

# Membrane Filtration Units

ANMD-MRS10-091 · Water & Environmental Technologies

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

## WHY THIS REPORT

Membrane filtration units are the workhorse of modern water and wastewater treatment — using microfiltration, ultrafiltration, nanofiltration and membrane bioreactors to separate particles, pathogens and dissolved contaminants without heavy chemical dosing. This decision-grade study sizes the global market three ways — value, treatment capacity (MLD) and units installed — across membrane technology, configuration and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

## SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Membrane filtration enables water reuse, cleaner discharge and lower chemical dosing, directly advancing water security and circularity.

Mapped Sustainable Development Goals:

|                                          |                                                       |                                                   |                                          |                                 |
|------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------------|---------------------------------|
| <b>SDG 6</b><br>Clean Water & Sanitation | <b>SDG 9</b><br>Industry, Innovation & Infrastructure | <b>SDG 11</b><br>Sustainable Cities & Communities | <b>SDG 12</b><br>Responsible Consumption | <b>SDG 13</b><br>Climate Action |
|------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------------|---------------------------------|

Measurable sustainability outcomes assessed:

- Water reuse and cleaner discharge
- Lower chemical dosing and smaller footprint
- Building block for potable and industrial reuse
- Energy intensity, replacement waste and concentrate as material risks

**Framework alignment:** Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

## WHAT'S INSIDE AT A GLANCE

|                                    |                               |                                  |                               |
|------------------------------------|-------------------------------|----------------------------------|-------------------------------|
| <b>53</b><br>Chapters              | <b>9</b><br>Report Parts      | <b>7</b><br>Regions Covered      | <b>40+</b><br>Country Markets |
| <b>2025–32</b><br>Forecast Horizon | <b>4</b><br>Forward Scenarios | <b>25+</b><br>Companies Profiled | <b>5</b><br>SDGs Mapped       |

## REPORT COVERAGE

**Geographic scope:** North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Asia Pacific dominates demand; the Middle East scales on reuse; Europe leads on circularity; other regions assessed on their own merits.

MARKET OVERVIEW

From niche treatment to default barrier — where membranes enable reuse conventional filtration cannot.

Membrane filtration is moving from niche treatment to the default barrier in municipal and industrial water. Demand is driven by tightening discharge standards, water-reuse mandates and industrial process needs across Asia Pacific, the Middle East and Europe. The market is read three ways — value, treatment capacity and units installed — and forecast under four scenarios, each region reported separately.

- **Asia Pacific dominates demand** — China, India, Japan, South Korea and Australia, on urbanisation, water stress and industry
- **Middle East scales on reuse** — Saudi Arabia, the UAE and Israel, where water scarcity drives membrane reuse and desalination pre-treatment
- **Europe leads on circularity** — reuse regulation, CSRD reporting and stringent discharge limits favouring membrane bioreactors
- **Reuse-readiness is the differentiator** — membranes enable potable and industrial reuse that conventional media filtration cannot reliably deliver

REGIONAL OUTLOOK

Across seven reporting regions, the report separates leading markets from high-growth and emerging ones — each profiled in full rather than aggregated into Rest of World.

| Region        | Stage              | Lead Markets & Drivers                                                             |
|---------------|--------------------|------------------------------------------------------------------------------------|
| Asia Pacific  | Demand leader      | China, India, Japan, South Korea, Australia — urbanisation, water stress, industry |
| Middle East   | Reuse-led          | Saudi Arabia, UAE, Israel — water scarcity, sovereign investment                   |
| Europe        | Circularity leader | Germany, France, Italy, Spain, Netherlands — reuse mandates, CSRD                  |
| North America | Reinvestment       | United States, Canada — ageing infrastructure, reuse, industry                     |
| Latin America | Emerging           | Brazil, Chile — sanitation gaps, mining water demand                               |
| Africa        | Frontier           | South Africa, Egypt, Kenya, Morocco — water access, blended finance                |

KEY MARKET DRIVERS & RESTRAINTS

| Drivers                                                                                                                                                                                                                                                                                                               | Restraints                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Tightening discharge &amp; reuse standards</li><li>• Water scarcity &amp; non-conventional supply</li><li>• Industrial process-water &amp; ZLD demand</li><li>• Ceramic &amp; fouling-resistant membrane gains</li><li>• Smaller footprint &amp; lower chemical use</li></ul> | <ul style="list-style-type: none"><li>• Membrane fouling &amp; cleaning burden</li><li>• Energy intensity &amp; operating cost</li><li>• CAPEX premium vs conventional filtration</li><li>• Membrane replacement &amp; end-of-life waste</li><li>• Skilled-operator &amp; maintenance needs</li></ul> |

## SEGMENTATION SNAPSHOT

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| By Membrane Technology | Microfiltration (MF) · ultrafiltration (UF) · nanofiltration (NF) · membrane bioreactor (MBR) · ceramic |
| By Configuration       | Hollow-fibre · spiral-wound · flat-sheet · tubular                                                      |
| By Application         | Municipal · industrial · commercial & residential                                                       |
| By End User            | Utilities · municipalities · industry · buildings                                                       |
| By Business Model      | Equipment sales · EPC · Water-as-a-Service                                                              |
| By Scale               | Decentralised · commercial · municipal / utility-scale                                                  |

## TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 53. Reference Annexes

**COMPETITIVE & INVESTMENT SNAPSHOT**

The competitive field spans global membrane majors, water-technology integrators, and ceramic and specialty-membrane innovators. Deal activity — capacity expansions, ceramic-membrane launches and reuse-project wins — signals a market consolidating around durability and reuse.

**Representative players profiled in the full report:**

DuPont de Nemours, Inc. · Veolia Environnement S.A. · SUEZ SA · Toray Industries, Inc. · Pentair plc · and 20+ further profiled players across membrane majors, integrators and ceramic innovators.

**Investment intelligence:** venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a conditional investment view.

## KEY QUESTIONS THIS REPORT ANSWERS

- How large is the global membrane filtration market, and how fast will it grow to 2032?
- Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- How does reuse-readiness change value versus conventional media filtration?
- Who leads, and where is the competitive and patent white space?
- Is the investment case bankable — and under what conditions?
- How does the category align with the SDGs, water security and disclosure regulation?

## WHY ANMD — THE DIFFERENCE

*Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate, water and natural-capital intelligence and a decision-ready bankability view in a single architecture.*

- **Triangulated sizing** — every market read three ways so value, volume and the physical-unit views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment view.

## WHO SHOULD BUY THIS REPORT

Investors, manufacturers, developers, utilities, lenders and policymakers, and strategic corporate planners and decision-makers.

### Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com) · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

### Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com). The full detailed table of contents will be sent directly to your registered company email address.