



GLOBAL WATER  
SUMMIT 2026

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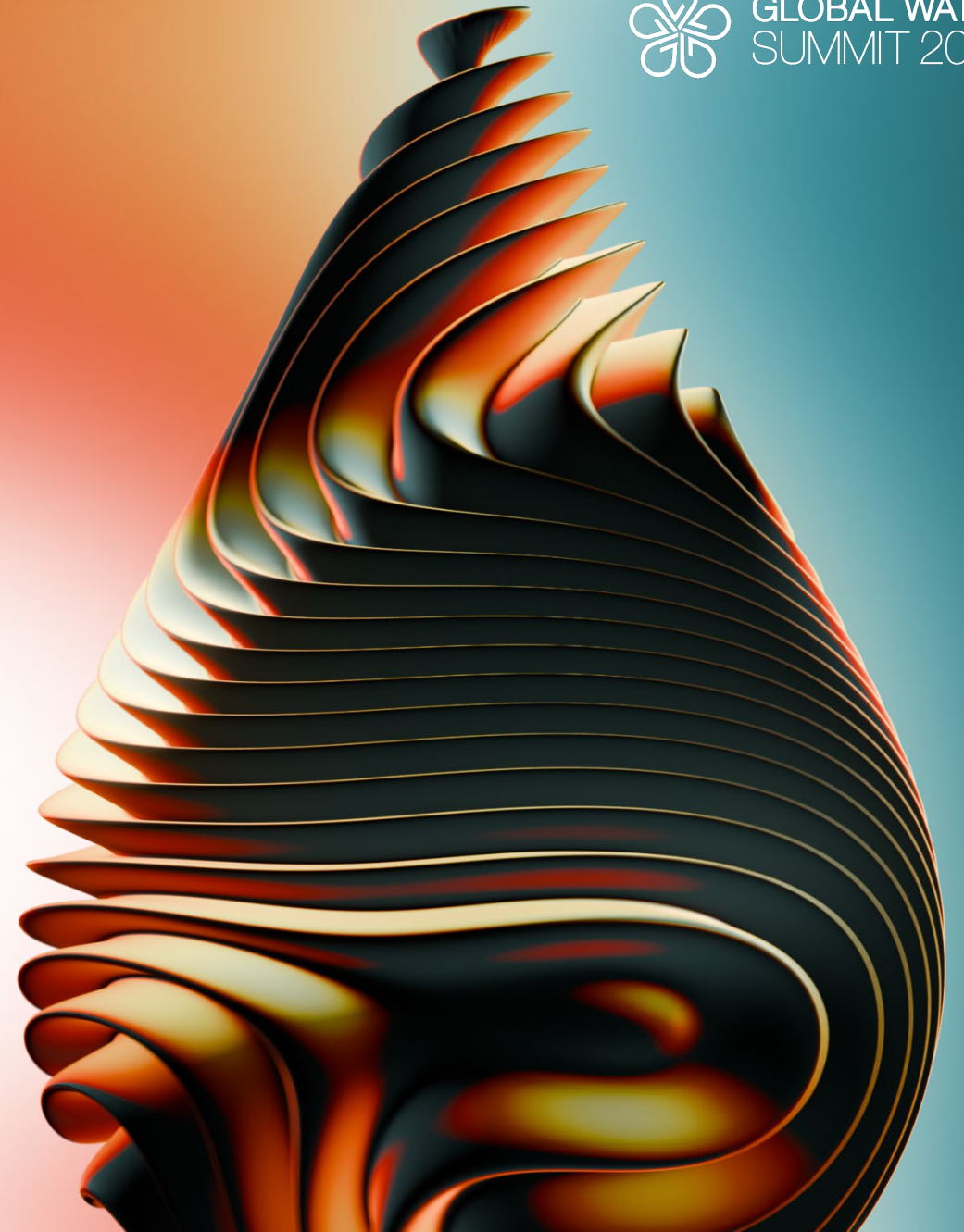
# Delivering Water at Megacity Scale

**Dr. Ram Prasath Manohar (IAS), Chairman**

Bengaluru Water Supply and Sewerage Board (BWSSB)

Bengaluru, India

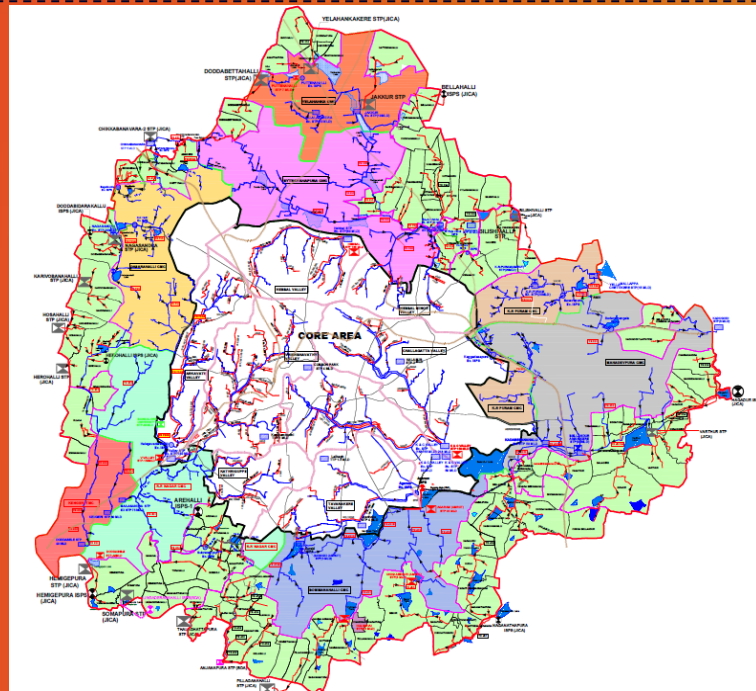
20<sup>th</sup> May | Madrid, Spain



# Profile: Bangalore Water Supply and Sewerage Board (BWSSB)



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**BWSSB Jurisdiction Map**



Area:  
**800 km<sup>2</sup>**



Population Catering:  
**~14 Million**



Total Water Supply  
Network  
**14,284 km**



Wastewater generated  
**2120 MLD**



Total Sewerage Network  
**12,000 km**



Sewage Coverage  
**100 %**



Nos and capacity STPs  
**34 -1348.50 MLD**



Daily WW generated/ Water  
Reuse  
**2,210 MLD/ 825  
MLD**



STPs planned  
**27 / 480 MLD**



O&M Revenue Recovery Ratio  
**100%**



Total BWSSB Revenue as on  
today

**~\$ 25 Million/Month**



GIS Enabled Network  
( Water Supply & Sewerage  
**~ 100%**

# The Challenges of Megacity

## Expanding City Population

**5th largest** metropolitan city in India. IT/BT, healthcare, industrial Hub. Expanding & fastest-growing metropolitan cities having 13 Million Population , density is **11,000 Per Sq km**.

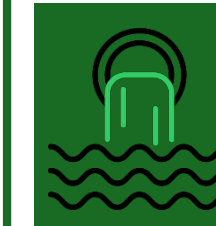


## Water Supply Issue

Bengaluru currently receives **3293 MLD** water supply. Shortfall of **1200MLD** of water by 2028. . It is estimated that City needs **3850 MLD** by 2030 to cater the population.

## Depletion of ground water

Bengaluru's groundwater dependency has reached a critical threshold, exhausting their entire available supply in 2024 ( CGWB, 2024)



## Sewerage System

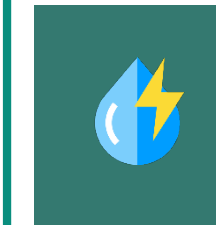
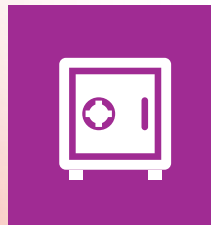
**Total Sewerage Generation (MLD) : 2255**

Existing (34) WwTP (MLD) : 1348.5

Ongoing Construction(27) (MLD) : 480

Gap in Treatment ( MLD ) : 426.5

**Seasonal Shift & Variation, Water Quality and Climate Change issue :** City having shortfall of water during dry season , and facing flooding issues during monsoon, Climate change aggravate the process

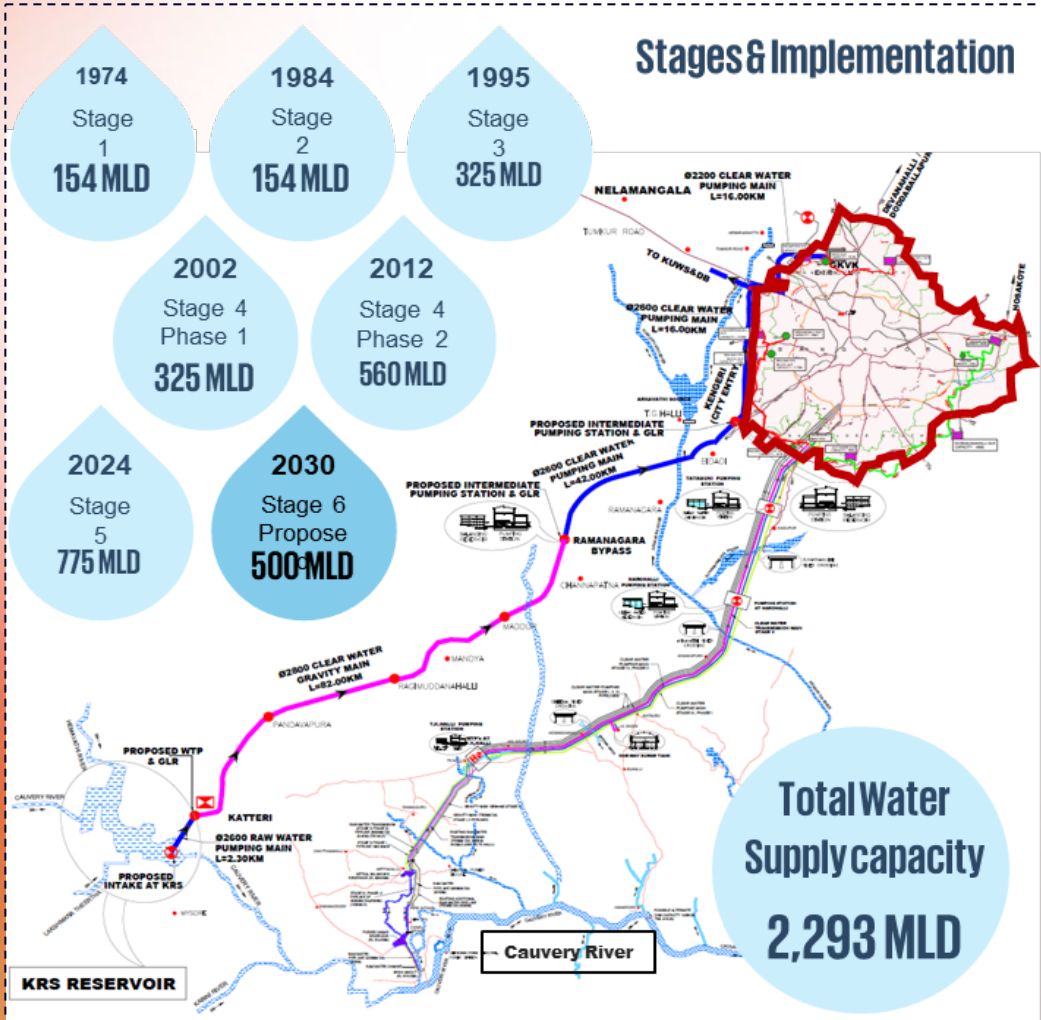


**Operational Challenges i.e. Energy Consumption & UFW :** BWSSB facing huge challenge in optimization of energy during operational activities and reduction of UFW for Water Security

# How BWSSB is Delivering the Water Transition ?



Surface Water : The Cauvery Water Supply (River)  
Ground water : 1000 MLD



## Reuse of Treated Water

- **Strategic Utilization** : Treated water in irrigation , lake filling and aquifer recharge purpose.
- **458 MLD** of treated water is transported daily from Bengaluru to these regions.
- **274 lakes** have been rejuvenated (140 in Kolar, 65 in Chikkaballapura, , and 69 in Anekal).
- **30 Lakes filling Annually**
- **Zero Bacteria Technology (with IISC Bangalore)**: 3 lakh liters/day to companies like Wipro – scaling to 1 crore liters/day.
- **Ground Water Replenishment** : 700 rainwater recharge pits installed 1,000 additional recharge pits planned
- **Community RWH** 2000 RWH have been installed
- **Industrial & Commercial Reuse on PPP Mode**
  - Data Centre
  - SEZs
  - Semi Conductor
  - **9000 Jala Mitra**

## Digital Backbone

- **Asia Largest AI based Control and Command centre (SCADA)**
- **Sajjala ( Web Based )**
- **Web based billing and collection facility.**
- **Jaladhare (Online Connections):** Online New Pipe Connections
- **Complaint Management System (CMS)** Automated, multi-channel system that allows citizens to register complaints via web, app, or call center.
- **. Kaveri On Wheels (Sanchari Kaveri :** India's first IoT-based smart water tanker management system. It uses RFID and GPS tracking.

# Key Strategic Projects in the Pipeline

## Water Supply



- Cauvery Phase 5 – 600 MLD additional water supply
- IoT enabled system to live monitor Health of borewell
- Robotics technology for Sewerage leak detection

## Wastewater Treatment & Reuse



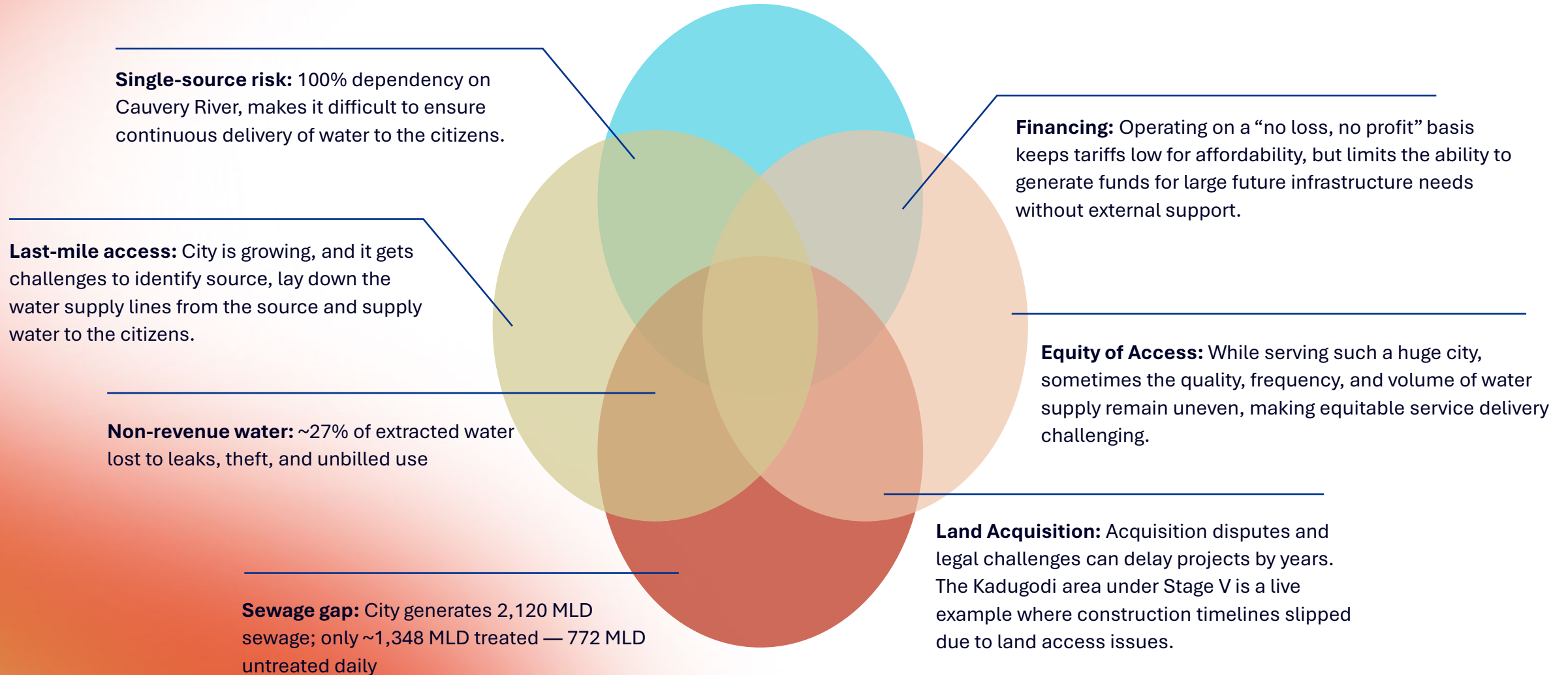
- PPP Based Scaling of wastewater treatment infrastructure.
- PPP based Biogas generation and distribution
- PPP based Energy optimization project for Water supply and Sewerage system.

## Digital Backbone



- **Digital Twinning** : Water Supply and Sewerage System
- IIoT-enabled Integrated Pumping Performance Management System
- NRW reduction through AI enabled system

# Challenges for Serving a Fast-Growing Megacity



# Panch Sutras WATER Governance



Augmentation of Water Supply : Scaling raw water supply to match demand

Reuse and Reduction of Wastewater : Treated water as a resource

Citizen Centric - Community Ownership at every ward

Efficiency - Energy Efficiency , NRW Reduction , smart solutions

Digital Backbone - AI , IoT, SCADA, GIS – Data Driven governance

**Vision 2030 : AI Utility of the year**

# Opportunities to work with Private sector



## 01

### PPP Mode of Project Development

- Waste water treatment and sale of Treated water to Industry / Data Centre / Companies / Industry / SEZ/ Semi Conductor
- Biogas generation and sale to companies for fuel and allied purpose.
- Management of sludge and distribution to the stakeholder /
- Digital transformation of Utility

## 02

### Digital Solutions

- Digital Twining of Water Supply and sewerage system
- AI Solutions for Energy Optimization
- Reduction of NRW by 10% by 2030 ( currently 28%)

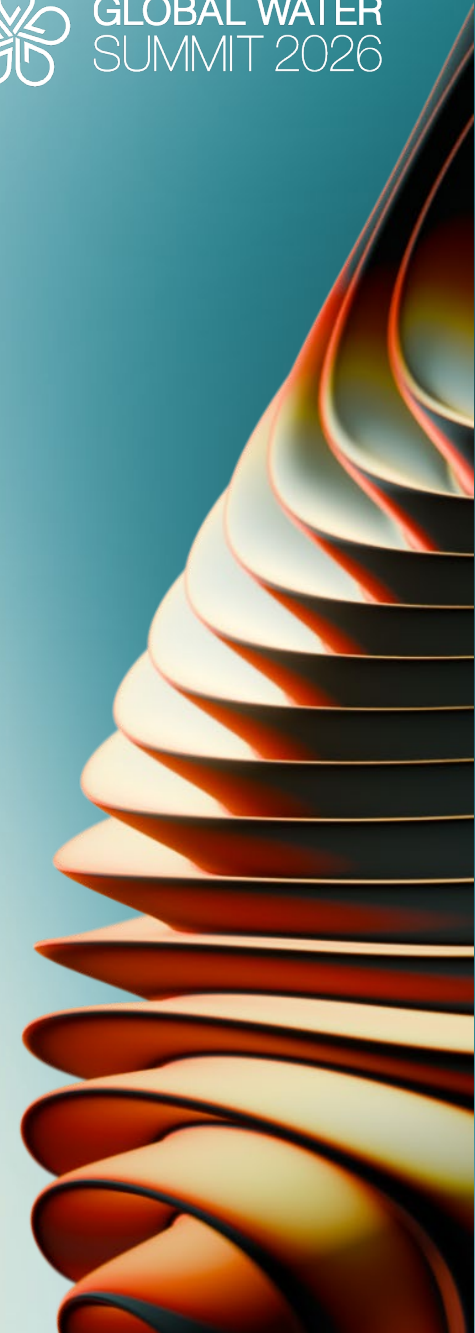
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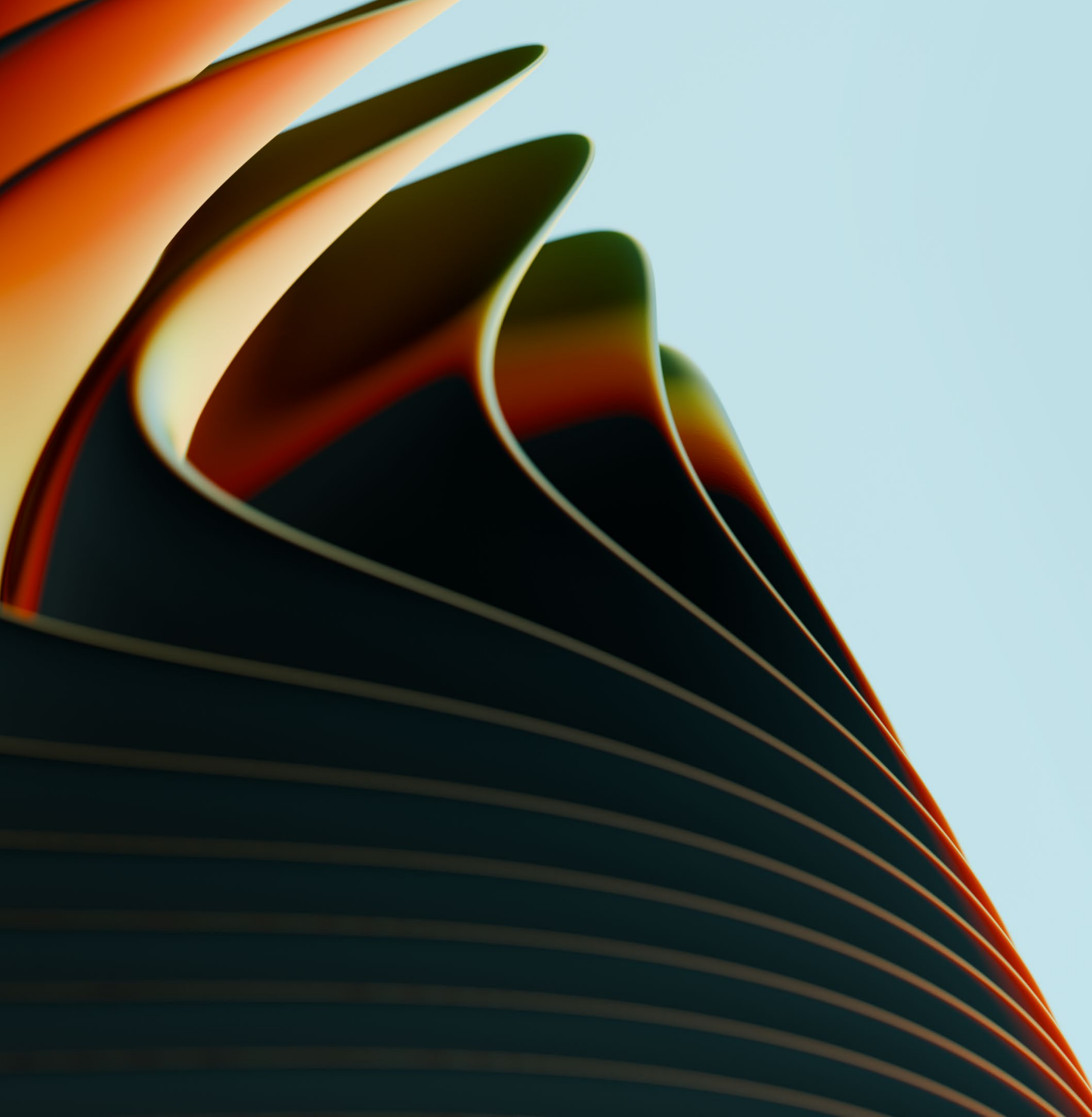
### Private Sector and Blended Finance

- Performance-based contracts to improve accountability and efficiency.
- Attracting private innovation and expertise to drive scalable and sustainable solutions

**Thank You**









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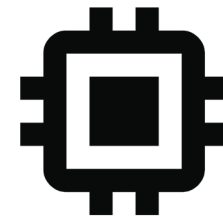
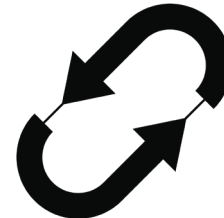
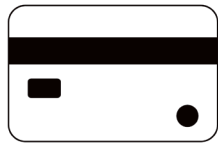
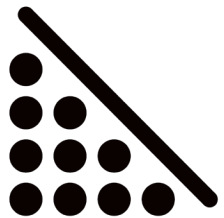
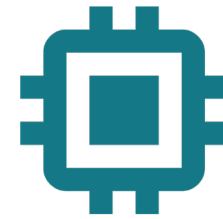
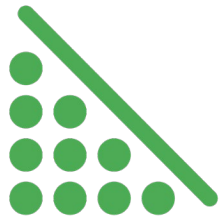
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**Desal**

**Finance**

**LATAM**

**Projects**

**Reuse**

**Tech**

**Utilities**

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## Charts and graphs

# Examples of charts and graphs

Chart Title

■ Category 1 ■ Category 2 ■ Category 3

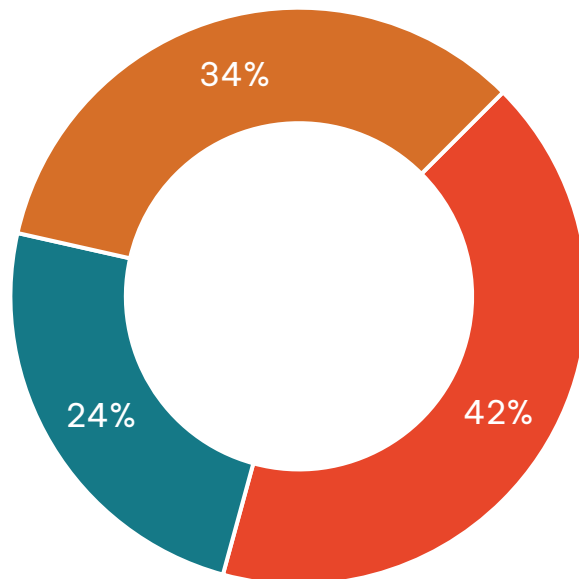


Chart Title

■ Series 1 ■ Series 2 ■ Series 3

