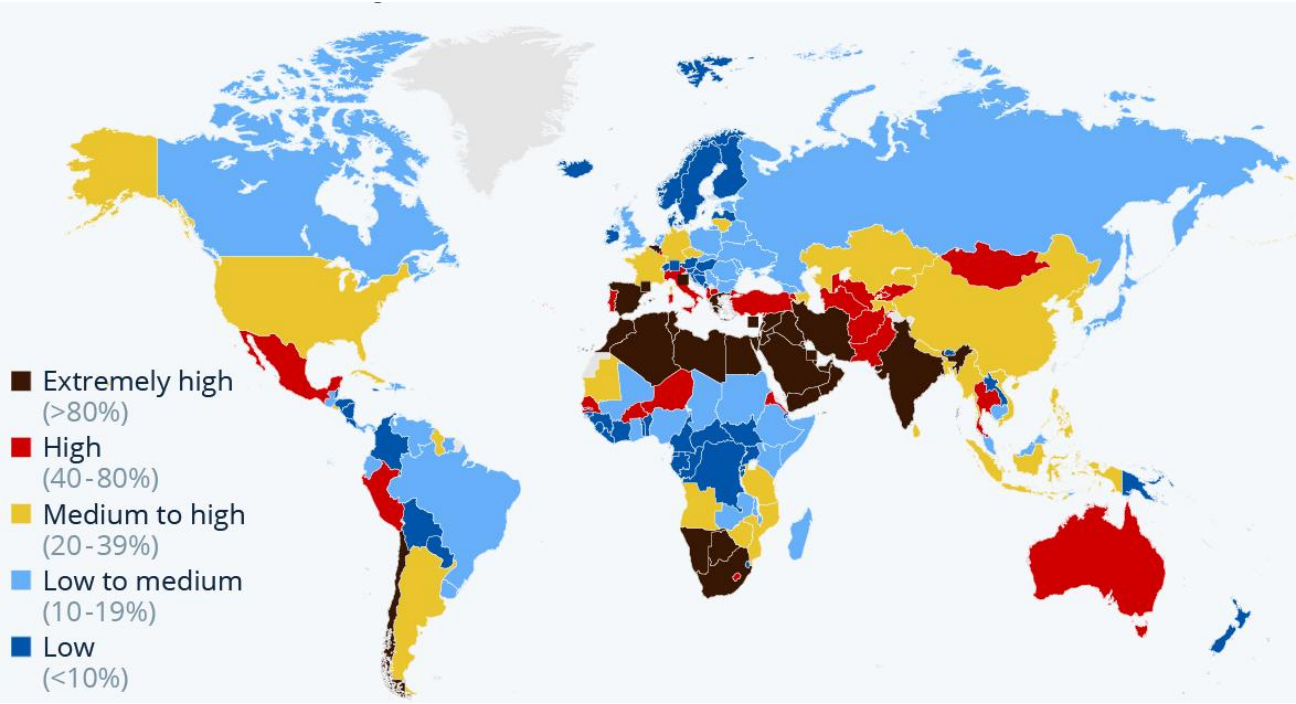

exowave
green
goes
blue
Turning Waves into Water: A Sustainable Future
ExoMare
Desalination systems
Version 01f

Why Desalination Needs a Rethink



- Growing regional water scarcity 2025 → 2050
- Over 2 billion people live in water-stressed regions
- Traditional desalination is energy-intensive and costly
- Remote and island communities lack grid access

Source: https://www.statista.com/chart/26140/water-stress-projections-global/?srsltid=AfmBOopvilcz0aoyWpLuDVhaHO9-e4KdT7901uR-5mjI1yrVGQRCaKDx

Exowave-Powered Desalination

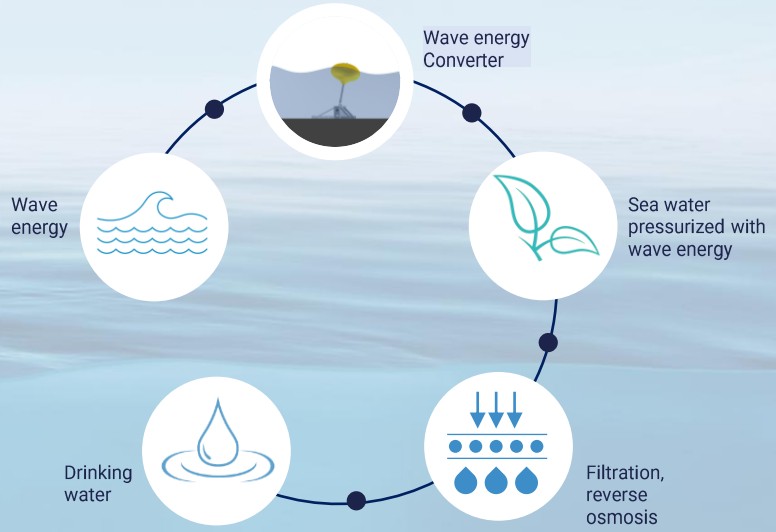
Solution Overview

What is Exowave?

- A modular wave energy converter (WEC) converting ocean motion into flow of pressurized seawater

What is ExoMare?

- Freshwater product line - desalination units (Reverse Osmosis) integrated with Exowave WEC
- Primary energy to water conversion
- Competitiveness by modular design
- Primary energy to water conversion



ExoMare product family

Configuration	Capacity [m^3/day]	WEC	Desalination unit
ExoMare-04	4	1 x WEC-1600	1 x DeSal-04
ExoMare-08	8	2 x WEC-1600	1 x DeSal-08
ExoMare-12	12	3 x WEC-1600	1 x DeSal-12
ExoMare-16	16	4 x WEC-1600	1 x DeSal-16
ExoMare-20	20	5 x WEC-1600	1 x DeSal-20

Core Product features

- 4–20 m^3/day capacity range
- 24/7 freshwater production
- Scandinavian Design & manufacture
- Attractive cost of freshwater
- Long service intervals
- Global availability
- Patented technology

Product qualities
ExoMare

- Designed for coastal zones
  - State-of-the-art utilisation ratio (capacity factor) >90%
  - Designed for shallow waters (3m) and low wave heights
  - Easy installation from shore
  - Designed for harsh marine environments

- Circular product design
  - Modular Design for inner loops
  - 20 years product lifespan
  - Simplicity by Design - Direct conversion of wave energy to freshwater

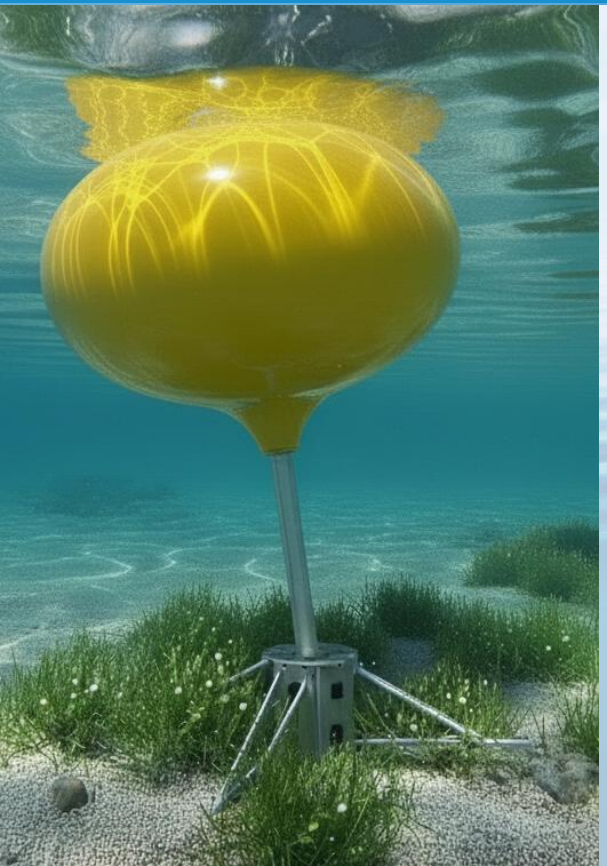
Technology benchmark

Process Technology	Water Source	Cost (USD $/m³)
MSF	Seawater	0.56-1.75
23,000 – 528,000 m³/day		
MED	Seawater	
91,000 – 320,000 m³/day		0.52-1.01
12,000 – 55,000 m³/day		0.95-1.5
Less than 100 m³/day		2.0-8.0
RO	Seawater	
100,000-320,000 m³/day		0.45-0.66
15,000-60,000 m³/day		0.48-1.62
1,000-4,800 m³/day		0.7-1.72
RO	Brackish water	
Large capacity: 40,000 m³/day		0.26-0.54
Medium 20-1,200 m³/day		0.78-1.33
Very small few m³/day		0.56-12.99

- Competitiveness by Design
  - Among best in class for low capacity market segment
  - ExoMare Levelized Cost of Water (LCOW) <2EUR/m³
  - Modular design concept reduces specific investment
  - Installation and maintenance by local service providers

Source: https://static1.squarespace.com/static/654f828605e2870b1ae767b7/t/6690d57e82f8e95d398f650f/1720767877135/%282024.07%29+Desalination.pdf

Use cases
Common applications



- Hospitality sector – Sustainable Freshwater independence
- Island & remote communities – Zero emission and reliable water access
- Disaster Relief - Rapid deployment for emergency water supply
- Military Outposts - Tactical sustainability in isolated zones
- Agriculture – Increased yield with sustainable and affordable water technology
- Utility companies – Sustainable supply of water to off-grid customers

Impact & Feasibility

- Benchmarking
  - Diesel-powered desalination, water by truck, PV powered RO units
  - ExoMare Levelized cost of water, LCOW from 1.5EUR/m^3
- Finance, Subsidies & Grants
  - Eligible for green energy and water infrastructure funding
  - ExoMare financieng in cooperation with the Danish Export Credit facility EIFO
- Environmental Impact
  - Zero emission freshwater production system
  - Zero land use for energy system
  - Zero noise design and barely visible impace

EIFO
Export & Investment Fund of Denmark

Let us power the future together

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