GLOBAL WATER PARTNERSHIP

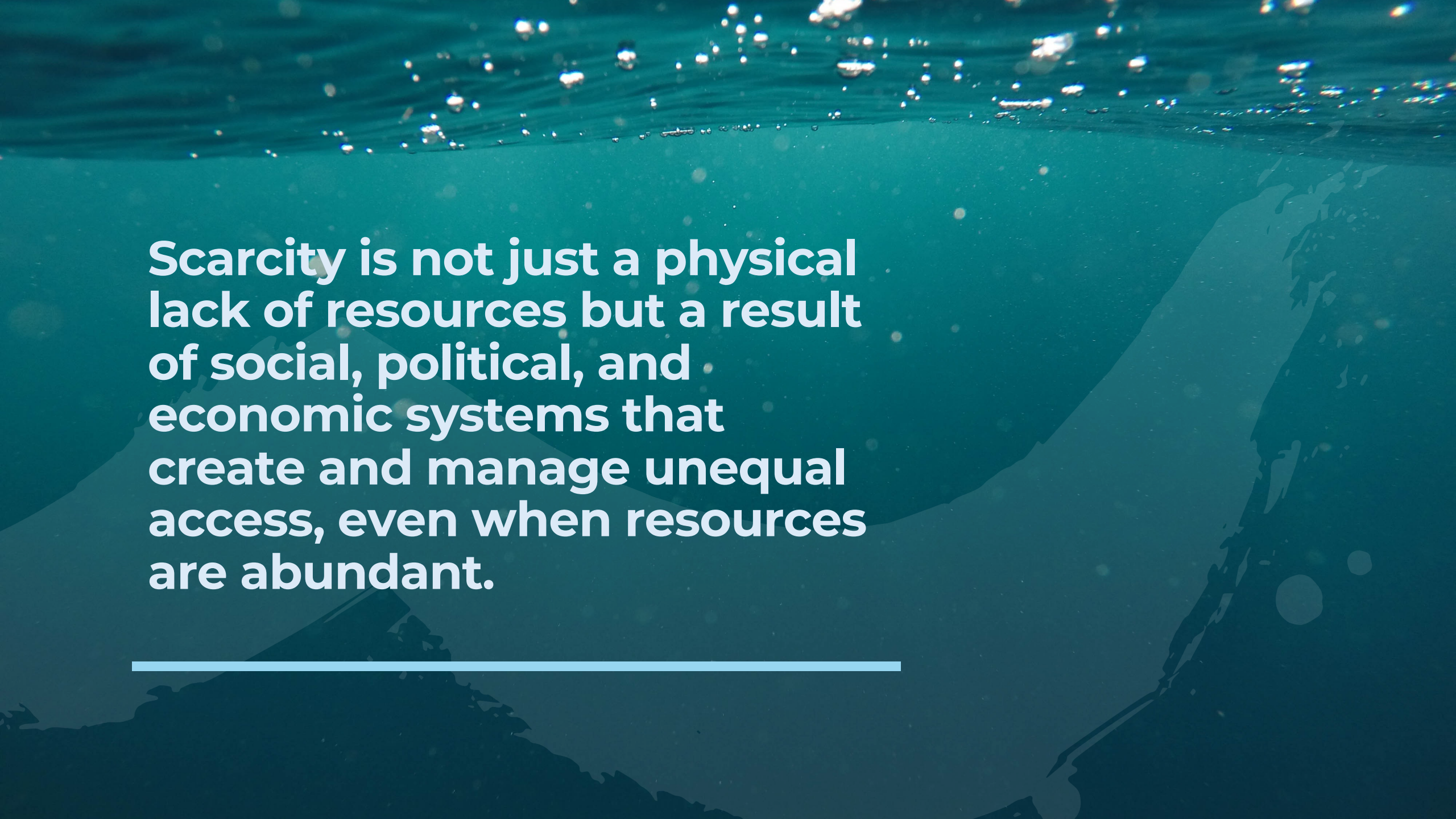
GLOBAL **TRANSFORMATION**
FOR A WATER SECURE WORLD

WATER SCARCITY IN INDONESIA: FROM SCARCITY TO SOLUTIONS

RAYMOND VALIANT
Regional Coordinator - GWP Southeast Asia

WATER INDONESIA 2025, 10 –13 SEPTEMBER 2025, JAKARTA


VIAR

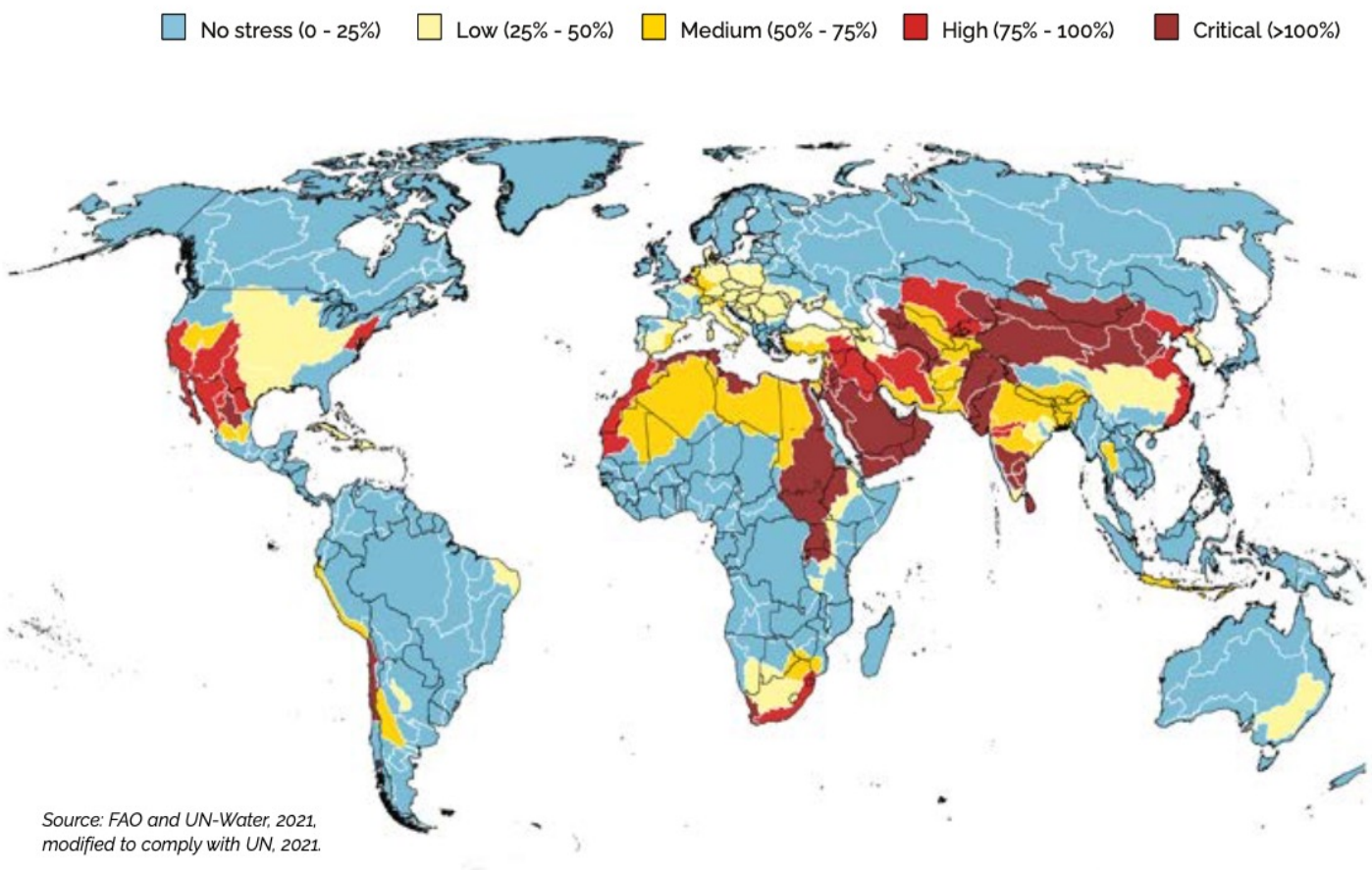

Scarcity is not just a physical lack of resources but a result of social, political, and economic systems that create and manage unequal access, even when resources are abundant.

INTRODUCTION: WATER STRESS

The water sector is facing mounting pressure due to extensive use.

Irrigation is the world's largest water user, reaching about 80% in Southeast Asia.

Climate change alters rainfall patterns, increasing reliance on man-made solutions.



Source: FAO and UN-Water, 2021, modified to comply with UN, 2021.

AI DATA CENTERS GUZZLE MUCH WATER

25,5K

CUBIC-M PER YEAR

A Single 1-MegaWatt Data Center's Annual Water Consumption

426

MILLION CUBIC-M

Annual Water Consumption Projected for Gulf AI Data Centers in 2030

300K

PEOPLE

Each MegaWatt Data Center Capacity Uses Water Equivalent to This Many People Daily Need

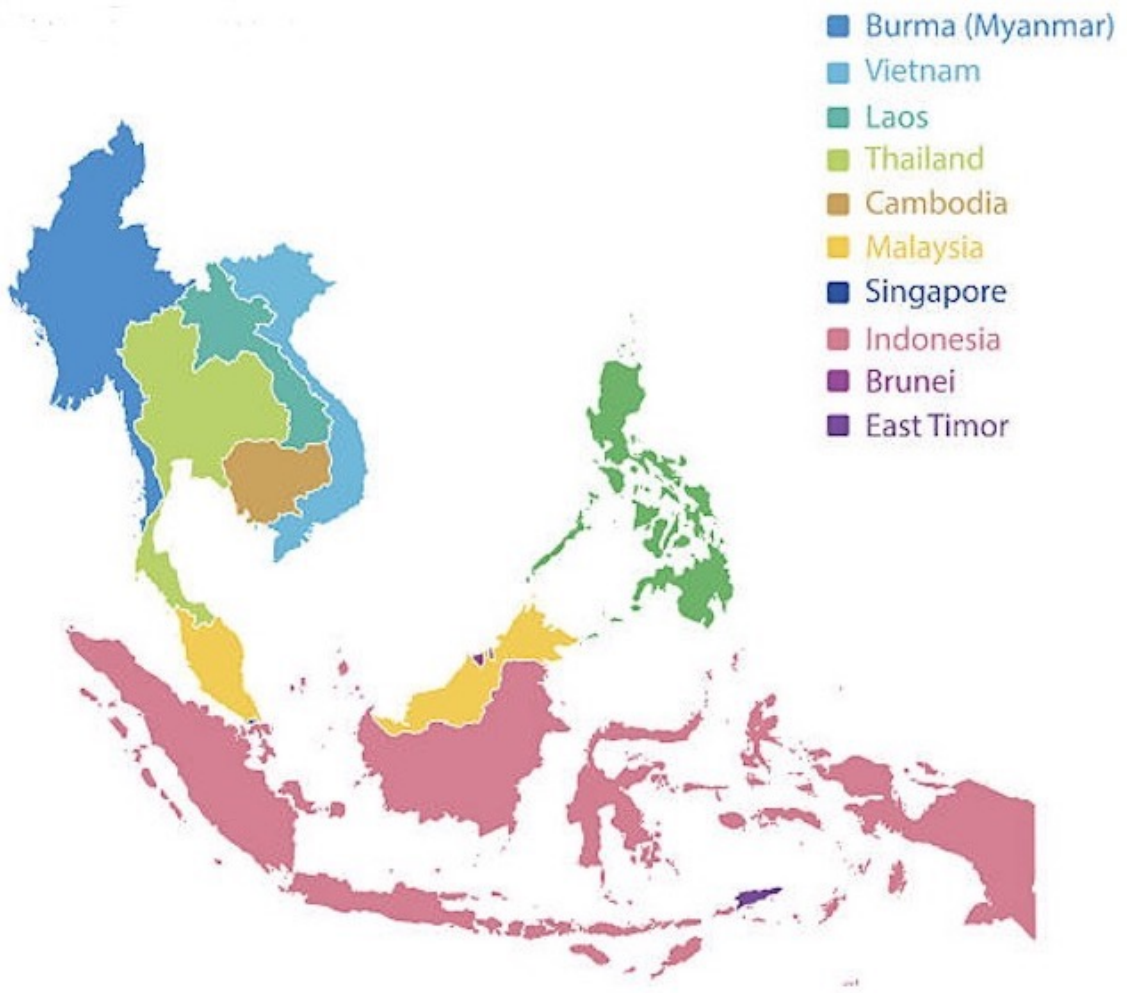
2023 – Ireland discovered data centers consuming **21%** of its electricity, threatening climate goals.

VISION OF THE GLOBAL TRANSFORMATION

GLOBAL WATER PARTNESHIP ORGANIZATION (GWP)

A WATER SECURE WORLD

OUR CONTEXT IN SEA



GWP Southeast Asia

Global Water Partnership Southeast Asia (GWP SEA) is one of the region with important role within the geopolitical context.

We working in the international network to foster an integrated approach to water resources management (IWRM) and climate resilient investments.

ASIA WATER DEVELOPMENT OUTLOOK

SOUTHEAST ASIA:

BALANCING PROGRESS AND ENVIRONMENTAL PRESSURES.

Most improvements in the water security.

34%

Increase in rural household water security score, that will support livelihood.

25%

Urban water security gain, as sanitation improved & affordability remained strong.

WORSENING

Ecosystem health is decreasing

PREPAREDNESS

is growing faster than the hazards but rising sea levels threaten current gains.

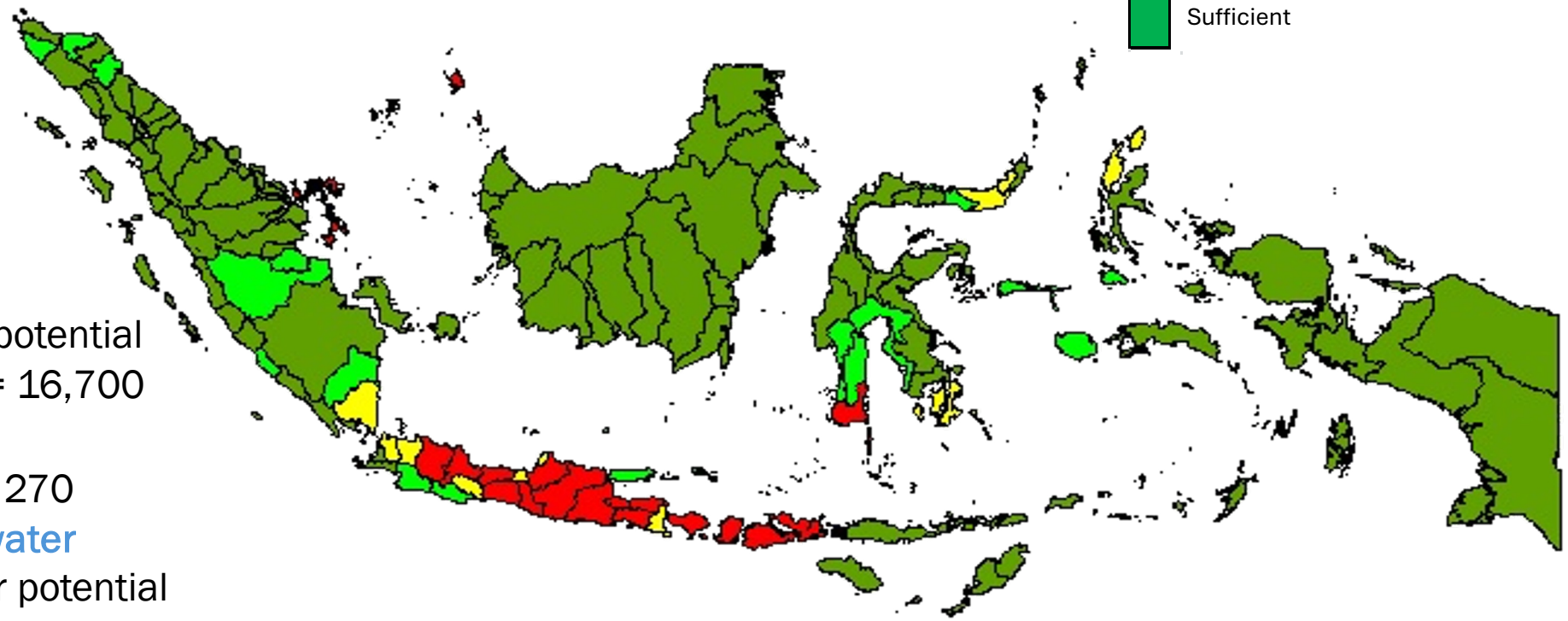
AT A GLANCE

- 10% increase in water security index
- **US$26B** annual water infrastructure needs
- Biggest improvements: Cambodia, Indonesia & Viet Nam.

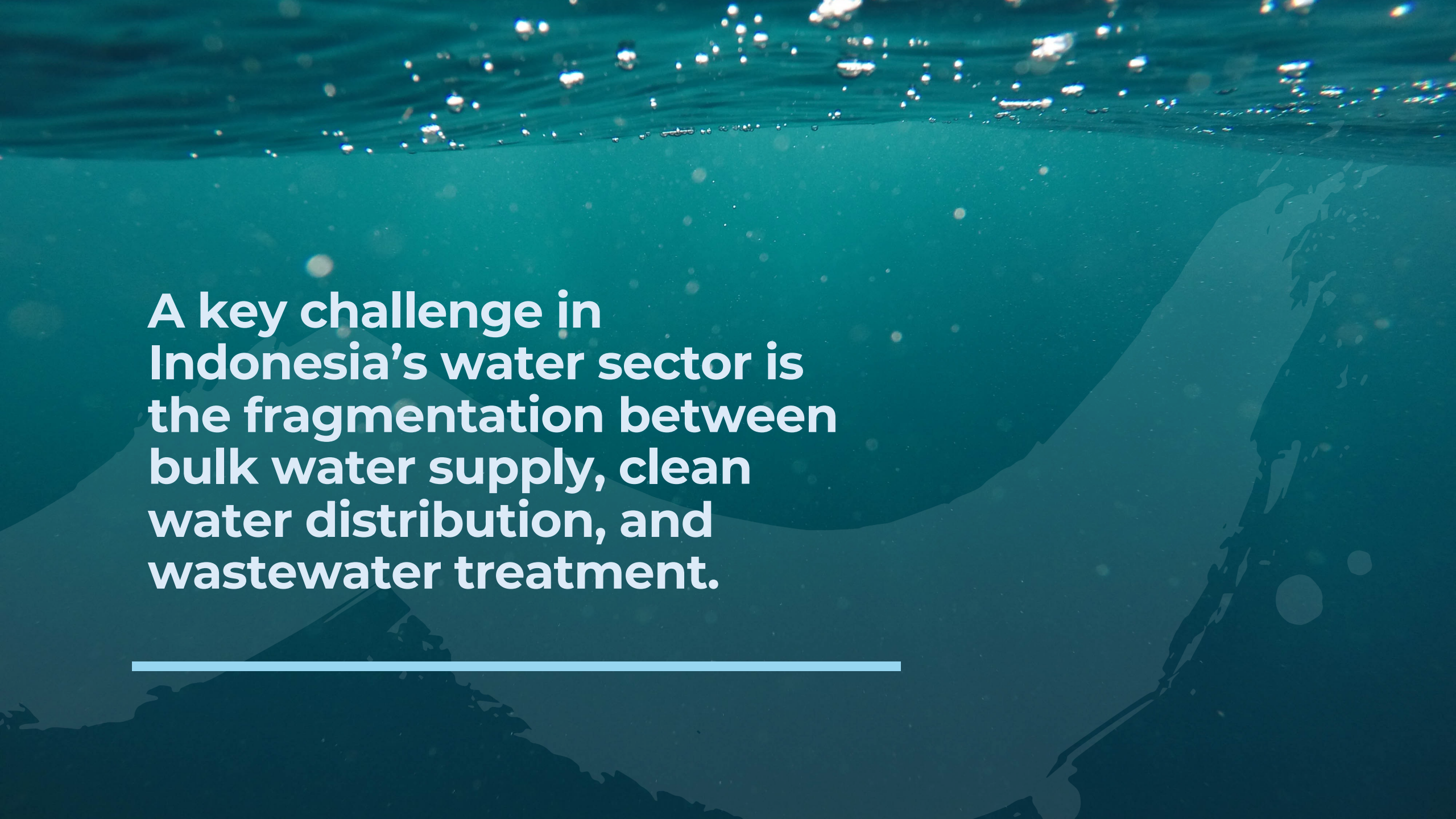
Source: ADB – AWDO Session, SWWW 24 August 2025

INDONESIA: AN ARCHIPELAGIC NATION

Indonesia has surface water availability (blue water) of 3,906 km^3/year but only 15 km^3/year or 63.5 m^3 per capita can be managed through dams.



- Gross surface water potential in Indonesia is high = 16,700 m^3/cap/year
- Java Island = 60% of 270 million inhabitants: water stress. Surface water potential in Java = 1,600 m^3/cap/year



A key challenge in Indonesia’s water sector is the fragmentation between bulk water supply, clean water distribution, and wastewater treatment.

DISPARITIES IN THE WATER SECTOR

The World Bank's Joint Monitoring Program (2023) recorded that 30.3% of the Indonesian population had access to protected and safe drinking water.

However, there are still deviations in the achievement of drinking water provision, as indicated by:

A shortfall of 6 million House Connections from the previous target 2019-2024.

An idle bulk water capacity of 38 m3/s due to limitations of distribution from the off-takers.

Water supply is managed by 404 entities, each serving only 26% to 36% of their designated area, with average non-revenue water levels ranging from 34% to 38%.

INVESTMENT FOR WASH (TO 2045)

Significant investment required: no single definitive figure for total investment to 2045, **substantial funding needed**.

Sanitation investment estimate: **IDR 116.7 trillion** (~USD 8.33B) for on-site sanitation to meet RPJMN targets

Clean water sector estimate: USD 24B required to achieve universal access and safely managed services for 20% of households.

Financing gap: gov't funding: in water supply and sanitation IDR 95 trillion (~USD 6.78B) between 2005–2023.

INFRASTRUCTURE INVESTMENT

	PUBLIC SECTOR & INTRAGOVERNMENTAL	CAPITAL MARKET	BANK, LENDERS AND IDF	CIVIL SOCIETY	GLOBAL POLICY DRIVERS
STEERING LEVEL	finfra; Indonesia Infrastructure Finance; Agency on Support Public-Private Partnership; AIP	J.P.Morgan; Aon	acciona; AECOM	Global Infrastructure Basel; World Resources Institute; WHC	World Economic Forum; World Water Council
EXECUTIVE AND ADVISORY	NSW Government; UNDRR; UNECE; The Sustainability Pledge; TCFD; Quality Infrastructure Investment Partnership	HSBC; WaterEquity; dolma impactfund; MUFG; infraVia; Pictet; Pegasus; 首创集团 Capital Group; Dalmore; Resonance Asset Management; 光大水务 Everbright Water	GIF Globalasia Infrastructure Fund; gef; IsDB Islamic Development Bank; ADB; Adaptation Fund; IDB Inter-American Development Bank; AIIB Asian Infrastructure Investment Bank; European Investment Bank; IFC International Finance Corporation World Bank Group	WaterAid; FIDIC; The Water Project; INBO International Network of Basin Organizations; MAVA; RICS; water.org; IWA the international water association; ICATALIST; The Nature Conservancy; Catalytic; Climate Policy Initiative	Sustainable Markets Initiative; CEO Water Mandate; ICLEI Local Governments for Sustainability; GFANZ; Investor Leadership Network

FUTURE STEPS FOR WATER SECURITY

Efficient Infrastructure: Upgrade aging water distribution systems to fix leaks and minimize losses; introduction of artificial intellegence. **Key issue**: continuous improvement in operation and maintenance.

Smart Water Grids: Use sensors and data analytics to track water use in real time, detect leaks, manage pressure, and optimize distribution. **Key issue**: financed by climate instruments and initiatives.

Behavioral Change: Promote awareness through education campaigns and tiered pricing to encourage responsible water use across households, agriculture, and industry. **Key issue**: political coherence.

DEFINING THE FUTURE

Sectoral Reform

Innovation

Circular Ways

Creative Funding

THANK YOU

RAYMOND VALIANT
raymond.valiant@gwpsea.org