

INFINITE WATER CDE

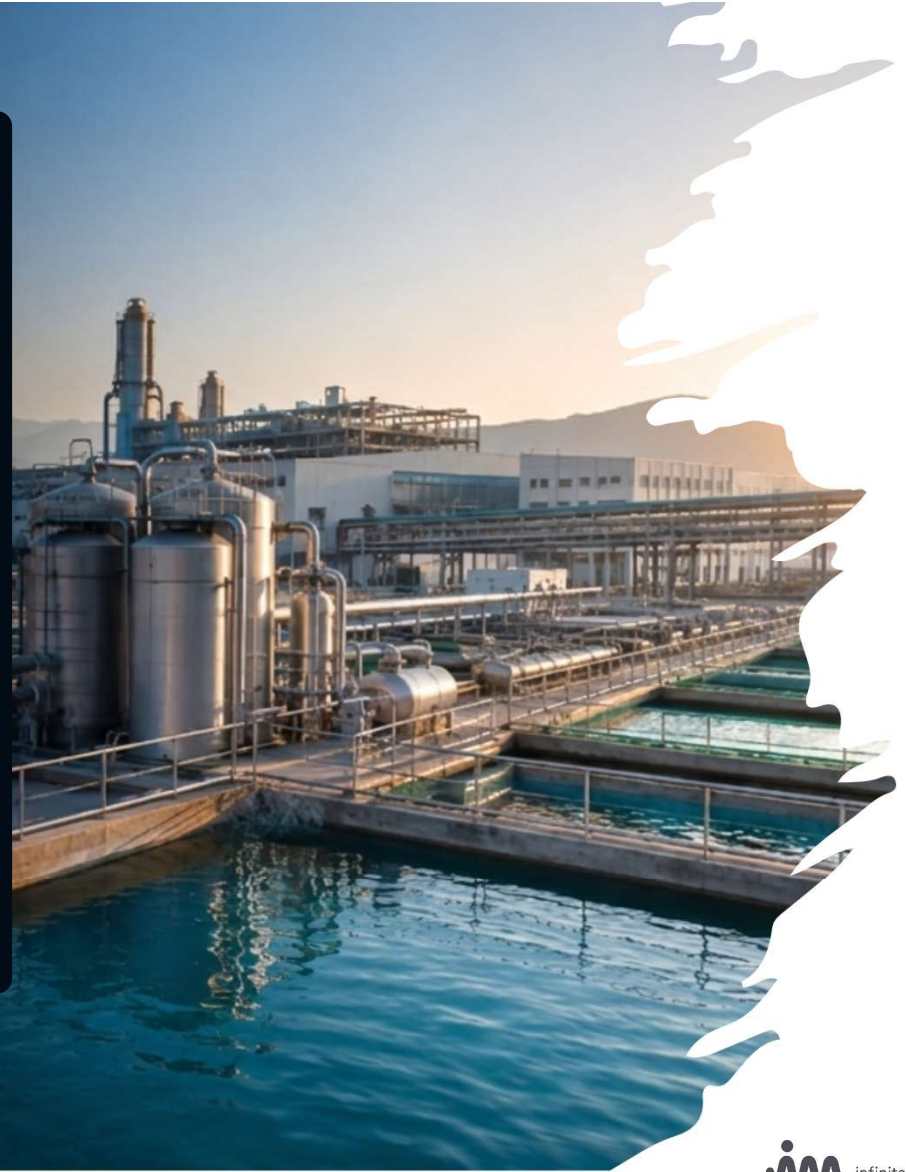
# Circular Desalination Ecosystem

An ultimate water-scarcity solution

- Infinite Water Source from Sea Water
- Financial Sustainability + Ecological Sustainability
- A Golden Responsible Investment

CORE TECHNOLOGY PATENT

- Catalytic Advanced Treatment (CAT)
- Desalination Pre-treatment



# The Global Water Crisis: A Rising Demand for Resilient Solutions

# 4B

People experiencing severe water scarcity.

# 2.1B

People lacking safely managed drinking water.

## Three Elements Intensifying Water Crisis with Scarcity and Contamination

### Sharply Rising Demand

Population growth, urbanization, agriculture, industrialization, cooling of AI data centres

### Rapidly Diminishing Supplies

Pollution reduces usable supplies,  
Climate change intensifying drought and flooding

### Water Treatment Resilience for Scarcity

Slow Infrastructure & Technological Innovation Growth  
to match the widening Demand & Supply Gap

# Desalination Market Overview – Market Size and Trend

## Market Size

The global desalination technology market is valued at around USD \$17.99 billion in 2026 and is forecast to grow strongly, reaching between USD \$27–36 billion by 2030, driven by water scarcity, urbanization, and advances in reverse osmosis (RO) and hybrid systems.

## Growth Trajectory

| Year    | Market Size (USD Billion)    | CAGR                                | Notes                                            |
|---------|------------------------------|-------------------------------------|--------------------------------------------------|
| 2025    | 15.7–16.5                    | –                                   | Baseline year                                    |
| 2026    | 16.5–18.0                    | 5.5–11%                             | Strong growth from municipal & industrial demand |
| 2030    | 27–36                        | 8–11%                               | Forecast range depending on methodology          |
| 2031–32 | 27.4–22.9 (different models) | 8.8% (Mordor) / 5.5% (360iResearch) | Divergent projections but both show expansion    |

## Desalination Market Overview – Key Market Drivers & Regional Trends

### Market Drivers

- **Water scarcity:** By 2050, up to **2.4 billion urban residents** may face water shortages.
- **Urbanization in MENA & Asia-Pacific:** Gulf megacities and APAC industrial hubs (semiconductors, pharma) are major adopters.
- **Technological advances:**
  - RO energy intensity now **<3 kWh/m<sup>3</sup>**, approaching sub-USD \$0.50/m<sup>3</sup> production benchmarks.
  - Energy recovery devices recuperate up to **60% of brine pressure**.
  - AI/IoT integration enables predictive maintenance and smart monitoring.
- **Policy & financing:** Sovereign-backed PPPs and long-term offtake contracts stabilize revenues in MENA.
- **Infinite Water Circular Desalination Ecosystem validation and adoption will achieve water right equality to all and accelerate the exponential market growth within 3 years.**

### Regional Trends

- **Middle East & North Africa (MENA):** Largest market, with Morocco, Algeria, and Egypt investing billions in RO plants.
- **Asia-Pacific:** Fastest growth, driven by industrial reuse mandates (semiconductors, pharma) and coastal urbanization.
- **Europe:** Focus on sustainable, low-emission desalination and hybrid RO-thermal systems.
- **North America:** Steady growth, especially in drought-prone states like California.

## Desalination Market Overview – Risks & Challenges and Strategic Outlook

### Risks & Challenges

- **Energy costs:** Still the largest OPEX driver; renewable integration is critical.
- **Membrane fouling & scaling:** Adds \$0.10–0.15/m<sup>3</sup> to operating costs.
- **Environmental concerns:** Brine disposal and marine ecosystem impacts.
- **Capital intensity:** Large plants require multi-billion-dollar financing, limiting smaller entrants.

### Strategic Outlook

- **Short term (2026–2028):** Expansion of RO plants in MENA and APAC, with modular small-scale units gaining traction.
- **Medium term (2028–2030):** Integration with renewables and digital monitoring will lower costs and expand adoption.
- **Long term (2030+):** Hybrid RO-thermal and advanced membranes (graphene oxide, nanofiltration) could redefine efficiency benchmarks.

# The Bottleneck: Why Desalination Hits a Wall

## The Scale of the Problem:

22,000+ operational plants | 135M m<sup>3</sup>/day capacity

Variable  
Feedwater

Variable  
Feed

Changing salinity  
and incoming  
contaminants

Pretreatment  
Complexity

Managing multiple  
processes and  
interfaces

RO  
Burden

Severe fouling, high  
cleaning cycles, and  
energy exposure

Brine  
Disposal

Prohibitive disposal  
costs and lost  
resource value

## OUTCOMES

- Pretreat the feed
- Optimize RO energy efficiency, Reduce maintenance cost, and Increase permeate recovery rate
- OPEX reduction
- Remarkable Brine Valorization revenue to Offset overall potable water production costs
- Zero Liquid Discharge ZLD - zero ecological impact

## The Disruptive Innovation: Catalytic Advanced Treatment (CAT)

Our patented CAT integrated seawater pretreatment combines with proprietary know-how developed through the XPRIZE Water Scarcity competition participation.

CAT – One of the best technologies which addresses the most difficult water-purification and resource-recovery challenges.

### 01 Condition

Controlled chemical conditioning for the specific water matrix.

### 02 Catalytic Contact

The core proprietary catalytic reaction.

### 03 Separate

Application-specific separation and polishing.

### 04 Monitor

Real-time telemetry and control.

Treatment Pipeline

**Key Advantage:** This continuous-flow platform delivers a consistent hand-off to RO, reducing integration complexity.

## Brine Valorization Opportunities

### 1. Sodium Chloride Recovery

**Process:** Evaporation or crystallization of desalination brine.

**Output:** High-purity salt for food, industrial, or pharmaceutical use.

**Economic impact:** Converts waste into a revenue stream, offsetting desalination OPEX.

**Example:** Mediterranean plants recovering culinary-grade salt from RO brine.

### 2. Magnesium Extraction

**Process:** Precipitation (e.g.,  $\text{Mg}(\text{OH})_2$ ) or solvent extraction.

**Applications:**

- Pharmaceuticals (antacids, supplements)

- Flame retardants

- Fertilizers

**Market value:** Magnesium compounds are higher-value than bulk salt, making this a profitable niche.

### 3. Lithium Recovery

**Process:** Selective membranes, ion exchange, or solvent extraction.

**Applications:** EV batteries, energy storage.

**Strategic importance:** Lithium demand is projected to triple by 2030.

**Example:** Pilot projects in Chile and Saudi Arabia exploring lithium recovery from seawater brine.

### 4. Potassium & Calcium

**Potassium chloride ( $\text{KCl}$ ):** Fertilizer industry.

**Calcium carbonate ( $\text{CaCO}_3$ ):** Construction, food additives.

**Benefit:** Diversifies product portfolio beyond sodium chloride.

# Brine Valorization Opportunities

## Market Trend Integration

| Segment         | Desalination Link         | Market Outlook                              |
|-----------------|---------------------------|---------------------------------------------|
| Sodium Chloride | Brine crystallization     | Stable, \$0.30–5.00/kg depending on grade   |
| Magnesium       | Brine precipitation       | Growing demand in pharma & flame retardants |
| Lithium         | Advanced brine extraction | High growth, EV battery demand              |
| Potassium       | Fertilizer recovery       | Steady agricultural demand                  |
| Calcium         | By-product recovery       | Moderate, construction & food               |

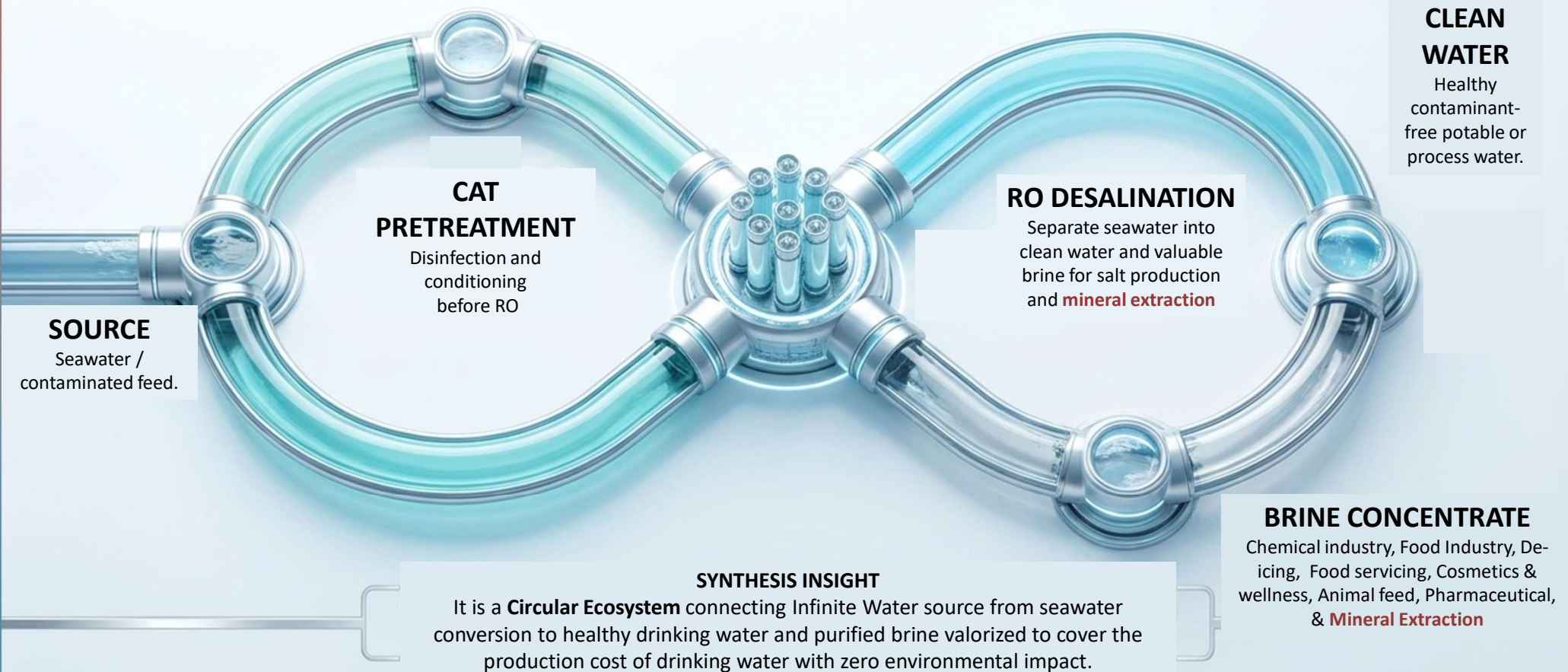
## Challenges

- Energy intensity:** Additional processing raises costs.
- Technology maturity:** Lithium recovery from seawater is still pilot-scale.
- Environmental compliance:** Brine discharge must meet marine protection standards.
- Market volatility:** Lithium and magnesium prices fluctuate with global demand.

## Strategic Outlook

- Short term (2026–2028):** Sodium chloride recovery becomes standard in new RO plants.
- Medium term (2028–2030):** Magnesium and potassium recovery scale up in MENA and Asia.
- Long term (2030+):** Lithium recovery could transform desalination economics, turning plants into multi-product mineral hubs.

# The Circular Ecosystem: Integrated Clean Water & Brine Recovery



# Value Levers: De-Risking Project Economics

|                       | Status Quo                        | Infinite Water SPV                           |
|-----------------------|-----------------------------------|----------------------------------------------|
| <b>Feedwater</b>      | Highly Variable & Unpredictable   | Stabilised & Controlled via CAT.             |
| <b>Business Model</b> | Fragmented, multi-vendor friction | Flexible and customised business solutions   |
| <b>System Outputs</b> | High-cost brine waste disposal    | Dual revenue streams (Water + ZLD minerals). |
| <b>Scaling</b>        | Bespoke, heavy civil engineering  | Modular, repeatable hardware deployment.     |

**Investor Test:** Validating these four levers creates a lower-risk, higher-yield infrastructure asset.

# Market Opportunity: Desalination Beachhead & Multi-Sector Scaling

## The Beachhead: Desalination Pretreatment

Targeting utilities, project developers, and EPCs where feed conditioning and brine strategy immediately impact the bottom line.

01

Seawater to Potable  
Water Desalination

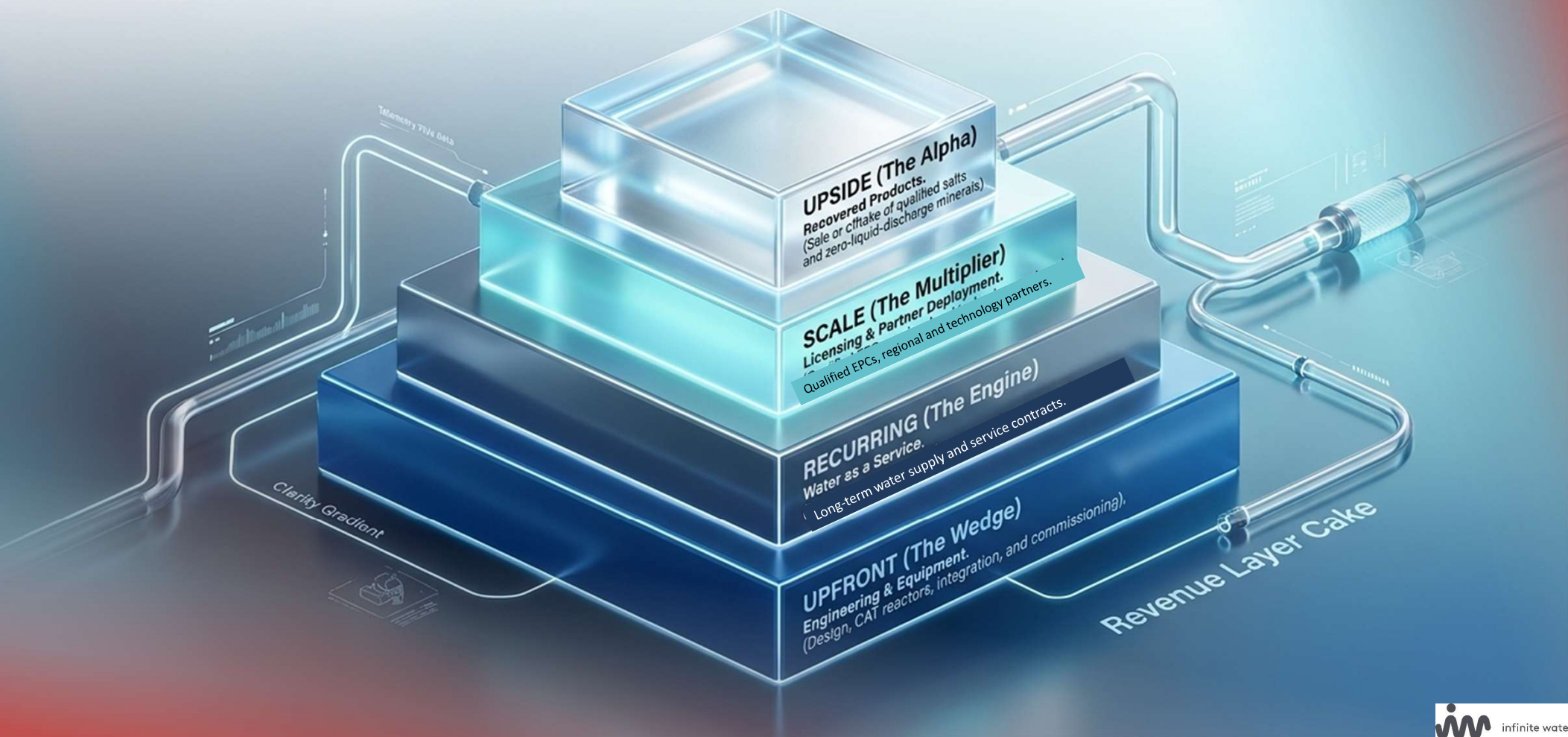
02

Oil Refining and  
Geothermal Water  
treatment

03

Domestic & Industrial  
Wastewater & Reuse  
Recycling

# Commercial Business Model: Scalable & Diversified Revenue Streams



## Desalination Brine Concentrate / Sea Salt – Market segment & Price

### Sea Salt Market Segments & Usage Shares (2025–2026)

| Segment              | Share of Market                     | Key Applications                                           | Notes                                                     |
|----------------------|-------------------------------------|------------------------------------------------------------|-----------------------------------------------------------|
| Industrial           | ~70% (2025)                         | De-icing, water treatment, chlor-alkali chemical feedstock | Largest segment by volume; stable demand.                 |
| Food Industry        | ~60% of revenue (2026)              | Table salt, food processing, packaged foods                | Driven by population growth & processed food consumption. |
| Foodservice/HoReCa   | Growing at ~4.96% CAGR (2026–2031)  | Restaurants, catering, gourmet cooking                     | Premiumization trend boosts demand for specialty salts.   |
| De-icing             | ~27% of applications (2026)         | Municipal & infrastructure use                             | Seasonal demand, especially in North America & Europe.    |
| Cosmetics & Wellness | Fastest growth (~5.6% CAGR to 2033) | Detoxifying, exfoliating, spa products                     | Rising demand for natural mineral ingredients.            |
| Animal Feed          | Small but steady share              | Mineral supplementation                                    | Niche but stable demand.                                  |
| Pharmaceutical       | Small but high-value share          | IV saline, dialysis, oral rehydration                      | Strict GMP standards; growing with healthcare expansion.  |

### Segment Analysis

**Two-tier market:** Bulk industrial salt is ultra-cheap, while gourmet culinary salt is luxury-priced.

**Stable baseline demand:** Food and industrial uses ensure long-term stability.

**Premiumization trend:** Specialty salts will keep pushing the upper price band.

**Healthcare growth:** Pharma-grade sodium chloride is a small but lucrative segment.

### Future Forecast (2026–2030)

**Industrial salt:** Expected to remain cheap (<\$0.20/kg) due to scale and abundant supply.

**Food-grade salt:** Stable growth, projected CAGR ~3–4%, driven by processed food demand.

**Gourmet salts:** Niche but fastest-growing, CAGR ~5–6%, with prices likely to stay in the **\$5–10/kg range**.

**Pharmaceutical-grade sodium chloride:** High-value segment, projected CAGR ~5.6%, reaching ~\$0.77 billion market size by 2030.

## Desalination Brine Concentrate / Sea Salt – Market segment & Price

### Regional Dynamics:

Asia-Pacific will dominate bulk and pharma-grade demand.

Europe will continue leading gourmet salt exports.

Climate risks (rainfall, cyclones) may cause short-term spikes in producing regions.

### Market Trend

**Consumer health awareness:** Rising demand for “clean label” salts free of microplastics and contaminants.

**Regulatory tightening:** EU and Japan enforce stricter purity standards, pushing suppliers toward high-purity grades.

**Technology adoption:** Vacuum evaporation and membrane crystallization are increasingly used to achieve >99% purity.

**Premium positioning:** Brands market high-purity salt as safer and healthier, especially in Asia and Europe.

| Origin / Grade            | Export Price (USD/kg)                                                                    | Notes                                     |
|---------------------------|------------------------------------------------------------------------------------------|-------------------------------------------|
| China (industrial bulk)   | \$0.07–0.13                                                                              | Very large volumes, lowest-cost supplier. |
| Argentina (bulk)          | \$0.14–0.50                                                                              | Stable supply, mainly industrial use.     |
| Vietnam (food-grade)      | \$0.38–0.79                                                                              | Culinary salt, mid-range pricing.         |
| Italy (culinary)          | \$0.28–0.87                                                                              | Mediterranean sea salt, food-grade.       |
| Spain (culinary)          | \$0.39–1.04                                                                              | Culinary salt, widely exported.           |
| France (premium gourmet)  | \$9.14                                                                                   | Fleur de sel, high-end niche market.      |
| United Kingdom (premium)  | \$8.74                                                                                   | Gourmet culinary salt.                    |
| Himalayan Salt (Pakistan) | \$50–100/ton (industrial), \$80–130/ton (standard food), \$120–180/ton (premium gourmet) | FOB Pakistan, varies by grade.            |

## Circular Desalination Ecosystem - A Golden Responsible Investment

### High-level Financial Analysis of a proposal:

For a 5000m3 desalination plant optimized for Brine Concentrate Valorization with ZLD, **premium contaminant-free salt** production is 147.85 tons/d or 53,965 tons/yr

Revenue: Sale of (decontaminated & sanitized through valorization) Brine/Salt + Sale of Potable Water (distribution network and other channels)

Less: Energy consumption + other OPEX + Financing Cost + Depreciation + Tax

Profit: Remarkable, well-covered the potable water production costs (based upon the lowest FOB export benchmarks **USD 0.3/kg**, the top premium salt could be **USD 3-5/kg**). **The annual revenue from brine could range from NZD 27M to NZD 458M**, yielding extremely favorable ROI and Payback Period.

### Business Models:

1. Procurement Contract of potable water from client
2. Procurement of Desalination Plant by client looking for potable water and sale contract of brine concentrate to 3<sup>rd</sup> party
3. PPP with client + Partnership with local community / NZ salt company

### Variables:

- Site selection for desalination
- Energy price \$/kWh
- Sale of the brine / Salt to 3<sup>rd</sup> party
- Salt Production & refining from premium concentrate with high TDS – remarkably lower energy cost
- Salt price and targeted market segment (rising demand and price trend for premium salt, 3-10x price higher than standard food grade salt)
- Sale of excess potable water capacity for the first 10-20 years: tanker, bottled water, ice production

### Conclusion:

- An eternal water scarcity solution with financial and ecological sustainability
- Validation projects at different sites and production capacities
- Strategic partners for global marketing and capital raising.
- **Detailed information available after NDA and EOI**

# Series A USD \$5-10M Capital Raising for 10-20% Equity Holding Post Completion

Together with Option for the Next Series B Capital Raising at 20% discount when annual revenue approaches USD 100M.

Client Base Focus: Australasia, Asia, Middle East, and Africa

## Gate 1: SPV, IP & FEED

Governance, technology rights, front-end engineering.

## Gate 2: Integrated Demonstration

CAT, RO and brine/ZLD pilot performance unit economics proven.

## Gate 3: First Commercial Project

Customer, site, permitting, project finance secured.

## Gate 4: Scale Capability

Standard design, manufacturing, and partner enablement.

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## The SPV Partnership

Infinite Water + SHE Aqua + Investment Partners

**The Rule of Capital:** Capital is released exclusively when agreed evidence gates are met. Proceed to structured diligence to define the integrated pilot and SPV framework.

# Partner With Us to achieve Water Right Equality

Partner with Infinite Water as we scale innovative circular desalination ecosystem solutions and pursue opportunities within the growing global demand for water right equality to all.

## Let's discuss the investment opportunity.

Connect with us to explore Infinite Water's growth strategy, commercial pipeline, and opportunities for strategic investment.

DECISION REQUESTED

PROCEED TO STRUCTURED DILIGENCE

CONFIRM THE SPV FRAMEWORK

DEFINE THE INTEGRATED PILOT



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