



**KEYNOTE ADDRESS BY YAB DEPUTY PRIME MINISTER AND
MINISTER OF ENERGY TRANSITION AND WATER
TRANSFORMATION
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Opening Plenary: Delivering the Economics of Water

***“Transforming Mindsets, Transforming Approaches:
Malaysia's Vision for Sustainable Water Management”***

Paris, Marriot Paris Marriott Rive Gauche

13 Mei 2025

9.00 – 10.30 am

Introduction

Good morning distinguished delegates, esteemed experts, and respected leaders.

I extend my sincere gratitude to Christopher Gasson and Global Water Intelligence for convening this prestigious Global Water Summit.

It is a distinct honour and privilege to address such an accomplished gathering. Today, I wish to share Malaysia's compelling journey in water management - a story marked by

significant transformation, continuous innovation, and growing resilience.

Water, the lifeblood of our planet, unites us in a shared responsibility. The global water crisis, transcending borders and economies, demands urgent collaboration. Forums like this are vital to catalyzing ideas, forging partnerships, and safeguarding our collective future.

Malaysia's story is one of evolving mindsets and adaptive strategies. Through this address, I want to illuminate our successes, acknowledge our challenges, and invite global collaboration in advancing sustainable water solutions.

Malaysia's Water Management Journey - Historical Context & Key Milestones

Prior to 1999, Malaysia's water services were fragmented, managed by state governments with minimal federal coordination. This fragmented approach led to disparities in service quality and infrastructure. A pivotal moment came in 1998, when a severe water crisis in Selangor - home to our capital, Kuala Lumpur - left millions without reliable supply. This crisis underscored the urgency for systemic reform.

In 2005, a constitutional amendment laid the groundwork for centralized oversight, culminating in the establishment of the **National Water Services Commission (SPAN)** in 2008. This marked Malaysia's shift from disjointed governance to a federal-state partnership model, harmonizing policies and standards nationwide.

Another milestone arrived in 2006 with the creation of the **Water Asset Management Company (PAAB)**. Through PAAB, the federal government acquired downstream water assets, leasing them back to state operators. This innovative financing mechanism unlocked critical infrastructure upgrades while preserving state operational autonomy. Federal investments in upstream assets e.g. dams and raw water transfer schemes complemented this model. These reforms bore fruit:

- **Non-revenue water (NRW)** decreased from over 40% in the early 2000s to **33.9%** in 2023, saving billions in lost revenue.

- Urban per capita water consumption dropped by **15%** through public awareness campaigns.
- Centralized sewage treatment facilities replaced outdated systems, adopting green technologies compliant with stringent environmental standards.

Following high-profile river pollution incidents, legislative action strengthened penalties under the **Environmental Quality Act 2023**, raising fines for violations to **RM10 million** and imprisonment terms to **15 years**.

All these reforms implemented progressively, have yielded tangible results: improve access to clean water and sanitation, enhanced service quality, and steady progress toward our Sustainable Development Goals (SDG) targets. Our progress toward **SDG 6** is evident whereby:

- The **National Drinking Water Quality Surveillance Programme** monitors **99%** of public supplies against **97 parameters**, ensuring safety for 32 million Malaysians; and
- The **Rural Water Supply Programme** has connected over **200,000 previously underserved households** to clean water in the past 5 years alone, bridging urban-rural disparities.

Today's Challenges & Demands

Despite progress, challenges loom large. Malaysia's annual rainfall - **2,940mm**, yielding **972 billion cubic meters (BCM)** of rainwater - masks vulnerabilities. Surface runoff stands at **495 BCM**, yet demand is projected to surge **76%** by 2050, from **14,458 million litres per day (MLD)** in 2010 to **25,455 MLD**.

Climate change exacerbates risks: erratic rainfall, prolonged droughts, and unprecedented floods - like the 2021 - 2022 deluges in Pahang and Johor, which submerged historically low risk zones. Traditional infrastructure and response protocols struggled to cope, revealing gaps in resilience.

Simultaneously, rapid urbanization and industrial growth-driven by semiconductor manufacturing, data centres, and high-tech sectors, intensify pressure on water resources. Balancing economic ambitions with sustainability remains a delicate act.

Malaysia's Strategies for Sustainable Water Management - Water Sector Transformation 2040 (AIR2040)

In response to these challenges, we have established the Water Sector Transformation 2040 agenda, which also known as AIR2040. Via the launching of AIR2040, Malaysia's roadmap to water security, rests on three paradigm shifts:

1. From 'Plentiful' to 'Precious Resource'

- **Integrated River Basin Management:** Balancing ecological preservation with sectoral needs.
- **Smart Water Systems:** Deploying IoT sensors and AI for real-time leak detection, predictive maintenance, and Non-Revenue Water reduction.
- **Matching Grants:** Federal co-funding for operators achieving NRW reduction targets, saving **RM2 billion annually**.

2. From ‘Closely Controlled’ to ‘Shared Opportunity’

- **Public-Private Partnerships (PPPs):** Build-Operate-Transfer models for water reclamation plants, such as **Indah Water Konsortium (IWK)**’s collaboration with agribusinesses to convert biosolids into organic fertilizer—turning waste into revenue.
- **Solar Initiatives:** Over **500 sewage treatment plants** now use privately funded solar panels, reducing energy costs by **30%**. IWK aims to expand to **1,000 sites** by 2026.
- **Reclaimed Water:** Partnerships supply treated effluent for industrial use (e.g., district cooling, data centres), with private firms financing and operating reclamation facilities.

3. From 'Reactive' to 'Prepared'

- **Climate Resilience: A National Flood Forecasting System**, integrating real-time rainfall data and topography, delivers hyperlocal alerts. Infrastructure now withstands **1-in-100-year flood events**.
- **R&D Leadership: The National Water Research Institute (NAHRIM)** pioneers nature-based solutions, such as bioengineered riverbanks and AI-driven hydrological models.
- **Capacity Building: The Water Services Academy** trains 5,000 professionals annually in cutting-edge techniques, while community programs engage citizens in conservation.

Malaysia as a Global Partner - Regional & Global Collaboration

Malaysia champions transboundary cooperation in ASEAN, particularly in the **Mekong and Golok River basins**. We aim to emerge as a **Regional Water Hub** through:

1. Advocacy & awareness campaigns.
2. Data-driven decision-making.
3. R&D commercialization.
4. A Center of Excellence.
5. Specialist training programs.

Our commitment to **SDG 6** - Clean Water and Sanitation for All - is unwavering. We collaborate with the UN, World Bank, and ASEAN peers to share knowledge and scale innovations. For example, Indah Waler Konsortium (IWK) as the national sewerage company, has proven its capability and garnered a distinction award at the 2023 Global Water Awards in Berlin, in recognition of its excellence in sustainable sanitation services and innovative wastewater management.

Invitation for Collaboration

To global innovators, Malaysia offers a testing ground for cutting-edge technologies from AI-driven desalination to decentralized treatment systems. We welcome partnerships to pilot, refine, and scale solutions that benefit humanity.

Conclusion

Ladies and gentlemen,

The water crisis is a mirror reflecting our shared humanity. Malaysia's journey - marked by reform, resilience, and reinvention - demonstrates that challenges, when met with innovation, become opportunities.

Yet, no nation can act alone. Let us unite in purpose, pooling expertise and resources to secure water for all. Together, we can turn the tide - ensuring a sustainable future for generations to come.

Thank you.