

Water Desalination Market to Reach USD 33.38 Billion by 2030 | Acciona, Biwater Holdings Limited, IDE Technologies

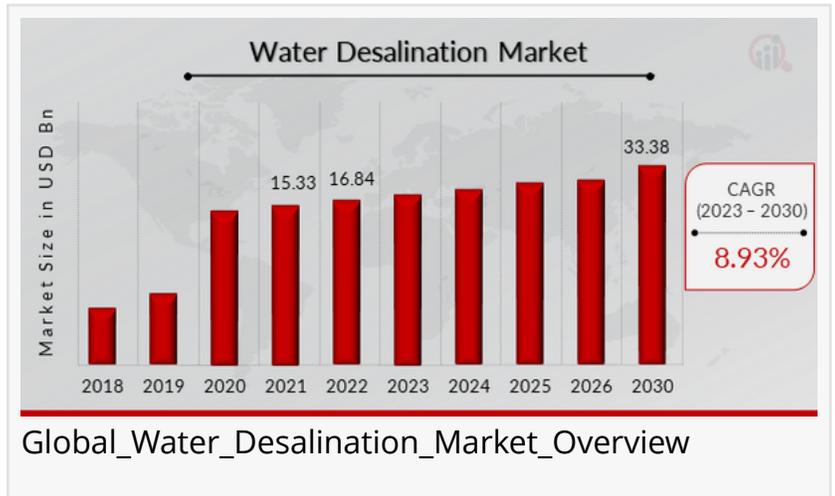
Increasing global population is expected to drive demand for water for largely consumption purposes

NEW YORK, NY, UNITED STATES, April 24, 2025 /EINPresswire.com/ -- Market Size and Forecast

[Water Desalination Market](#) Size was valued at USD 15.33 billion in 2021.

The Water Desalination market is projected to grow from USD 16.84

billion in 2022 to USD 33.38 billion by 2030, exhibiting a compound annual growth rate (CAGR) of 8.93% during the forecast period (2023 - 2030).



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Key Companies in the Water Desalination Market include:

Acciona (Spain)

Biwater Holdings Limited (UK)

Aquatech International LLC (US)

IDE Technologies (Israel)

Veolia Water Technologies (France)

Doosan Heavy Industries & Construction (South Korea)

Genesis Water Technologies (US)

SUEZ Group (France)

Aqua Filsep Inc. (India)

Hatenboer-water (Netherlands)

Key Drivers Accelerating the Desalination Market

1. Freshwater Scarcity and Urbanization

The rapidly depleting groundwater reserves, especially in drought-prone regions, is compelling governments to turn to seawater and brackish water desalination. Urbanization is exacerbating water shortages, making desalination an essential lifeline for expanding metropolitan areas and industrial clusters.

2. Technological Innovations in Desalination

The sector has witnessed remarkable technological evolution over the past decade. Innovations such as:

Reverse osmosis (RO) membranes with higher salt rejection rates and energy efficiency

Energy Recovery Devices (ERDs) that minimize operational costs

Solar-powered desalination plants for sustainable water treatment

Zero Liquid Discharge (ZLD) systems to mitigate brine disposal issues

These innovations are significantly lowering the cost per cubic meter of desalinated water while improving the carbon footprint and environmental viability of desalination projects.

3. Government Initiatives and PPP Models

Governments worldwide are offering subsidies, tax incentives, and streamlined approvals for desalination projects. Public-private partnerships (PPPs) are increasingly being leveraged to mobilize private capital, improve project execution, and ensure long-term operational stability.

Desalination Technology Landscape: Leading Methods and Emerging Alternatives

Reverse Osmosis (RO): The Market Leader

Reverse osmosis dominates the water desalination market, accounting for more than 60% of all

desalination installations globally. RO systems offer high efficiency, lower energy consumption compared to thermal methods, and are suitable for both seawater and brackish water desalination.

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Multi-Stage Flash Distillation (MSF) and Multi-Effect Distillation (MED)

While energy-intensive, thermal desalination methods like MSF and MED are still widely used in the Middle East due to their compatibility with existing power plant infrastructure. These methods are particularly effective in treating high salinity seawater and are often integrated with cogeneration plants.

Electrodialysis and Forward Osmosis

Emerging technologies such as electrodialysis reversal (EDR) and forward osmosis (FO) are gaining attention for specific industrial applications. These technologies are ideal for low-salinity water sources and offer lower fouling risks and greater recovery rates, especially in decentralized water treatment systems.

Regional Analysis: Key Markets Shaping the Future of Desalination

Middle East and North Africa (MENA): The Global Desalination Powerhouse

The MENA region remains the epicenter of global desalination activities, holding over 50% of the world's desalination capacity. Countries such as:

Saudi Arabia is investing in megaprojects like NEOM and Red Sea developments.

United Arab Emirates continues to expand its fleet of hybrid desalination plants.

Israel leads in water reuse and integrated desalination networks, setting global benchmarks.

Asia-Pacific: Accelerated Demand Across Coastal Economies

The Asia-Pacific market is witnessing rapid growth, especially in countries like:

India, which is deploying desalination plants in Chennai, Mumbai, and Gujarat.

China, which is investing in desalination for both urban use and industrial sectors, including petrochemicals and mining.

Australia, leveraging renewable-powered desalination to secure its coastal cities.

North America and Europe: Modernization and Decentralization

In North America, California and Texas are key hotspots due to recurring droughts and water stress. Desalination in the U.S. is transitioning from large-scale to modular, decentralized solutions for flexibility and quicker deployment.

In Europe, countries like Spain, Italy, and Greece are focusing on brackish water desalination for agricultural and municipal uses. EU climate policies are promoting energy-efficient and circular water technologies.

Challenges in the Water Desalination Sector

Despite its tremendous promise, the desalination industry faces several key challenges:

High energy consumption remains a core concern, especially for thermal desalination.

Environmental impacts such as marine ecosystem disruption and brine disposal need sustainable mitigation strategies.

High capital expenditure (CAPEX) and operational expenditure (OPEX) can be prohibitive for developing nations.

Future Outlook: The Evolution of Desalination into Sustainable Water Management

Looking ahead, the water desalination market will evolve from a reactive water supply solution to a strategic pillar of water security and climate resilience. The integration of AI and IoT-based monitoring systems, green hydrogen-powered desalination, and circular water reuse models will shape the industry's next frontier.

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Key trends to watch include:

Desalination powered by renewable energy (solar, wind, geothermal)

Mobile and containerized desalination units

Desalination for agriculture and data centers

Cross-border water supply partnerships

Conclusion

The water desalination market is not just a business opportunity—it's a global imperative. As populations grow and climate change threatens freshwater supplies, desalination technologies offer a sustainable and scalable pathway to ensure clean water access for all. By leveraging cutting-edge innovations, aligning with environmental frameworks, and fostering global cooperation, we can create a future where no community is left behind in the quest for water security.

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