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SYNOPSIS

As the world enters an era of water bankruptcy, Southeast Asia faces a future with increased competition over shared water resources. With data centres reliant on water-intensive cooling systems, adding to the region's drivers of water insecurity, stronger multistakeholder cooperation and confidence-building measures are crucial to reduce tensions and enhance sustainable water management.

COMMENTARY

The Global Water Bankruptcy report by the United Nations University Institute for Water, Environment and Health, released early this year, warns that the world has entered an era where freshwater systems are being depleted faster than they can naturally replenish.

In many regions, water stress is no longer a temporary issue, but a structural condition driven by overuse, pollution, and climate change. This condition has moved the world beyond a global water crisis toward a global "water bankruptcy", with 6.1 billion people living in water-insecure or critically water-insecure areas.

For Southeast Asia – home to rapidly growing populations, climate-vulnerable river basins, and complex transboundary water systems – this shift raises urgent questions about the nexus between water management and peace and security.

As climate change intensifies droughts, floods, and environmental degradation, it increasingly intersects with broader development and security challenges in the region. Across transboundary and domestic settings, governments are left to navigate a difficult balance between community needs and economic growth, with

the recent expansion of data centres, which consume significant amounts of water, adding another driver of water scarcity.

Addressing these multi-level risks requires stronger governance, regional cooperation, and integrated approaches that link water management with climate adaptation and sustainable development.

Water Bankruptcy as a Peace and Security Issue

One key policy message of the UN Report is that water bankruptcy is becoming a driver of fragility, displacement and conflict. How states and societies address these challenges will shape social cohesion, political stability, and peace.

As water systems move into a state of structural deficit, competition over access is likely to intensify – not only between sectors such as agriculture and urban consumption, but also across communities and, in some cases, between states. These pressures are particularly acute in contexts with uneven governance capacity, amplifying existing social inequalities, as vulnerable populations bear the brunt of declining water availability and rising costs. The erosion of livelihoods in water-dependent sectors can, in turn, trigger patterns of displacement and migration that place additional stress on urban systems and social relations.

Southeast Asia's water-peace nexus should not be ignored. Absent effective and equitable management, the dynamics risk undermining public trust in institutions and weakening the social compact. In transboundary settings such as the Mekong sub-region, the persistence of water deficits may also strain cooperative frameworks, raising the risk of disputes. In this sense, water bankruptcy should be understood not merely as a resource challenge but as a systemic risk with far-reaching implications for regional and global stability.

Data Centres in Southeast Asia: The New Face of Water Competition

The strained dynamics in transboundary water systems are increasingly reflected at the domestic level. While many pressures overlap, the regional data centre boom introduces a significant new driver in water demand.

With stronger government enforcement of local data storage coupled with the rapid growth of AI, the sector is accelerating ASEAN's digital economy towards its projected value of close to US$1 trillion by 2030. However, modern data centres often rely on water-based cooling strategies to prevent servers from overheating. As a result, their surge is creating an additional layer of competition over finite freshwater resources, as technology firms increasingly vie with traditional users – agriculture, industry, hydropower dams, and urban communities – for a reliable water supply.

Amid the explosive growth, local concerns have arisen. A single data centre can require water flows equivalent to the needs of tens of thousands of people. They have also raised concerns about unsafe chemical discharges during the cooling process, which could pollute local water bodies. These pressures threaten the well-being and livelihoods of people in the vicinity.

As a result, data centres increasingly shape political outcomes. In Johor (Malaysia), home to Southeast Asia's leading data centre hub and recently the site of its first data centre protest, authorities have halted the development of water-intensive Tier 1 and Tier 2 data centres. Still, rapid developments have left many places lagging in comprehensive governance responses. For example, in Chonburi (Thailand) and Batam (Indonesia), where data centre expansions intersect with existing water scarcity, members of the public have called for more comprehensive environmental assessments and coordination among local communities, authorities, and private actors to curb intensifying insecurities.

Sustainable Water Management as a Confidence-Building Measure

The emergence of "thirsty" data centres provides a timely reminder of Southeast Asia's vulnerability to both long-term and rapidly changing stressors, which together shape the era of water bankruptcy.

At the same time, experts have long emphasised the potential of water management to be a cornerstone in building peace and trust. Rather than advancing actor-specific interests, there is space to rethink water as a transboundary resource that can generate mutual gains. This encourages greater focus on the role of confidence-building measures (CBMs) in regional water management.

Centred on trust-building, CBMs not only involve direct state-to-state communication, but can also engage various actors, including the private sector, civil society, and local communities. Environmental CBMs (ECBMs), in particular, are vital to tackling long-term natural resource issues where communication, information-sharing, and collaboration can help combat environmental degradation and scarcity.

Strengthening ECBMs in water governance offers a much-needed approach. These are not foreign to Southeast Asia; the guiding principles of the Mekong River Commission (MRC) closely align with the aim of ECBMs. Its four member states – Laos, Thailand, Cambodia, and Vietnam – are mandated to engage in data and information sharing practices, including on water flow and water quality. Members must also notify relevant MRC bodies in advance of planned dam construction and participate in the mandatory consultation procedures.

However, while practices established by the MRC have successfully fostered a "Mekong Spirit" of dialogue and goodwill, shortcomings remain. Amid intensified effects of climate change, excessive hydropower dam constructions and, most recently, toxic waste pollution from critical minerals extraction, the Mekong River lacks joint- or river-wide projects. This has resulted in largely zero-sum outcomes, where benefits to one actor may cause harm downstream – a problem that existing mechanisms struggle to resolve.

Enhancing Multistakeholder Participation

Across several levels and shaped by multiple drivers, the wider pattern is clear: water insecurity intensifies where coordination is limited. The response must be a shifting

governance approach that is proactive, not reactive. Inviting all affected parties to discussions becomes its starting point: authorities, civil society and NGOs, community representatives, and, with increasing urgency, private actors.

The approach needs to be anchored in strong mechanisms of transparency and community impact assessments before project initiation. Local actors cannot be treated as “add-ons”; they must instead be granted mandates for participation in planning and monitoring. Additionally, the private sector’s impact on water resources requires stricter mandatory environmental and water-use disclosures. These provisions would help bridge existing trust deficits.

On a larger scale, joint projects should be taken more seriously. For example, treating the Mekong River as a shared resource with funding and benefits split among all participating actors offers significant advantages. It would help cement a more informed planning process to avoid transboundary harm, build mutual dependence and trust, and possibly build a legacy beyond water management.

In an era of water bankruptcy faced by new and intensifying drivers, it is critical to reframe water management as a shared, multi-level challenge that brings together governments, industry, and communities. This shift can unlock more cooperative and forward-looking approaches to managing demand, strengthening resilience, and aligning water use with long-term sustainability goals, while also mitigating risks to peace and security emerging across Southeast Asian states and communities.

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