

UN Water Conference 2026
Concept Paper for Interactive Dialogue
Investments for Water

Investments for Water Security: capacity building, financing, technology and innovation in Latin America and the Caribbean

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1. Introduction

The region faces an annual financing shortfall for the SDGs of close to US\$99 billion until 2030 (all priority areas), while in water and sanitation additional needs are estimated to exceed US\$150 billion over the next 12 years to achieve the regional goals². Investment in water is a necessary condition to achieve SDG 6 but also to unlock wider progress across the 2030 Agenda. Yet chronic underinvestment, especially in the Global South, continues to erode resilience, equity and productivity. The 2026 UN Water Conference is a timely opportunity to reset ambition with systemic, inclusive and results-oriented investment strategies that turn political commitments into bankable action.

When well designed, water investments protect human health and rights, strengthen productivity, reduce disaster and climate risks, and conserve ecosystems. However, finance remains scarce precisely where it generates the highest social returns: underserved rural and peri-urban territories, Nature-Based Solutions (NBS), integrated water resources management, and digital operations. Closing these gaps is not about mobilizing more money, it requires capability and coherence, so available resources are used better and faster.

Evidence from Latin America and the Caribbean (LAC) shows how low growth, high inequality and institutional weaknesses – the region’s “triple trap” – are increasingly magnified by water risk. (CEPAL, 2024a)³. The region’s economy, where 8 in 10 people of LAC live in cities, faces extreme water security risks that raise the cost of capital, depress firm performance, and widen territorial disparities.

Structurally, LAC exhibits low per-capita storage capacity (approximately 14% per capita), insufficient wastewater treatment (less than 50%), and significant operational losses due

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² OECD, ECLAC, CAF, and European Commission (2025), Latin American Economic Outlook 2025: Promoting and Financing Production Transformation.

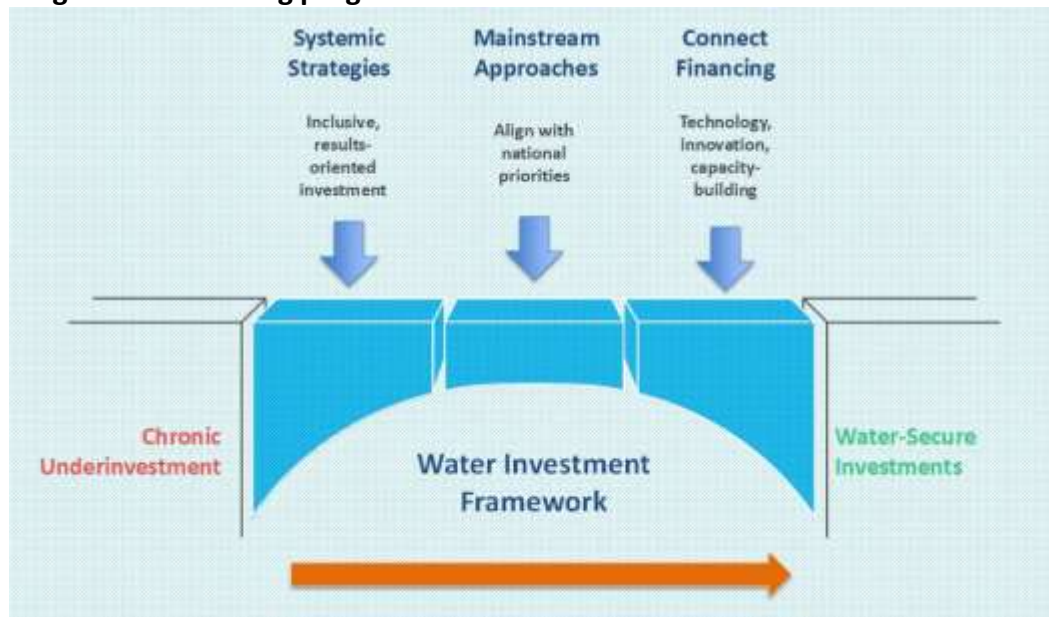
³ CEPAL (2024a), América Latina y el Caribe ante las trampas del desarrollo: transformaciones indispensables y cómo gestionarlas (LC/SES.40/3-P/-*), Santiago.

to non-revenue water (over 40%) and asset degradation (CEPAL, 2024b⁴). In many urban centers, dry-season water stress is high, and quantity and quality risks remain elevated; in the Caribbean, sea-level rise intensifies saline intrusion and flooding, threatening tourism and fisheries—and with them jobs and the fiscal base. Ultimately, service degradation cost lives and productivity (Saravia Matus *et al*, 2023⁵).

In economic terms, water is the hidden input: when it is scarce, excessive or polluted, production contracts, costs rise, and investment is deferred. Conversely, when water services are reliable, land values are often appreciated substantially. Empirical studies show that increases attributable to networked water and sanitation (notably sewage) can, in some contexts, exceed capital costs by up to 3:1. Capturing a portion of this uplift through Land Value Capture (LVC) helps co-finance last-mile connections and reduce fiscal pressure⁶. Equally, water security is essential to both food and energy security in the region (CEPAL 2024b).

While countries and institutions are advancing various solutions such as blended finance, Performance-Based Contracts (PBC), Public-Private Partnerships (PPP), community-anchored schemes that make water visible, valued and investable, a major issue is to ensure the actual mainstreaming of these approaches, align them with national priorities, and systematically connect financing, technology and innovation, and capacity-building so that pipelines translate into implementation and scalable solutions (See Diagram 1).

Diagram 1: Unlocking progress with water investments in LAC



Source: Own elaboration

⁴ CEPAL (2024b), Panorama de los recursos naturales en América Latina y el Caribe, 2023 (LC/PUB.2024/4), Santiago

⁵ Saravia Matus, S. Llavona, A., Naranjo, L., García, S., Guzman, N., Saravia, J.A. (2023) Urban Water Management Challenges and Opportunities in Latin America and the Caribbean Urban Water Security Issues Series. Aug 2023

⁶ Lincoln Institute of Land Policy, 2024. "Unlocking Climate Resilience Through Land Value Capture.

This concept paper maps the current landscape, identifies system-wide and transaction-level bottlenecks, proposes a valuation-led Water Investment Framework, and concludes with concrete deliverables and guiding questions for Member States and partners.

While grounded in LAC evidence and practice, the framework is globally applicable: it aims to help countries make water-secure, productivity-enhancing investments that protect people and nature—at the speed and scale this decade demands.

2. Status and Trends

Over the last decade, progress in water-related investment has been markedly uneven across regions, income levels, and sectors. While global infrastructure spending has risen in absolute terms, expenditure on water and sanitation remains below what is needed to meet SDG 6 targets (Saravia Matus *et al*, 2023⁷). Public financing is insufficient and highly dependent on central budgets, private participation is limited, and climate or blended finance instruments are still emerging. Compounding this, fragmented governance and weak subnational institutional capacity constrain project preparation, execution, and follow-up; in several countries, a substantial share of sector budget is not fully executed (reaching only a 72% implementation rate)⁸. Likewise, the gap varies depending on the type of actor: municipalities, public/mixed utilities, regulators and banks face different bottlenecks that require differentiated instruments and metrics.

Against this backdrop, the 2025 Regional LAC Water Week⁹ and the Fifth Regional Water Dialogues¹⁰, convened by ECLAC and partners, strongly underscored that closing the gap between planning and implementation requires prioritizing the strengthening of institutional capacities. Participants converged on a key insight: institutional capacity is as critical as financial availability to unlock investment flows. This reframes the agenda from merely “raising more money” to “using available money better and faster,” through robust project preparation, sound risk allocation, coherent regulatory frameworks, and monitoring and evaluation systems that demonstrate results.

Even so, clear signals of change are emerging. In LAC, the launch of the High-Level Panel on Water Investment co-convened by ECLAC, Global Water Partnership (GWP) and Development Bank of Latin America (CAF)—sends a strong political signal to shift from isolated projects to a coherent regional portfolio aligned with national priorities and SDG 6 acceleration. In parallel, ECLAC’s Financing Framework for Water Security offers a

⁷ S. Saravia Matus, Fernandez, Montañez, López, Naranjo, Llavona “Necesidades de inversión en agua potable y saneamiento en América Latina y el Caribe: efectos en el empleo verde y el valor agregado bruto”, serie Recursos Naturales y Desarrollo, N° 218 (LC/TS.2023/101), Santiago, Comisión Económica para América Latina y el Caribe (CEPAL), 2023.

⁸ [World Bank. \(2024\). Funding A Water-Secure Future: An Assessment of Public Expenditure in the Water Sector. World Bank Group.](#)

⁹ <https://www.cepal.org/en/node/71224>

¹⁰ <https://www.cepal.org/en/node/71223>

systemic tool to identify enabling investment conditions, focusing on strengthening Technical, Operational, Political and Prospective (TOPP) capacities through practical cases and South–South cooperation. These initiatives aim to interlink finance, technology and innovation, and capacity-building, providing actor-specific templates and key performance indicators (KPIs) that clarify who does what, with which instruments, and against which results, so that project pipelines translate into effective implementation at scale.

In practice, five trends define today’s landscape in the region:

(1) Investment remains concentrated in “shovel-ready” (mostly gray) infrastructure, while underinvestment prevails in key areas that sustain long-term performance: asset management, demand-side efficiency, watershed protection and Nature-Based Solutions (NBS), and digitalization of operations are not sufficiently prioritized. This perpetuates high non-revenue water, asset degradation and elevated operating costs, eroding financial credibility and raising the cost of capital.

(2) Public budgets remain the backbone of service provision, but there is a shy yet discernible expansion of performance-based approaches, credit enhancements, revolving funds, and tariff reforms with equity safeguards to crowd in private and climate finance. Adoption, however, is heterogeneous due to high transaction costs for small municipalities and utilities, regulatory frameworks evolving at uneven speeds, and data gaps that complicate risk pricing and results verification.

(3) Utilities and basin agencies are digitalizing operations (smart metering, leakage control, asset health monitoring), integrating energy recovery and resource circularity in sanitation, and deploying NBS to secure supply and cut treatment costs. These innovations can de-risk assets, lower Operating Expenditure (OPEX), and strengthen creditworthiness, but they require capabilities, standards, and financing to scale.

(4) Water risk is becoming a macroeconomic and financial issue: supervisors and investors are beginning to integrate it into sovereign and corporate assessments—creating constraints, but also opportunities for countries that can show credible pipelines and strong governance. According to the European Central Bank¹¹ water scarcity alone can put a double-digit share of economic value added at risk in European countries, with exposure far beyond agriculture—into food and beverage, manufacturing, energy generation and urban services

(5) Project preparation facilities, transaction-readiness support, and peer-learning networks have grown; however, fragmented governance persists. For instance, coordination between water, urban planning and productive sectors remains weak, and the use of economic valuation (of water, land and ecosystem services) in decisions

¹¹ <https://www.ecb.europa.eu/press/key/date/2025/html/ecb.sp250522~b371549cb6.en.html>

affecting tariffs, subsidies and spatial development is limited. At this point, investing in institutional capacity (not only Capital Expenditure (CAPEX)), determines the speed and quality of delivery.

At the same time, the region offers scalable practices. Examples include energy and methane recovery in sanitation (See Box 1), performance-based contracts that reduce network losses, land-value capture to co-finance extensions to vulnerable neighborhoods, and city–basin–value-chain platforms that align urban investments with source protection and sectoral productivity (Altamirano and Saravia Matus 2026, forthcoming)¹². Together, they demonstrate that it is feasible to make water visible, valued, and investable with social, environmental, and economic returns. Development banks (national and regional) and subnational governments can also assume a larger role in the investment architecture, while public–private partnerships and climate finance—backed by credit enhancements and tariff frameworks with equity safeguards—could gain traction, particularly where clear rules and reliable data exist.

Box 1: Driving the circular economy in wastewater treatment in Latin America and the Caribbean

Based on diagnostics of 75 medium-sized wastewater treatment plants (WWTPs) (500–4,000 l/s) in five countries, ECLAC estimated that an investment of about US\$250 million could generate annual energy savings of roughly US\$46 million, with a payback period of around six years, operating cost reductions of nearly 40%, and an estimated 88% decrease in methane emissions (Saravia Matus et al., 2022)¹³. A second analysis of seven small and medium WWTPs (30–220 l/s) in Mexico and El Salvador showed that an investment of US\$5.37 million would save 8,077 MWh per year (about US\$1.35 million), with an average payback of 5.5 years and reductions of approximately 5,200 tCO₂e annually (Saravia Matus *et al* 2025¹⁴). These results support a strong economic and climate case for scaling circular solutions, and ECLAC’s methane calculator enables national and municipal teams to pre-screen projects and estimate benefits without relying exclusively on external consultants. Link: <https://www.cepal.org/es/notas/calculadora-metano-evaluacion-aprovechamiento-energetico-biogas-plantas-tratamiento>

¹² Altamirano and Saravia Matus (2026) “Financial Framework for Water Security”, forthcoming Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2026

¹³ S. Saravia Matus, Fernandez, Montanez, Blanco, Llavona, Naranjo, Sarmanto (2025). The circular economy opportunities for wastewater treatment systems in Latin America and the Caribbean, Natural Resources and Development Series (213) (LC/TS.2022/193), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).

¹⁴ S. Saravia Matus, Fernandez, Chavarro, Sarmanto, 2025. “Energy recovery from methane in wastewater treatment: case studies in El Salvador, Mexico and Panama”, Natural Resources and Development series, No. 226 (LC/TS.2024/143), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2025.

Looking ahead to the next five years, the outlook is ambivalent yet promising. Bottlenecks in governance, financing, and institutional capacity still slow execution and limit impact. Yet frameworks and coalitions capable of accelerating quality investment are emerging along with efforts to support financing and economic valuation toolkits, project preparation mechanisms and transaction clinics, and deeper integration of technology and innovation (including NBS and digitalization). The 2026 UN Water Conference can play a catalytic role by consolidating successful experiences, strengthening partnerships, and sending a clear political signal: investing in water is urgent and strategic for sustainable development and climate resilience. The challenge—and opportunity—is to align finance, technology and innovation, and capacities to turn portfolios into works on the ground, roadmaps into measurable results, and commitments into tangible benefits for people and territories.

3. Challenges and emerging issues

This section distinguishes cross-cutting, system-wide challenges that shape the enabling environment from water-investment-specific challenges that directly impede the structuring and delivery of bankable projects and programmes.

A. Cross-cutting, system-wide challenges (enabling environment)

1) Financing architecture and market signals: Available funds are too often channeled through short-term, projectized operations rather than coherent, multi-year programmes. The result is fragmentation—multiple small projects, weak portfolio effects and uneven O&M—driven by a disconnect between national planning instruments (sector strategies, territorial plans, NDCs/NAPs) and allocation mechanisms across budgets, development banks and climate funds. Macro-financial headwinds—tight fiscal space, elevated debt service, shallow local markets—raise the cost of long-tenor finance, especially for subnational. Enabling conditions for private and blended finance remain incomplete (regulatory uncertainty, misaligned tariffs/subsidies, limited utility creditworthiness, scarce standard documentation), leaving PPPs and performance-based contracts underused even when socio-economic returns are strong.

2) Institutions, capacities and coordination: Technical, operational, political and prospective capacities remain a binding constraint. Many institutions lack multidisciplinary structuring teams and effective platforms to align water, urban development, environment, disaster risk management and productive sectors. High staff turnover and narrow career paths erode institutional memory. Regionally, transboundary basin bodies and cooperation platforms are under-leveraged to pool risk, harmonize standards and replicate what works.

3) Climate, environment and resilience alignment: Escalating droughts, floods, heatwaves and quality shocks outpace legacy design assumptions. Planning still only partially integrates grey-green-digital portfolios, watershed protection and circularity, and alignment with NDCs, NAPs and DRR frameworks remains patchy. Instruments are not

consistently tailored to compound risk profiles (“too little, too much, too polluted”), increasing maladaptation and lifecycle costs.

4) Data, MRV and investment transparency: Most countries lack standardized, disaggregated data on water finance and outcomes across public, private and development sources. Budget codes seldom distinguish core water-security functions; no common green/blue taxonomy tracks eligible investments. Weak MRV limits transparency, impedes risk pricing and performance-based contracting, and slows access to thematic/climate finance. Gaps in gender-responsive and territory-specific data hinder last-mile prioritization and accountability.

5) Equity, rights and social licence: Affordability safeguards, Indigenous rights, gender equality and disability inclusion are unevenly embedded in financing frameworks. Limited participation and social dialogue—especially in territories with historic exclusion—undermine fair benefit distribution, legitimacy and social licence, raising project risk and cost. (Inclusion is therefore treated as a cross-cutting requirement across all solutions.)

B. Water-investment-specific challenges (structuring and delivery)

1) Value creation and revenue design: The co-benefits of reliability—health gains, avoided disaster losses, productivity (tourism, agro-industry, energy, manufacturing) and land-value uplift—are rarely monetized ex-ante. Without valuation-informed instruments (land-value capture, payments for ecosystem services, resilience/insurance-linked mechanisms) and well-designed abstraction/discharge charges, viable projects appear weaker than cash-flow-rich alternatives despite high economic returns. At the same time, tariff and subsidy frameworks often fail to reward loss reduction, asset management and demand efficiency, eroding operating performance and creditworthiness.

2) Pipeline quality, standardization and lifecycle readiness: Pre-feasibility gaps—demand/quality scenarios, climate stress testing, O&M and lifecycle costing, risk allocation, distributional analysis—slow due diligence and inflate transaction costs. Preparation facilities are fragmented; end-to-end support from concept to close is the exception. Heterogeneous term sheets, risk matrices, KPIs and MRV protocols impede PBCs, PPP/DBO structures and results-based climate finance. Financing and procurement remain biased to “new build” rather than lifecycle optimisation (NRW/energy reduction, asset rehabilitation, digital O&M) and do not consistently recognise NBS stewardship costs—further weakening bankability.

3) Subnational execution and access to finance: Municipalities and smaller operators struggle to meet fiduciary, safeguards, procurement and reporting requirements. Transaction-readiness support is episodic, and few platforms provide standard documentation, framework agreements or umbrella guarantees that lower per-deal costs and crowd in local lenders. Many subnational entities lack credit histories and stable own-source revenues to anchor borrowing or PPPs, keeping pipelines thin where service gaps are most acute.

4) Functional-territory integration and climate/circularity in deals: Planning and budgeting still reflect silos. Utilities, basin agencies and productive sectors miss cost-effective cross-sector options—industrial/agricultural reuse, source protection that reduces treatment costs, joint storage for energy–water optimisation—because governance and finance do not match city–basin–value-chain realities. Deal models also under-embed climate and circularity: compound risks, modularity, resource/energy recovery, contingent finance and resilience metrics are not consistently built into financial models, weakening bankability and long-term service credibility.

If these bottlenecks are not addressed holistically both the system-wide enablers and the investment-specific constraints—the gap between commitments and results will widen, and the cost of closing the SDG 6 deficit will rise year after year. The implications are stark; a cascade of interconnected failures that erodes fiscal sustainability, productive capacity, infrastructural resilience and social cohesion:

- Macro-fiscal deterioration and asset degradation are the first-order consequences. Climate shocks damage critical infrastructure and disrupt service delivery, precipitating emergency expenditures that crowd out preventive investment. Deferred maintenance compounds hidden liabilities, forcing governments into reactive, costlier damage-control cycles precisely when adaptation demands expansion of capital spending. This narrows fiscal space and tightens the trap that confines future water investments.
- Economic productivity losses have negative effects across sectors and geographies. Firms confronted with higher input costs and operational uncertainty reduce capital allocation to water-dependent activities. Households absorb mounting health and time burdens, while investors facing elevated risk premia, redirect capital toward less climate-exposed sectors. The aggregate effect is diminished economic dynamism, compressed tax revenues and swelling social welfare demands, which intensify fiscal pressure and make future infrastructure investments increasingly difficult to justify and finance..
- Infrastructure lock-in perpetuates technological and institutional stagnation. Stranded and maladapted assets proliferate when projects fail to integrate compound risks or harness circularity opportunities. These sunk costs become liabilities that constrain investment capacity and divert scarce resources toward legacy systems, foreclosing pathways to modernization and the efficiency gains essential for climate adaptation.
- Territorial inequalities and climate injustice accelerate social fragmentation. Last-mile rural areas, peri-urban settlements and climate-vulnerable zones remain chronically underfinanced. Climate impacts fall disproportionately on Indigenous Peoples, smallholder farmers, informal settlers and low-income households least responsible for and least equipped to adapt. This spatial concentration of risk and

financing exclusion undermines project legitimacy, erodes social licence and renders equitable water-security targets unreachable without fundamental governance restructuring.

The result is a self-reinforcing cycle of underinvestment, deteriorating services and expanding vulnerability where the cost of inaction escalates exponentially rather than linearly. Without intervention, SDG 6 deficits will widen progressively, and the mitigation and adaptation costs across sectors will multiply beyond current estimates.

The 2026 UN Water Conference offers a unique opportunity to pivot from fragmented, reactive investments to strategic, system-based and inclusive financing that links investment with governance, innovation and human rights. By strengthening enabling environments and targeting investment-specific holdups, Member States and partners can convert political will into investible water solutions and measurable results for people and nature.

4. Solutions

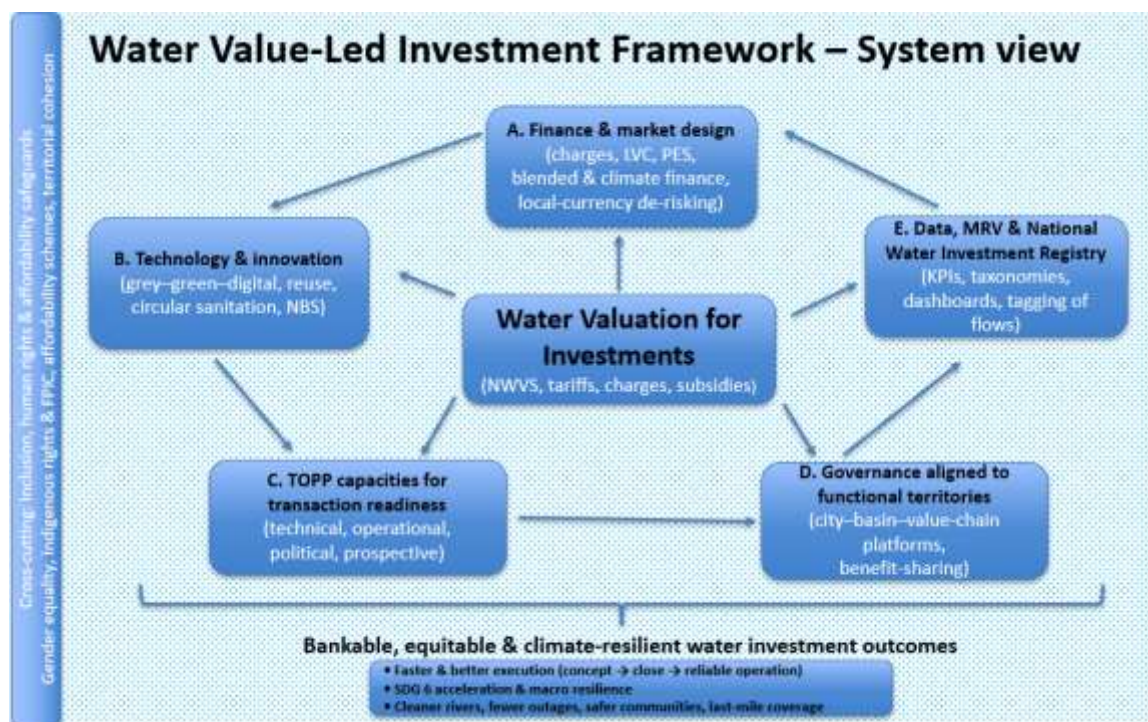
Delivering investment at the scale required to fulfill SDG 6 targets demands a shift from fragmented, project-by-project spending to strategic, system-based and inclusive investment anchored in water valuation. A valuation-led approach closes three persistent gaps at once. First, it clarifies total value: avoided drought and flood losses; productivity gains in tourism, agro-industry, manufacturing and energy; public-health improvements and time savings; and ecosystem services from healthy watersheds and NBS. Second, it converts value into cashflows and policy levers—Land Value Capture (LVC), Payments for Ecosystem Services (PES), resilience-linked incentives, and well-designed water charges for large abstractors and dischargers—to support cost recovery, co-finance last-mile services and crowd-in private and climate capital. Third, it strengthens equity and legitimacy by making benefit-cost distribution explicit, embedding affordability for vulnerable users, and aligning price signals with human-rights commitments and territorial cohesion. Governments should codify this through National Water Valuation Standards (NWVS) that set shadow prices for scarcity/reliability/quality, require distributional analysis, and link directly to the National Public Investment System and regulatory/tariff methodologies. A phased pathway—guidance in addition to pilots in priority sectors/basins before nationwide adoption helps keep learning costs low while accelerating take-up.

Within this perspective, water charges to productive sectors—abstraction fees, discharge fees and differentiated tariffs for high-volume or high-impact uses—are part of a broader policy suite that aligns incentives with sustainable outcomes. Properly designed, these instruments internalize externalities by reflecting scarcity, reliability and quality, and they can fund watershed protection, pollution control and digital/operational upgrades when revenues are transparently earmarked and verified through robust MRV. Results-based

payments and open public dashboards should reinforce this transparency, linking each currency unit collected to verifiable service and environmental outcomes. Charges must be progressive and proportionate, focused on material drivers (large extractions, pollutant loads, peak-season pressures), phased predictably, and accompanied by social safeguards and transition support where competitiveness is at stake.

To operationalize the shift, this section proposes a valuation-led Water Investment Framework that links: A) Valuation as the first mile, B) Finance and market design, C) Technology and innovation chosen by value, D) TOPP Capacity-building for transaction readiness, E) Governance aligned to functional territories, and F) Data, MRV and investment tracking. The guiding principle is straightforward: choose and fund options that deliver the greatest total value per public dollar over the full asset lifecycle, with equity and resilience designed in from the start. Where relevant, sequencing should pair early service improvements with any price reform to build social license and reduce political risk. The system view of this architecture is illustrated in Diagram 2 below.

Diagram 2. “Water Value-Led Investment Framework: From Valuation to Outcomes”.



Source: Own elaboration.

A. Valuation-led approach

A valuation-led approach is the entry point for aligning water policy, planning and finance with real economic, social and environmental value. It brings visibility to the full spectrum of benefits—service reliability, risk reduction, productivity and ecosystem health (visible,

comparable and financeable- and translates them into economic signals that drive budgeting and investment.

A practical tool is a set of National Water Valuation Standards (NWVS) that guide public investment appraisals and regulatory/tariff decisions. The NWVS should require valuation of: (i) household and enterprise service gains (e.g., continuity, quality, time savings, dignity/rights); (ii) risk reduction from avoided drought, flood and water-quality shocks; (iii) productivity effects in priority sectors; (iv) ecosystem services from healthy basins and NBS; and (v) fiscal effects (reduced emergency outlays, and O&M savings). To ensure consistency, it should set shadow prices for scarcity, reliability and pollution; apply a social cost of carbon where relevant; require distributional analysis (gender, Indigenous peoples, disability, and territorial equity); and specify social discount rates and resilience metrics for lifecycle appraisal.

Valuation is the bridge between planning to implementation. It informs tariffs, subsidies and water charges so incentives align with policy goals. For households and small enterprises, progressive tariff structures should be linked to service targets (continuity, NRW reduction, quality) and paired with affordability mechanisms (lifeline blocks, targeted transfers, arrears management). For large users, abstraction and discharge charges indexed to scarcity, seasonality and pollutant loads encourage efficiency, pretreatment and reuse, while generating revenues for watershed restoration, digital operations and last-mile connections. These are corrective and enabling instruments, not punitive measures.

Equity requires careful design. Valuation identifies where exemptions or transitional support are warranted (e.g., smallholders, subsistence uses). Charges should target material drivers rather than apply broad increases that burden vulnerable users.

Valuation also strengthens the financial case for co-investment and improves technology choice. and climate finance for measurable results (methane abatement, resilience outcomes) monetize long-term benefits and reduce perceived risk. Lifecycle comparisons of grey–green–digital options often show integrated solutions—smart metering, pressure management, NBS—delivering higher total value than traditional builds once avoided losses and ecosystem benefits are counted.

B. Finance Instruments

Turning valuation into implementation requires financial architectures that transforms value into predictable cashflows, reduce the cost of capital, and channel resources to high-impact, equitable uses. Finance is not only about “more money”; it is about designing markets and rules so public, private and climate finance work together—especially at subnational level.

When tariffs, subsidies and charges are valuation-grounded, they clarify who pays for what and why. Household tariff roadmaps must be progressive and predictable, tied to service improvements and backed by affordability schemes so no one is left behind. Well-calibrated charges for large abstractors and dischargers steer behavior, fund source protection and reduce allocation conflict, with revenues earmarked to programs that demonstrably improve water security (e.g., watershed restoration, reuse infrastructure, digital loss reduction). Affordability plans should be co-approved with tariff reforms by regulators, with explicit social-protection linkages, grievance-redress, and Free, Prior and Informed Consent (FPIC) where Indigenous rights could be affected. Earmarking rules should mandate open dashboards and independent MRV so citizens can verify how charge revenues finance concrete improvements.

Given that many countries have strategies but thin pipelines, a dedicated Water Project Preparation Facility can finance pre-feasibility analysis, climate stress testing, social dialogue, legal structuring and valuation-based revenue design. Template term sheets, standard risk matrices and model Performance-Based Contract (PBC)/PPP contracts with common KPI/MRV suites (continuity, NRW, energy intensity, reuse, resilience, inclusion) reduce transaction costs and speed due diligence. Where small/medium projects dominate, framework facilities can aggregate them under a single due-diligence spine.

In this context, public finance should be used surgically to de-risk projects and crowd in private capital—through partial guarantees, subordinated tranches and liquidity lines, preferably in local currency. Results-based climate finance should pay on verified outcomes (methane abatement, NBS risk-reduction, NRW/energy savings), turning performance into revenue. Similarly, parametric insurance and resilience-linked debt can price and reward resilience (e.g., outage hours avoided, continuity in vulnerable areas). Foreign exchange and interest rates' risks should be addressed via local-currency facilities, hedging windows or on-lending in domestic currency, coordinated with central banks and development banks. Credit-enhancement tiers should be calibrated to mobilize domestic institutional investors (pension funds, insurers) through pooled vehicles and sustainability-linked bonds/loans using standard covenants.¹⁵¹⁶

At the same time, financing frameworks must protect last-mile investments from being crowded out by projects with easier cashflows. Options include performance-based intergovernmental transfers and concessional windows for territories with high social returns, plus valuation-grounded cross-subsidies that channel a share of abstraction/discharge charge revenues to affordability schemes and network expansion. A simple transparency rule should publish, by territory and beneficiary group, the share and destination of cross-subsidies and charge revenues, with annual results (connections added, outage hours reduced, NRW lowered). In rural and peri-urban contexts, revolving

¹⁵ International Institute for Sustainable Development. (2019). Credit enhancement for sustainable infrastructure: Practitioner survey results (IISD Report).

¹⁶ Matsukawa, T., Sheppard, R., & Wright, J. (2003). Foreign exchange risk mitigation for power and water projects in developing countries (Energy and Mining Sector Board Discussion Paper No. 9). World Bank.

funds, microfinance and output-based aid can complement the more sophisticated structures used in metropolitan systems¹⁷¹⁸¹⁹.

Regulators should recognize whole-life-costing and asset management in tariff reviews; allow mixed CAPEX/OPEX remuneration typical of digital solutions and PBCs; and recognize NBS as eligible assets where appropriate. A green/blue taxonomy for water, developed with finance ministries and central banks, should explicitly cover digital O&M, NBS, circular sanitation and reuse, aligning domestic rules with Development Finance Institution (DFI) and climate-finance criteria. Graduated disclosure enables utilities to build track records and access local-currency funding from pension funds, insurers and domestic banks via standardized products (sustainability-linked loans/bonds, pooled municipal instruments) supported by credit enhancement. Taxonomy and disclosure should be paired with a proportional MRV regime (higher verification for larger risks/flows) to avoid excessive compliance costs while maintaining credibility. Regulatory sandboxes can pilot novel models (pay-for-performance, digital O&M remuneration, community-run NBS trusts) before full-scale adoption²⁰²¹²².

Lastly, social dialogue is essential to connect contributions to tangible improvements—fewer outages, cleaner rivers, faster connections—and to show how low-income households are protected. Earmarking, independent MRV and accessible grievance-redress build trust and reduce transaction risk. Communication should emphasize ‘value for money’ and publish service KPIs alongside tariff paths per utility, with corrective actions if targets are missed. A minimum integrity package (open contracting data, ex-ante publication of evaluation criteria, ex-post contract/variation disclosure) should be required for facilities and PPPs to qualify for public or climate funds²³²⁴²⁵.

C. Technology and Innovation Chosen by Value

Technology is a means to maximize total value per public dollar over the asset lifecycle—measured in service, health, productivity, resilience and environmental integrity.

¹⁷ Department for Environment, Food & Rural Affairs. (s.f.). Company social tariffs [Guidance document].

¹⁸ PPIAF. (2016). Water sector experience of output-based aid [Sector brief]. Public-Private Infrastructure Advisory Facility & World Bank.

¹⁹ Rural Water Supply Network. (2025). Financing maintenance in last-mile contexts: Endowment funds as a sustainable solution

²⁰ Lawrence Berkeley National Laboratory. (2025). Regulatory sandboxes and other processes to expedite innovation [Research report]. U.S. Department of Energy, Office of Electricity.

²¹ S&P Global. (2025). 'Regulatory sandboxes' gain traction as states push for clean energy innovation.

²² United Nations Economic Commission for Europe. (2023). Monitoring, reporting, and verification (MRV): Case study of Croatia. UNECE.

²³ B20 South Africa. (2025). Integrity and compliance: Policy paper

²⁴ European Investment Bank, African Development Bank, Asian Development Bank, Asian Infrastructure Investment Bank, Council of Europe Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, Islamic Development Bank, New Development Bank, & World Bank. (2025). Development banks committed \$19.6 billion to water security in 2024: First joint annual MDB water security financing report.

²⁵ International Capital Market Association. (2025). Climate transition finance handbook [Updated edition]. ICMA.

Public investment frameworks should require whole-life-costing and multi-criteria analysis that internalize scarcity, reliability and pollution through shadow prices and resilience metrics. PBCs can tie payments to verified NRW reduction, continuity hours, kWh/m³, reuse volumes and pollutant-load reductions, unlocking results-based climate finance and sustainability-linked lending. Evaluation templates and model PBC clauses should be standardized nationally to reduce transaction costs and enable aggregation of similar subprojects. Regulators should publish guidance for eligibility of green–digital–NBS assets in tariff methodologies and clarify how savings-based remuneration is treated in price reviews²⁶²⁷²⁸.

Smart metering, district metered areas, pressure management, active leakage control and asset-health monitoring can rapidly cut water and energy losses, improving cashflows and equity. Because digital solutions are often OPEX-heavy and iterative, regulation should permit mixed CAPEX/OPEX models and remuneration based on verified savings. Open data standards and cybersecurity baselines are essential to scale and trust.

Riparian restoration, wetlands, recharge zones and green urban drainage often deliver lower lifecycle cost and greater resilience than grey-only builds. Scaling NBS requires clarifying asset recognition, long-term O&M responsibilities, and stable finance via PES/watershed funds. With MRV that quantifies risk reduction (e.g., peak-flow attenuation, turbidity reduction, recharge), NBS can access resilience payments and climate finance.

Energy/methane recovery, nutrient reuse (See Box 1) and optimized operations transform liabilities into revenue and climate benefits. Contracts can remunerate kWh generated, methane abated and pollutant reductions. Industrial/agricultural reuse—structured with take-or-pay contracts and reliability classes—can be more reliable and affordable than new abstractions in stressed basins. Efficiency retrofits in tourism and food processing often have negative abatement costs once avoided tariffs, charges and reduced business interruption are counted.

In SIDS and arid regions, desalination may be part of the least-cost resilient mix if coupled with renewable energy, efficient intake/discharge and demand-side measures. Valuation ensures full externalities are priced; resilience-linked finance can lower fiscal burden. Least-cost plans should compare modular desalination with loss reduction, reuse and managed aquifer recharge under stress scenarios, using common assumptions on energy prices, peak-demand risks and brine management costs. For islands, hotel-sector

²⁶ Kingdom, B., Liemberger, R., & Marin, P. (2006). The challenge of reducing non-revenue water (NRW) in developing countries - How the private sector can help: A look at performance-based service contracting.

²⁷ World Bank. (2020). Water regulation: Separate regulatory body with autonomy - Guidance on tariff methodology and asset recognition.

²⁸ World Bank. (2023). Guidance notes: SPD water loss reduction - Standardized procurement documents and model contractual clauses.

participation (renewable-powered desalination, peak shaving, leakage control) can be embedded via performance covenants and transparent tariffs²⁹³⁰³¹.

Technology choices must address service gaps in rural, peri-urban and informal settlements, using modular, maintainable solutions. Digital inclusion tools, pre-paid lifeline blocks and grievance-tracking improve access and reduce arrears. NBS programs must respect Indigenous and community rights, remunerate stewardship fairly and avoid unfunded maintenance burdens.

D. TOPP Capacity-Building for Transaction Readiness

Pipelines only deliver when institutions can take projects from concept to close and reliable operation. A valuation-led agenda therefore hinges on transaction-anchored, standardized and scalable TOPP capacity-building. Implementation should be funded and governed explicitly (who pays, who delivers, who certifies), avoid duplication with existing regional platforms, and adopt a phased, country-tailored rollout that matches institutional capacity and fiscal space.

- Technical: Apply the NWVS in Cost-Benefit Analysis (CBA)/ Multi-Criteria Analysis (MCA); quantify distributional effects; translate valuation into cashflows (LVC, PES, resilience payments); build bankable models; embed asset management and lifecycle costing in utility practice; accredit valuers and MRV auditors.
- Operational: Update procurement and contract management to enable outcomes-based remuneration for digital/NBS/circular sanitation; maintain standard document libraries; institutionalize Transaction Clinics that accompany municipalities/utilities from concept to close and early operations; strengthen the Chief Financial Officer (CFO) function (cashflow forecasting, arrears management, affordability analytics, disclosure)
- Political: Lead social dialogue on tariff roadmaps, targeted subsidies and sector charges; embed gender-responsive and culturally appropriate participation (including FPIC where applicable); design benefit-sharing that connects contributions to visible improvements; sequence reforms and offer transition finance for trade-exposed sectors.
- Prospective: Integrate climate scenarios, demand/quality pathways and disaster risk in planning and in the design of prices and charges that stay coherent as conditions evolve; practice functional-territory governance across city–basin–value chains with shared diagnostics, storage/reuse and source protection.

²⁹IRENA (International Renewable Energy Agency). (2019). Renewable desalination technology options for islands.

³⁰ Turner, A., White, S., Beatty, K., & Gregory, A. (2005). Water efficiency and reuse: A least cost planning approach for the water services sector. University of Technology Sydney.

³¹ European Commission Joint Research Centre. (2018). Analysis of desalination sector and regulatory frameworks - Including brine management costs and environmental externalities.

E. Governance Aligned to Functional Territories

Water moves through cities, basins and value chains, not administrative silos. Governance must match this reality by aligning mandates, incentives and accountability around functional territories. Therefore, establishing legally grounded city–basin compacts with a funded technical secretariat responsible for shared diagnostics, an investment shortlist, and performance tracking can offer a transformational path towards water security.

Metropolitan compacts or basin–city platforms with legal standing should, for instance: adopt joint diagnostics; co-prioritize grey–green–digital investments using valuation; agree benefit-sharing (downstream utilities/industries co-finance upstream NBS via PES; municipalities allocate LVC proceeds to last-mile connections); and align drought/flood plans with tariff and allocation measures. In transboundary basins, commissions need standard MRV, dispute-resolution procedures and co-financing windows.

In this respect, agriculture, industry, energy and tourism are partners, not just users. Abstraction/discharge charges with predictable trajectories and performance-based rebates can help align incentives and fund stewardship. For SIDS/coastal cities, setting desalination and brine-management standards tied to renewable energy usage may contribute to reducing peak aquifer stress.

It is also necessary to institutionalize equity and rights. Thus, it is essential to pair tariff roadmaps with affordability packages; design charge systems with exemptions/reduced rates for subsistence users and technical support; maintain independent grievance mechanisms; ensure meaningful participation and FPIC where applicable.

Similarly, updated zoning with risk-informed rules to protect recharge/retention areas is vital. This way it is also possible to use LVC to co-finance last-mile networks and green corridors; define environmental-flow safeguards and cap abstractions per aquifer unit; where appropriate and with safeguards.

Lastly, the creation of National Water Investment Registries tagging flows by function, territory and beneficiary profile can help govern watershed funds through multi-stakeholder boards that disburse against verified outcomes. Watershed funds should adopt open contracting, beneficial-ownership disclosure, and conflict-of-interest screening as standard integrity requirements.

F. Data, MRV and Investment Tracking

Valuation, pricing and finance only work when evidence is timely, trusted and comparable. Countries need integrated systems for data, MRV and investment tracking that are proportionate to capacity but robust enough to anchor tariffs, targeted subsidies, sector charges, results-based finance and market disclosure.

It is thus essential to define, compile and monitor indicators related to continuity and coverage (with rural/peri-urban/informal disaggregation); NRW and energy intensity; drinking-water quality and wastewater compliance; reuse volumes and demand-side efficiency; financial health (collection, arrears, OPEX/CAPEX balance); affordability uptake; and resilience indicators (outage hours avoided, flood depth reduction, people/assets protected). Basin MRV should track abstractions by user class, groundwater levels, environmental flows, pollutant loads and ecosystem condition. Issue methodological notes and data dictionaries and define verification tiers. Prioritize a core tier (≤ 15 KPIs) for universal adoption and expand to advanced tiers as capacity grows, ensuring comparability across utilities and basins. Align indicator definitions with SDG 6 monitoring and national statistics standards so one dataset serves regulators, DFIs and budget authorities³².

Equally it is important to link billing data to social registries to target subsidies where most needed. For abstraction and discharge charges, monitoring for large or high-impact users is needed. It is possible to start in priority basins and scale as capacity grows.

In summary, a valuation-led Water Investment Framework converts ambition into bankable, equitable and climate-resilient action. It puts water valuation at the core; aligns finance and market design to lifecycle value; chooses technology by value; builds transaction-ready TOPP capacities; governs the scale of functional territories; and institutionalizes data and MRV that make value and results visible. With this architecture, tariffs and well-designed charges for productive sectors become incentives that reduce externalities and co-finance shared security, rather than blunt instruments. Most importantly, citizens can see the connection between contributions and outcomes: cleaner rivers, fewer outages, safer communities and faster connections for those furthest behind.

5. Recommendations and Conclusions

The 2026 UN Water Conference can mark a decisive shift from fragmented, reactive spending to strategic, systems-based and inclusive investment that makes water visible, valued and investable—without compromising affordability, rights or environmental integrity. Building on the analysis in this paper and on lessons from LAC and other regions, this section presents a practical package for Member States, development banks, the private sector and the UN system, and closes with conclusions that convert ambition into near-term action.

To recap the pathway set out in the previous section:

³² van den Berg, C., & Danilenko, A. (2017). *Performance of water utilities in Africa*. World Bank.

- Put water valuation and fair price signals at the centre—including well-designed abstraction and discharge charges with affordability safeguards.
- Redesign finance to convert value into predictable cashflows through standardized preparation, blending and local-currency de-risking.
- Choose technology by lifecycle value, scaling digital operations, circular sanitation, reuse and nature-based solutions.
- Build transaction-ready TOPP capacities so projects move from concept to close.
- Align governance to functional territories that connect cities, basins and value chains.
- Institutionalize data, MRV and investment tracking so money and results are visible. Strengthen regional cooperation and South–South learning to replicate what works.
- Embed inclusion, human rights and social license so coverage expands without leaving anyone behind.

Together, these shifts replace isolated projects with investable systems and prepare the ground for a focused set of Conference deliverables that accelerate bankable, equitable and climate-resilient action.

The 2026 UN Water Conference should be remembered not for new slogans, but for launching a adequate set of instruments that countries can use immediately:

At the core is a **Global Water Valuation Compact**: common principles, default parameters and open tools so every major public appraisal—and the tariff, subsidy and charge decisions that follow—properly captures service benefits, risk reduction, productivity effects, ecosystem services and equity impacts.

Paired with the Compact, a **Green/Blue Taxonomy for Water** recognized by development banks and climate funds would define what qualifies as sustainable investment across digital operations, nature-based solutions, circular sanitation and reuse, and anchor a standard suite of KPIs and MRV protocols so pay-for-results finance can scale without bespoke negotiations each time.

Valuation and taxonomy matter only if countries can close transactions. A **Water Transaction-Readiness Alliance** would provide the missing execution backbone: a pooled roster of certified valuers, financial structurers, MRV auditors and social specialists; open libraries of model contracts, risk matrices and term sheets; and “transaction clinics” that accompany subnational projects from concept to financial close and through early implementation. To reach scale where projects are small and dispersed, framework facilities and umbrella guarantees would aggregate municipalities and utilities under a single due-diligence spine, lower per-deal costs, mobilize domestic lenders in local currency and create investable products for pension funds and insurers.

As transparency and inclusion are the conditions for durable finance, **National Water Investment Registries** and disclosure codes would enable treasuries and regulators to tag flows from budgets, development banks, climate funds and private finance by function, territory and beneficiary, and to link spending with continuity, non-revenue water, energy intensity, reuse, pollutant loads, affordability and resilience. Publishing these data through open dashboards would shorten due diligence, support sustainability-linked lending and allow evidence-based calibration of tariffs and sector charges. Complementarily, a **Last-Mile Inclusion Pledge** would commit concessional windows and earmarked revenues from abstraction and discharge charges to underserved territories and watershed programs, with measurable affordability and gender/Indigenous inclusion benchmarks that protect rights while accelerating coverage.

Since climate risk must be priced and rewarded, not only managed, a **Water Resilience Finance Package** would mainstream parametric insurance, resilience-linked debt and results-based climate finance with standardized triggers and indicators, so verified reductions in outage hours, flood depths or pollutant loads translate into lower premiums, pricing step-downs or outcome payments.

Finally, because water flows through cities, basins and value chains rather than administrative silos, a **City-Basin Investment Initiative** would provide guidance, co-financing and benefit-sharing templates—payments for ecosystem services, land-value capture and reuse offtakes—to help metropolitan and basin platforms prepare and implement joint portfolios, including in transboundary settings.

Three conclusions follow.

First, valuation is the shortest path from intention to outcomes. When the total value of water security is visible, service, resilience, productivity, ecosystems and equity, it changes which projects move first, creates the cashflows and price signals that make blended finance work, and gives regulators and financiers a common language for lifecycle value rather than upfront cost.

Second, finance is a design challenge more than a scarcity problem. With standardized preparation, local-currency de-risking, results-based instruments and proportionate disclosure, countries can lower perceived risk, mobilize domestic capital and move from concessional dependence to cashflow-backed finance, including for subnational entities.

Third, capability, governance and data are the multipliers that turn political will into closures and closures into better lives: transaction-ready TOPP capacities, governance aligned to functional territories, and evidence architectures that track both money and results are not constraints on ambition, but how ambition becomes credible delivery.

Taken together, these deliverables form a coherent bridge from commitments to bankable, equitable and climate-resilient action. They place valuations at the center, align

finance and technology with lifecycle value, protect affordability and rights, and equip countries to disclose, verify and improve. If adopted and resourced, they will shift the center of gravity from projects to systems, from inputs to results, and from fragmented budgets to investable pathways that protect people and nature. The opportunity is within reach; the Conference can really be the turning point—decisively, inclusively and at a considerable scale.

6. Guiding questions

1. How can water investment strategies help break Latin America and the Caribbean’s “triple trap” of low growth, high inequality, and institutional weakness, given that water-related risks are amplifying each of these structural constraints?
2. What immediate steps can countries take to adopt national water valuation standards that guide public investment decisions, strengthen tariff and charge regulation, and enable the prioritization of project portfolios based on value and vulnerability?
3. How can countries advance governance arrangements based on functional territories (city–basin–value-chain systems), with clear financing rules and meaningful social participation, to co-finance nature-based solutions, climate-resilient infrastructure, and the expansion of water and sanitation services?