White Paper

Strategic Opportunities in ASEAN for International Water Technology & Water Management Companies

Why Participation in Aquatech Asia 2026 Provides a Gateway to ASEAN Regional Business Development

Prepared for: International water technology and water management companies

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Executive Summary

Southeast Asia (ASEAN) represents one of the fastest-growing regions globally for water technology, water infrastructure and integrated water management investment. Rapid urbanisation, industrial development and climate-related water challenges are driving demand for advanced water treatment, digital water management, industrial water reuse, operational-efficiency solutions, flood and drought resilience, and aquaculture water systems.

Market opportunity research conducted by RAI Amsterdam and VNU Exhibitions Asia Pacific during the development of Aquatech Asia identified Southeast Asia as one of the most promising expansion regions for international water technology providers and water management companies.

International companies with capabilities in wastewater treatment, smart and digital water, industrial water management, sludge and resource recovery, aquaculture water technologies, flood resilience, and integrated basin or urban water management are strongly aligned with regional market needs.

Aquatech Asia aims to support participating companies not only in building visibility, but also in establishing initial connections with potential customers, qualified local partners, system integrators and distributors in ASEAN markets.

An individual exhibitor's booth, a coordinated international pavilion, country pavilion or sector-based group participation at Aquatech Asia can all provide a focused platform to capture these opportunities, establish regional partnerships and initiate long-term business development in Southeast Asia.

Selected sources: *ADB Water Sector Directional Guide | ASEAN Sustainable Urbanisation Report | FAO State of World Fisheries and Aquaculture 2024*

1. Market Outlook: Strong Structural Growth

The Asia-Pacific water and wastewater sector is supported by strong structural demand from urban growth, rising service-quality expectations, industrial expansion and climate resilience needs.

According to the Asian Development Bank (ADB), developing Asia needs about US$26 trillion in infrastructure investment for 2016–2030, including water supply and sanitation. More recently, the World Economic Forum estimated that Asia accounts for the largest share of the global water infrastructure funding gap, at around EUR 5.2 trillion.

In Southeast Asia specifically, the industrial water and wastewater treatment market was valued at approximately US$18.1 billion in 2022 and is projected to reach US$33.2 billion by 2031, according to Transparency Market Research. This is consistent with broader regional trends: ASEAN s urban population is projected to rise to about 405 million by 2030, creating sustained demand for municipal water, wastewater, stormwater and related water management and water technology solutions.

These investments are driven by rapid urbanisation, manufacturing growth, tighter environmental compliance and the increasing need to improve resilience against floods, droughts and water quality pressures.

Selected sources: *ADB – Meeting Asia's Infrastructure Needs | WEF – Bridging the EUR 6.5 Trillion Water Infrastructure Gap | Transparency Market Research – SEA Industrial Water & Wastewater Treatment | ASEAN / UN-Habitat – Sustainable Urbanisation | FAO SOFIA 2024*

Indicator	Latest figure	Relevance for water market	Source
Developing Asia infrastructure need, 2016–2030	US$26 trillion	Confirms large multi-sector infrastructure pipeline, including water supply and sanitation	ADB
Asia share of global water infrastructure gap	EUR 5.2 trillion (46%)	Shows Asia is the largest global water investment-gap market	WEF 2025
SEA industrial water & wastewater treatment market, 2022	US$18.1 billion	Indicates already substantial demand base	TMR
SEA industrial water & wastewater treatment market, 2031	US$33.2 billion	Implies sustained growth in industrial treatment demand	TMR
ASEAN urban population by 2030	405 million; ~55.7% urban	Urban growth expands municipal and peri-urban water demand	ASEAN / UN-Habitat
Asia share of global fisheries & aquaculture production	75% in 2022	Supports relevance of aquaculture water technologies	FAO 2024

2. ASEAN Water Infrastructure CAPEX Outlook (2025–2035)

Across Southeast Asia, governments and development-finance institutions are investing heavily in water infrastructure to address urbanisation, industrial water demand and climate-related water risks. The figures below remain indicative and should be understood as compiled estimates rather than a single harmonised regional dataset. They nevertheless illustrate a sizeable addressable market.

Indicative estimates based on national infrastructure programmes and multilateral development financing (ADB, World Bank, GWI and public programme documents) suggest substantial investment pipelines in Indonesia, Vietnam, the Philippines and Thailand. These include urban water supply expansion, sanitation and wastewater systems, flood resilience, utility-performance upgrades and climate adaptation-related water works.

Combined estimates suggest that total water-related infrastructure investment across ASEAN could reach approximately US$150–200 billion over the coming decade, creating significant opportunities for technology providers, engineering partners, water management specialists and solution integrators.

Selected sources: *ADB Indonesia water portfolio | World Bank – Indonesia water programmes | ADB – Vietnam water expansion | World Bank – Philippines water supply and sanitation project | World Bank – Thailand blue finance / investment | ADB Annual Report 2024*

Country	Indicative water CAPEX / pipeline	Recent programme evidence	Why it matters commercially	Source
Indonesia	Approx. US$40–50bn over the coming decade	ADB approved a US$419.6m sanitation loan in 2024; World Bank has supported urban water and rural/community access programmes	Large pipeline across sanitation, NRW reduction, treatment and utility modernisation	ADB Indonesia water portfolio
Vietnam	Approx. US$25–30bn	ADB-backed water expansion projects and continuing wastewater / urban water upgrades	Good fit for industrial water, municipal treatment, reuse and aquaculture-related solutions	ADB Vietnam water expansion
Philippines	Approx. US$20bn	World Bank preparing a Philippine Water Supply and Sanitation Project focused on safely managed water and sanitation services	Strong demand for utility performance, digital systems and treatment upgrades	World Bank Philippines WSS project
Thailand	Multi-billion ongoing pipeline	Water-related investment spans wastewater, flood management, resilience and blue-finance linked programmes	Bangkok and wider Thailand function as a practical regional market-entry base	World Bank Thailand blue finance
Regional / ASEAN	Approx. US$150–200bn combined estimate	ADB 2024 commitments plus World Bank and country programmes point to sustained execution capacity	Supports a regional rather than single-country market-entry strategy	ADB Annual Report 2024

3. CAPEX vs OPEX Opportunities

ASEAN water markets are characterised by a combination of large infrastructure investments (CAPEX) and growing demand for operational efficiency improvements (OPEX). CAPEX projects include treatment plants, pipelines, pumping stations and flood infrastructure, often delivered through government programmes or EPC contractors.

OPEX-driven technologies — such as digital water monitoring, leak detection, optimisation software, energy-efficiency tools and advanced treatment upgrades — are increasingly attractive because they improve performance without requiring large-scale new civil works. In practice, many utilities now seek hybrid solutions: selective CAPEX combined with digitalisation and operational improvement.

This is particularly relevant in Southeast Asia, where non-revenue water, intermittent service, energy costs and wastewater-treatment gaps remain common utility challenges. Technologies and advisory capabilities that can improve lifecycle efficiency and shorten payback periods are therefore well positioned. In wastewater systems specifically, sludge handling and energy consumption are increasingly critical cost drivers.

Selected sources: *AIIB Water Sector Analysis | ADB / Development Asia – AI for water supply efficiency | UN-Water / UN-Habitat – Progress on Wastewater Treatment 2024 | IBNET utility benchmarking | ADB – Issues and Challenges of Reducing Non-Revenue Water*

Metric / evidence	Illustrative figure	Commercial implication	Source
Non-revenue water in selected Southeast Asian systems remains high	AIIB notes NRW is especially high in countries such as the Philippines, Malaysia and Indonesia	Supports demand for leak detection, metering, pressure management and digital tools	AIIB Water Sector Analysis
Revenue losses from NRW across Asia	Estimated around US$12bn per year in cited regional analysis	Strengthens business case for operational-efficiency technologies	AIIB / IWMI data
Digital and AI-enabled utility optimisation	ADB highlights smart water management and AI as tools to improve distribution and reduce unaccounted-for water	Favours software, sensors, analytics and advanced control systems	ADB Development Asia
Wastewater safely treated remains a global and regional gap	UN-Water / UN-Habitat continue to report acceleration needs toward SDG 6.3.1	Supports treatment, reuse, sludge and resource-recovery solutions	UN-Water SDG 6.3.1 report
Benchmarking and utility-performance data are increasingly used	IBNET provides utility data on NRW, cost recovery, coverage and service performance	Improves targeting of partner utilities and value-proposition design	IBNET

4. Indicative Opportunity Segments in ASEAN Water Markets

Key growth segments within ASEAN water markets where international technology providers and water management companies are increasingly active include:

- Municipal wastewater upgrades and treatment optimisation
- Industrial water treatment and reuse
- Non-revenue water reduction and leak detection
- Smart and digital water solutions
- Aquaculture water systems and water quality monitoring
- Sludge treatment, thermal hydrolysis and resource recovery
- Climate resilience and flood management systems
- Integrated water resources management, river-basin planning and urban water resilience
- Nature-based solutions, blue-green infrastructure and water-sensitive urban design

Selected sources: *ADB Water Sector Directional Guide | WEPA Outlook on Water Environmental Management in Asia | FAO SOFIA 2024*

5. Strategic Fit: International Technologies and ASEAN Needs

ASEAN utilities, industrial operators and project developers increasingly face sludge management, energy, water quality, compliance and lifecycle cost challenges. Solutions that integrate treatment performance with efficiency, digital control, resource recovery and resilience are gaining traction.

International companies that combine proven technology with implementation experience, local-partner models and an understanding of lifecycle economics are well positioned to compete in the region.

Selected sources: *FAO – SOFIA 2024 | Asian Development Bank – Water Sector Directional Guide / Strategy | Transparency Market Research – Southeast Asia Industrial Water Market | WEPA – Outlook on Water Environmental Management in Asia*

International technology / management capability	Relevant ASEAN market need	Strategic fit rationale
Advanced wastewater treatment (MBBR, compact biological systems, membranes, modular systems)	Urban wastewater expansion and tightening discharge standards	Compact, high-performance systems suited for space-constrained upgrades and phased implementation
Sludge treatment, thermal hydrolysis and resource recovery	Increasing sludge volumes, disposal challenges and energy-cost pressure	Enables volume reduction, pathogen removal, biogas generation and lower lifecycle costs
Digital water, smart utility and optimisation solutions	High non-revenue water, intermittent service and operational inefficiencies	Strong fit for rapid OPEX-driven improvements with measurable ROI
Industrial water treatment and reuse	Manufacturing growth, compliance pressure and ESG requirements	Supports water security, reuse, discharge compliance and production continuity
Aquaculture water systems and monitoring	Rapid aquaculture expansion and water-quality risks	Highly relevant given ASEAN production scale and increasing sustainability requirements
Flood resilience, drainage, pumping and water-control systems	Climate volatility, urban flooding and coastal/delta vulnerabilities	Supports practical adaptation, asset protection and urban resilience
Integrated water management, planning and advisory expertise	Fragmented governance, basin-level pressures and multi-agency coordination needs	Helps translate investment ambition into implementable programmes and project pipelines
Energy-efficient lifecycle solutions	Rising energy costs and limited operating budgets	Compete on total cost of ownership rather than lowest upfront price

6. Why International Water Technology Is Well Positioned in ASEAN

Although Southeast Asian markets include strong price competition from equipment suppliers from China and other regions, international water technology and water management companies have several competitive advantages.

First, many international companies compete on performance, reliability and lifecycle efficiency rather than lowest upfront price. Utilities, EPCs and industrial operators increasingly evaluate solutions based on total lifecycle cost, resilience and operational performance.

Second, companies from established water technology markets bring proven references, compliance experience and system-integration know-how. This is particularly relevant where ASEAN buyers are moving from basic infrastructure expansion toward higher-performance, digitally enabled and more sustainable assets.

Third, specialised international capabilities in advanced treatment, industrial reuse, digital water, resource recovery, aquaculture systems, flood resilience and integrated water management represent niches with less commoditised competition.

Selected sources: *WEF – water infrastructure gap playbook | ADB – Strategy 2030 Water Sector Directional Guide | FAO SOFIA 2024*

7. Thailand as Regional Entry Hub

Thailand serves as a strategic entry point into Southeast Asia. It offers strong infrastructure, a central geographic position and access to neighbouring growth markets such as Vietnam, Cambodia, Laos and Myanmar. In addition, Thailand hosts senior water-related government departments, regulatory bodies and industry associations, making it not only a geographic hub but also a strong institutional and policy engagement platform.

Bangkok functions as a regional hub for engineering firms, international organisations, government agencies and corporate decision-makers, making it an effective base for regional business development.

The presence of established international and EU water sector networks further strengthens Thailand s role as a gateway market for international companies.

In addition, many of these stakeholders maintain close relationships with local supply chains and private sector networks, which can further support introductions to potential distributors, system integrators and implementation partners.

Selected sources: *World Bank – Thailand blue finance and investment | OECD – Financing Sustainable Cities in Southeast Asia*

8. Why Aquatech Asia

Aquatech Asia is positioned as a regional platform that connects water technology providers and water management companies with utilities, engineering firms, industrial end-users and policy stakeholders from across Southeast Asia. It serves as a convergence point for decision-makers across the full water value chain, including public utilities, EPC contractors, industrial operators, aquaculture stakeholders, government agencies and development-finance related actors.

For international companies, one of the key challenges in entering ASEAN markets is not identifying opportunities, but effectively accessing the relevant stakeholders across multiple countries in an efficient manner.

In this context, Aquatech Asia can be considered a practical market-entry instrument, enabling companies to engage multiple ASEAN markets within a single, focused setting.

The platform is designed to facilitate targeted interactions through curated matchmaking programmes, delegation visits and engagement with institutional stakeholders. Particular emphasis is placed on attracting senior representatives from utilities, government agencies, industrial clusters and engineering firms, supporting meaningful business discussions rather than purely exploratory contacts.

In parallel, the conference programme provides a structured environment for dialogue between public and private stakeholders, addressing policy frameworks, financing mechanisms and implementation challenges. This creates opportunities for participating companies to position their expertise within a broader strategic context and to engage with stakeholders involved not only in technology selection, but also in planning and project development.

Participation in Aquatech Asia can therefore support companies in developing initial market insights, identifying potential partners and establishing early-stage relationships that can be further developed through follow-up activities in the region.

In Bangkok, Aquatech Asia takes place in the world-class venue Queen Sirikit National Convention Center, conveniently and attractively situated in the city center, easily accessible by public transportation. See www.qsncc.com

Selected sources: *Aquatech event platform | ASEAN Sustainable Urbanisation Report*

9. International Pavilion / Sector Pavilion Concept

For clusters, national groups and groups of technology providers, international market entry is often organised through a coordinated pavilion structure, enabling both individual company visibility and a collective positioning towards the market.

In the context of Aquatech Asia, an international, national or sector-based pavilion bringing together a complementary group of companies would provide a structured approach to engaging the ASEAN market. A coordinated presence allows participating companies to present capabilities across municipal, industrial, aquaculture, digital water, flood-resilience and integrated water management segments, increasing overall relevance to regional stakeholders.

Compared to individual participation, a pavilion-based approach typically offers several advantages. It enhances visibility and recognition by presenting a coherent country, cluster or sector profile, supports engagement with a broader range of stakeholders, and facilitates joint interactions with utilities, EPC contractors and government agencies. In addition, it enables more efficient use of resources in areas such as marketing, networking and business development.

A pavilion structure also supports internal collaboration between participating companies, including shared meetings, cross-referrals and the exploration of integrated solution offerings. This is particularly relevant in ASEAN markets, where project development and implementation often involve multiple partners across the value chain.

As such, a coordinated presence at Aquatech Asia can provide both a practical and strategically aligned approach to initiating and structuring regional market engagement.

In addition, Aquatech Asia is developing a more structured approach to support participating companies in identifying and engaging with qualified local distributors, system integrators and implementation partners in ASEAN markets. This will include pre-event profiling of participating companies and their target partner types, followed by targeted outreach through local industry associations, chambers of commerce and existing RAI/VNU networks to identify relevant counterparts. During the event, this will translate into pre-arranged 1:1 meetings and informal introductions on the show floor and within pavilion settings. Where relevant, follow-up support after the event can further facilitate continued dialogue and help convert initial contacts into concrete partnerships.

10. ASEAN Market Entry Playbook

Before Aquatech Asia

- Engage with relevant national government, export promotion and trade-development organisations.
- Identify priority ASEAN markets. Focus on 2–3 priority countries to ensure depth rather than breadth, and align internal resources accordingly.
- Map potential distributors, system integrators, EPC contractors and engineering partners.
- Schedule meetings with utilities, EPC contractors and industrial operators.
- Prepare clear value propositions tailored to ASEAN market needs, such as cost-efficiency, robustness, lifecycle performance, energy efficiency, compliance and resilience.
- Connect with relevant water technology, infrastructure, industrial and water management media in ASEAN.

During Aquatech Asia

- Focus on relationship building and ensure senior-level presence at the stand to accelerate decision-making and build trust with regional partners.
- Identify local partners, distributors and implementation channels.
- Explore pilot project opportunities and demonstration-site potential.
- Plan structured follow-up within 2–4 weeks after the event to maintain momentum and convert leads into concrete opportunities.
- Actively participate and present in thought-leadership sessions where relevant.

After Aquatech Asia

- Conduct follow-up market visits in priority countries.
- Establish partnerships with distributors, system integrators, engineering firms or local implementation partners.
- Develop pilot projects and regional distribution networks.
- Maintain engagement with utilities, industrial prospects and public-sector stakeholders identified during the event.
- Convert initial introductions into structured commercial opportunities, pilot proposals or memoranda of understanding where appropriate.

Particular attention will be given to connecting participants with commercially relevant counterparts, including distributors, local partners and system integrators, as these are often critical for successful market entry in ASEAN. The aim is not only to facilitate visibility, but to actively support the development of initial business relationships during and after the event.

Conclusions

ASEAN represents one of the most dynamic water technology and water management markets globally, characterised by significant infrastructure investment needs and a growing emphasis on operational efficiency, sustainability and climate resilience.

The capabilities represented by international water technology and water management companies align closely with these evolving market requirements, particularly in areas such as advanced wastewater treatment, digital water solutions, industrial water management, aquaculture-related technologies, flood resilience, resource recovery and integrated water management.

At the same time, effective market entry in Southeast Asia requires structured engagement with a diverse set of stakeholders, including utilities, engineering partners, government authorities, industrial end-users, local distributors and implementation partners across multiple countries.

In this context, participation in Aquatech Asia can be considered a resource-efficient approach to gaining market insight, establishing initial relationships and exploring partnership opportunities at a regional level. For group-based participation, a coordinated pavilion structure offers a practical framework to combine individual company objectives with a broader, collective positioning.

Beyond visibility and positioning, the event is designed to support tangible market-entry steps, including connections to qualified local partners and distributors.

Taken together, this suggests that an international presence at Aquatech Asia provides a relevant and timely step in exploring and developing longer-term engagement in Southeast Asia.

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Selected sources: *ADB Water Sector Directional Guide | WEF water infrastructure gap playbook | FAO SOFIA 2024*

Appendix: Selected Source References Used in the Original White Paper

- Asian Development Bank (ADB) – Meeting Asia's Infrastructure Needs; Water Sector Directional Guide; Annual Report 2024; country water portfolios and water expansion projects.
- World Economic Forum – Bridging the EUR 6.5 Trillion Water Infrastructure Gap / water infrastructure gap playbook.
- Transparency Market Research – Southeast Asia Industrial Water & Wastewater Treatment Market.
- ASEAN / UN-Habitat – Sustainable Urbanisation in ASEAN.
- FAO – The State of World Fisheries and Aquaculture 2024.
- World Bank – Indonesia water programmes; Philippine Water Supply and Sanitation Project; Thailand blue finance / investment references.
- AIIB Water Sector Analysis and related non-revenue water references.
- ADB / Development Asia – AI and smart water management for water supply efficiency.
- UN-Water / UN-Habitat – Progress on Wastewater Treatment 2024 and SDG 6.3.1 reporting.
- IBNET utility benchmarking data.
- WEPA – Outlook on Water Environmental Management in Asia.
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