

Aquaculture Technology Market Forecasts to 2034 – Global Analysis By Technology Type (Recirculating Aquaculture Systems, Aquaculture Monitoring Systems, Automated Feeding Systems, Water Treatment Technologies and Other Technology Types), Component, Culture Environment, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Aquaculture Technology Market is accounted for \$11.5 billion in 2026 and is expected to reach \$34.8 billion by 2034 growing at a CAGR of 14.8% during the forecast period. Aquaculture technology encompasses the equipment, systems, and innovations used to support the farming of fish, shellfish, algae, and other aquatic organisms. These technologies include water filtration systems, automated feeding equipment, aeration devices, recirculating aquaculture systems (RAS), and monitoring platforms that improve operational efficiency and aquatic health management. Advanced technologies also integrate artificial intelligence, IoT, and biotechnology for disease prevention and production optimization. Aquaculture technologies play a vital role in meeting rising global seafood demand while supporting sustainable and environmentally responsible aquatic farming practices across freshwater and marine production systems.

Market Dynamics:

Driver:

Growing sustainable fish farming practices

Consumers are increasingly demanding eco-friendly seafood options. Governments are promoting sustainable aquaculture to reduce pressure on wild fisheries. Farmers are adopting advanced technologies to improve efficiency and reduce environmental impact. Partnerships between aquaculture firms and technology providers are expanding. Awareness campaigns highlight the importance of sustainable seafood production.

Restraint:

Expensive advanced farming equipment

Farmers often struggle to afford modern systems such as automated feeders and water quality monitors. Smaller farms face challenges in scaling operations due to financial constraints. Limited access to financing reduces adoption of premium technologies. Regional disparities in affordability slow down market penetration. High maintenance costs further discourage investment. This issue is hindering wider market adoption.

Opportunity:

Recirculating aquaculture system expansion

An important opportunity lies in the expansion of recirculating aquaculture systems (RAS). These systems allow efficient water reuse and reduce environmental impact. Farmers benefit from improved productivity and reduced disease risks. Innovation in affordable RAS solutions supports broader adoption. Governments are promoting RAS as part of sustainable aquaculture initiatives. Partnerships with technology providers are enhancing accessibility.

Threat:

Fluctuating aquatic feed prices

Feed costs represent a significant portion of aquaculture expenses. Price volatility reduces profitability for farmers. Smaller farms are particularly vulnerable to feed price fluctuations. Global supply chain disruptions add further uncertainty. Negative publicity around unsustainable feed sources reduces trust. This volatility is hampering stable market expansion.

Covid-19 Impact:

Covid-19 had a mixed impact on the aquaculture technology market. On one hand, demand rose as consumers sought reliable seafood sources during supply chain disruptions. Farmers turned to technology to maintain productivity. Online platforms supported distribution of aquaculture equipment. On the other hand, economic uncertainty limited investments in advanced systems. Supply chain challenges affected equipment availability. Preventive health awareness increased focus on sustainable seafood.

The marine aquaculture segment is expected to be the largest during the forecast period

The marine aquaculture segment is expected to account for the largest market share during the forecast period as it dominates global seafood production. Marine systems support large-scale farming of fish and shellfish. Farmers are investing in offshore and coastal aquaculture technologies. Governments are promoting marine aquaculture to meet rising seafood demand. Retail penetration of marine aquaculture products is strong in developed markets. Partnerships with technology providers enhance efficiency.

The aquaculture hatcheries segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the aquaculture hatcheries segment is predicted to witness the highest growth rate due to rising demand for seed stock and breeding technologies. Hatcheries play a critical role in ensuring sustainable fish farming. Farmers benefit from improved productivity and disease resistance. Innovation in hatchery management systems supports adoption. Governments are supporting hatchery development through subsidies. Younger demographics are entering aquaculture with hatchery investments.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to strong consumer awareness and advanced aquaculture infrastructure. High adoption of aquaculture technologies supports growth. Leading companies and innovators are headquartered in this region. Government initiatives promote sustainable seafood production. Retail penetration of aquaculture products is strong in the US and Canada. Farmers are willing to invest in premium aquaculture systems.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by rising disposable incomes and growing seafood demand. Urbanization and food security concerns are fueling adoption of aquaculture technologies. Countries such as China, India, and Japan are rapidly expanding aquaculture practices. E-commerce platforms support distribution of aquaculture equipment. Government subsidies encourage adoption in rural areas. Affordable technologies appeal to mass farmers.

Key players in the market

Some of the key players in Aquaculture Technology Market include AKVA group ASA, Xylem Inc., Pentair plc, Innovasea Systems, Inc., ScaleAQ AS, Veolia Environnement S.A., Aquabyte, Inc., eFishery, BioFishency Ltd., Tecnosea S.r.l., Mowi ASA, Lerøy Seafood Group ASA, Cermaq Group AS, Bluegrove AS and Billund Aquaculture Group A/S.

Key Developments:

In April 2026, Aquabyte, Inc. officially launched "Sea Lice Pro," an advanced computer-vision system capable of counting sea lice with 99% accuracy in high-turbidity environments. This product-led growth strategy utilizes high-definition underwater cameras and edge computing to automate regulatory reporting, allowing farm managers to trigger localized treatments precisely when infection thresholds are reached.

In January 2026, AKVA group ASA announced a formal strategic review of its Digital business segment to explore a potential divestment or partnership for its software platforms. This collaborative initiative aims to streamline the company's capital allocation toward its core sea-based and land-based (RAS) engineering infrastructure while seeking a dedicated partner to scale its data-driven "AKVA connect" ecosystem.

Technology Types Covered:

Recirculating Aquaculture Systems

Aquaculture Monitoring Systems

Automated Feeding Systems

Water Treatment Technologies

Other Technology Types

Components Covered:

Hardware

Software

Services

Sensors & Control Systems

Other Components

Culture Environments Covered:

Freshwater Aquaculture

Marine Aquaculture

Brackish Water Aquaculture

Integrated Multi-Trophic Aquaculture

Other Culture Environments

Applications Covered:

Fish Farming

Shrimp Farming

Shellfish Farming

Aquatic Disease Management

Other Applications

End Users Covered:

Commercial Aquaculture Farms

Aquaculture Hatcheries

Research Organizations

Government Fisheries Departments

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL AQUACULTURE TECHNOLOGY MARKET, BY TECHNOLOGY TYPE

- 5.1 Recirculating Aquaculture Systems
- 5.2 Aquaculture Monitoring Systems
- 5.3 Automated Feeding Systems
- 5.4 Water Treatment Technologies
- 5.5 Other Technology Types

6 GLOBAL AQUACULTURE TECHNOLOGY MARKET, BY COMPONENT

- 6.1 Hardware
- 6.2 Software
- 6.3 Services
- 6.4 Sensors & Control Systems
- 6.5 Other Components

7 GLOBAL AQUACULTURE TECHNOLOGY MARKET, BY CULTURE ENVIRONMENT

- 7.1 Freshwater Aquaculture
- 7.2 Marine Aquaculture
- 7.3 Brackish Water Aquaculture
- 7.4 Integrated Multi-Trophic Aquaculture
- 7.5 Other Culture Environments

8 GLOBAL AQUACULTURE TECHNOLOGY MARKET, BY APPLICATION

- 8.1 Fish Farming
- 8.2 Shrimp Farming
- 8.3 Shellfish Farming
- 8.4 Aquatic Disease Management
- 8.5 Other Applications

9 GLOBAL AQUACULTURE TECHNOLOGY MARKET, BY END USER

- 9.1 Commercial Aquaculture Farms
- 9.2 Aquaculture Hatcheries
- 9.3 Research Organizations
- 9.4 Government Fisheries Departments
- 9.5 Other End Users

10 GLOBAL AQUACULTURE TECHNOLOGY MARKET, BY GEOGRAPHY

- 10.1 North America
 - 10.1.1 United States
 - 10.1.2 Canada
 - 10.1.3 Mexico
- 10.2 Europe
 - 10.2.1 United Kingdom
 - 10.2.2 Germany
 - 10.2.3 France
 - 10.2.4 Italy
 - 10.2.5 Spain
 - 10.2.6 Netherlands
 - 10.2.7 Belgium
 - 10.2.8 Sweden
 - 10.2.9 Switzerland
 - 10.2.10 Poland
 - 10.2.11 Rest of Europe
- 10.3 Asia Pacific
 - 10.3.1 China
 - 10.3.2 Japan
 - 10.3.3 India
 - 10.3.4 South Korea
 - 10.3.5 Australia
 - 10.3.6 Indonesia
 - 10.3.7 Thailand
 - 10.3.8 Malaysia
 - 10.3.9 Singapore
 - 10.3.10 Vietnam
 - 10.3.11 Rest of Asia Pacific
- 10.4 South America
 - 10.4.1 Brazil
 - 10.4.2 Argentina

- 10.4.3 Colombia
- 10.4.4 Chile
- 10.4.5 Peru
- 10.4.6 Rest of South America
- 10.5 Rest of the World (RoW)
 - 10.5.1 Middle East
 - 10.5.1.1 Saudi Arabia
 - 10.5.1.2 United Arab Emirates
 - 10.5.1.3 Qatar
 - 10.5.1.4 Israel
 - 10.5.1.5 Rest of Middle East
 - 10.5.2 Africa
 - 10.5.2.1 South Africa
 - 10.5.2.2 Egypt
 - 10.5.2.3 Morocco
 - 10.5.2.4 Rest of Africa

11 STRATEGIC MARKET INTELLIGENCE

- 11.1 Industry Value Network and Supply Chain Assessment
- 11.2 White-Space and Opportunity Mapping
- 11.3 Product Evolution and Market Life Cycle Analysis
- 11.4 Channel, Distributor, and Go-to-Market Assessment

12 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 12.1 Mergers and Acquisitions
- 12.2 Partnerships, Alliances, and Joint Ventures
- 12.3 New Product Launches and Certifications
- 12.4 Capacity Expansion and Investments
- 12.5 Other Strategic Initiatives

13 COMPANY PROFILES

- 13.1 AKVA group ASA
- 13.2 Xylem Inc.
- 13.3 Pentair plc
- 13.4 Innovasea Systems, Inc.
- 13.5 ScaleAQ AS

- 13.6 Veolia Environnement S.A.
- 13.7 Aquabyte, Inc.
- 13.8 eFishery
- 13.9 BioFishency Ltd.
- 13.10 Tecnosea S.r.l.
- 13.11 Mowi ASA
- 13.12 Lerøy Seafood Group ASA
- 13.13 Cermaq Group AS
- 13.14 Bluegrove AS
- 13.15 Billund Aquaculture Group A/S

List Of Tables

LIST OF TABLES

Table 1 Global Aquaculture Technology Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Aquaculture Technology Market, By Technology Type (2023–2034) (\$MN)

Table 3 Global Aquaculture Technology Market, By Recirculating Aquaculture Systems (2023–2034) (\$MN)

Table 4 Global Aquaculture Technology Market, By Aquaculture Monitoring Systems (2023–2034) (\$MN)

Table 5 Global Aquaculture Technology Market, By Automated Feeding Systems (2023–2034) (\$MN)

Table 6 Global Aquaculture Technology Market, By Water Treatment Technologies (2023–2034) (\$MN)

Table 7 Global Aquaculture Technology Market, By Other Technology Types (2023–2034) (\$MN)

Table 8 Global Aquaculture Technology Market, By Component (2023–2034) (\$MN)

Table 9 Global Aquaculture Technology Market, By Hardware (2023–2034) (\$MN)

Table 10 Global Aquaculture Technology Market, By Software (2023–2034) (\$MN)

Table 11 Global Aquaculture Technology Market, By Services (2023–2034) (\$MN)

Table 12 Global Aquaculture Technology Market, By Sensors & Control Systems (2023–2034) (\$MN)

Table 13 Global Aquaculture Technology Market, By Other Components (2023–2034) (\$MN)

Table 14 Global Aquaculture Technology Market, By Culture Environment (2023–2034) (\$MN)

Table 15 Global Aquaculture Technology Market, By Freshwater Aquaculture (2023–2034) (\$MN)

Table 16 Global Aquaculture Technology Market, By Marine Aquaculture (2023–2034) (\$MN)

Table 17 Global Aquaculture Technology Market, By Brackish Water Aquaculture (2023–2034) (\$MN)

Table 18 Global Aquaculture Technology Market, By Integrated Multi-Trophic Aquaculture (IMTA) (2023–2034) (\$MN)

Table 19 Global Aquaculture Technology Market, By Other Culture Environments (2023–2034) (\$MN)

Table 20 Global Aquaculture Technology Market, By Application (2023–2034) (\$MN)

Table 21 Global Aquaculture Technology Market, By Fish Farming (2023–2034) (\$MN)

Table 22 Global Aquaculture Technology Market, By Shrimp Farming (2023–2034) (\$MN)

Table 23 Global Aquaculture Technology Market, By Shellfish Farming (2023–2034) (\$MN)

Table 24 Global Aquaculture Technology Market, By Aquatic Disease Management (2023–2034) (\$MN)

Table 25 Global Aquaculture Technology Market, By Other Applications (2023–2034) (\$MN)

Table 26 Global Aquaculture Technology Market, By End User (2023–2034) (\$MN)

Table 27 Global Aquaculture Technology Market, By Commercial Aquaculture Farms (2023–2034) (\$MN)

Table 28 Global Aquaculture Technology Market, By Aquaculture Hatcheries (2023–2034) (\$MN)

Table 29 Global Aquaculture Technology Market, By Research Organizations (2023–2034) (\$MN)

Table 30 Global Aquaculture Technology Market, By Government Fisheries Departments (2023–2034) (\$MN)

Table 31 Global Aquaculture Technology Market, By Other End Users (2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

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