

World Utilities Congress high-level session

Unlocking Deployment Pathways for Water Technologies in the UAE

Summary & Key Takeaways

Thursday may 29, 2025



Executive Summary

As part of its strategic participation in the World Utilities Congress 2025, the Department of Energy – Abu Dhabi, in collaboration with the Global Climate Finance Centre (GCFC), hosted a high-level session titled "Unlocking Deployment Pathways for Water Technologies in the UAE." The session brought together global experts, policy leaders, and innovators to discuss integrated solutions for financing, scaling, and modernizing water infrastructure. This summary captures the most important insights and recommendations from the session, reinforcing the UAE's ambition to lead in water diplomacy, blue finance, and sustainable innovation.

The discussion focused on exploring innovative approaches to financing and scaling water-related solutions in alignment with the UAE's ambition to lead in global water diplomacy and climate finance. Recognizing the critical importance of water as a public good under stress, the discussion emphasized the need for integrated strategies that combine financing, technology, and policy reform. Key themes included the development of viable, derisked financing models, particularly for water infrastructure, to attract sovereign wealth funds and private sector capital. There is a strong push to create performance and outcome-based incentive structures, link water to emerging carbon and environmental credit markets, and explore "blue finance" opportunities ahead of the upcoming UN Water Conference.

On the innovation front, participants highlighted the growing role of AI, machine learning, and digital infrastructure in modernizing water systems, improving reuse and monitoring, and decentralizing infrastructure.

The UAE was identified as uniquely positioned to become the "Silicon Valley of water," given its bold leadership, capital access, and commitment to innovation. There was also an emphasis on shifting from service provision to service creation by enabling startups, accelerating R&D, and building platforms for public-private collaboration. Education, consumer financing tools (e.g., green mortgages), and behavioral change were acknowledged as critical levers to engage end-users in sustainable water practices.

What	Insights
Strategic vision & leadership	• UAE has the potential to become the Silicon Valley of water technology. • Bold leadership, access to capital, and a critical need for water innovation place the UAE in a unique leadership position. • Opportunity for the UAE to bridge public-private partnerships and lead water diplomacy at the upcoming UN Water Conference. • Emphasis on UAE taking the lead in presenting innovative, attractive water solutions at international platforms.
Financing models & investment needs	• Need for viable and innovative financing models, especially to: ◦ Derisk water projects. ◦ Attract sovereign wealth funds and impact investors. ◦ Scale up water-related startups and infrastructure. • Emphasis on blue finance and preparations for upcoming pledges at the UN conference. • Explore performance-based and outcome-based incentive structures. • Deploy capital funds to subsidize water efficiency projects. • Water as the next asset class—tradable with support from AI and technology. • Gap in financing smaller climate tech projects and scaling existing ones.
Technology integration & innovation	• Water innovation areas: ◦ Water production and next-generation reuse. ◦ Monitoring water quality and efficiency. ◦ AI integration in agriculture and water systems. • Use of Machine Learning and AI to: ◦ Decentralize water infrastructure. ◦ Enhance digitization in the energy and power sectors. ◦ Support predictive water quality monitoring and efficient reuse. • Example of innovation: <i>Recycling water for use in steel production.</i> Role of data centers in water generation and accessibility.
Infrastructure, procurement & public sector role	• Need for technical ecosystems to support long-term infrastructure development. • Coordination required across different government departments to: ◦ Fast-track procurement processes. ◦ Set standards to support innovation adoption. ◦ Enable outcome-based contracts for startups. • Governments must do more to: ◦ Create platforms for data/resource sharing. ◦ Learn from failure through feedback loops. ◦ Expedite R&D for scalable impact.
Public goods & policy innovation	• Recognize water as a public good under stress. • Need for minimum pricing on water to: ◦ Break its linked over dependence with energy. ◦ Reframe water-energy policy narratives. • Explore policy tools like: ◦ Water credits for replenishing water systems. ◦ Green mortgages and consumer-facing financing tools. • Link carbon credits to water, especially due to the emissions from desalination and wastewater.
Culture, mindset & behavior change	• Importance of understanding country-specific mindsets on water utilization. • Include end-users in the conversation: ◦ Support behavior change through education. ◦ Facilitate adoption via accessible financing tools. • Shift from <i>service provision</i> to <i>service creation</i>.