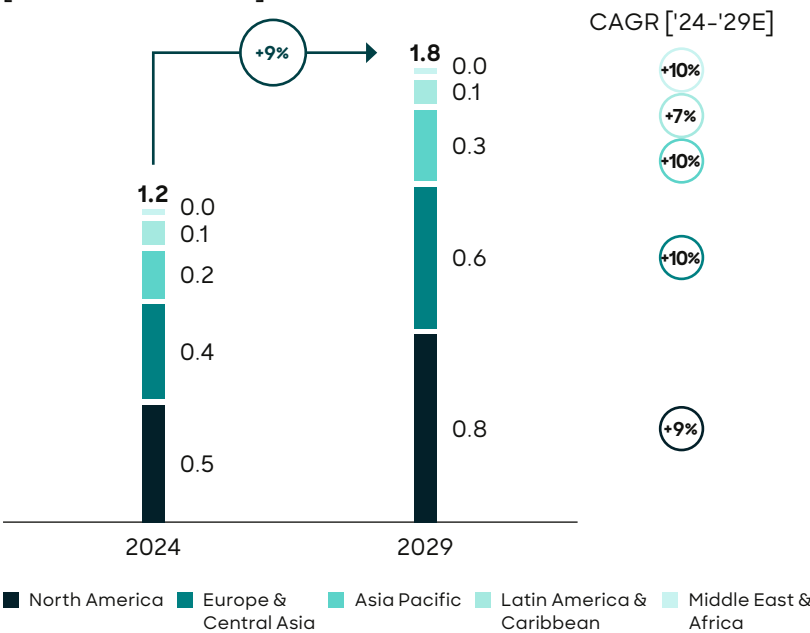
Source: GWI DesalData / IDRA

Modularization: Flexible and fast-deployment solutions

The market for modular water treatment solutions is growing at 9% CAGR globally, projected to reach USD 2 billion by 2029 for industrial applications alone. These pre-engineered, factory-built systems arrive on-site ready for rapid deployment.

Modular solutions offer compelling advantages over traditional stick-built plants, including up to 13% reduction in capital expenditures, 4-6 months of time savings, and the flexibility to scale up or down as needs change. This approach is particularly valuable for industrial customers needing to adapt quickly to new regulations or production changes, and for utilities in rapidly growing areas. North America represents the largest market, but strong growth is occurring across all regions as the benefits of modularization become increasingly apparent. Applications span both water and wastewater treatment, with particular growth in reuse applications where modular systems can be deployed close to the point of use.

Industrial mobile water treatment¹ market size
[2024-2029, USD bn]



¹ Includes spend on mobile water services (time-bound rental of modular treatment equipment) by industrial customers only, for both water and wastewater applications

Source: GWI Waterdata; Roland Berger

Recommendations

These growth areas are transforming how utilities, industries, and providers address 21st-century water challenges. As the sector continues to evolve, leaders should consider the following recommendations:

- Prioritize digital integration strategies**
that connect isolated data systems to unlock the full potential of smart water technologies across your operations.
- Evaluate your vulnerability**
to emerging contaminants and water scarcity now, rather than waiting for regulatory mandates or supply crises to force reactive investments.
- Consider modular, scalable approaches**
when planning infrastructure upgrades to maintain flexibility in the face of changing regulations, climate conditions, and population patterns.

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