

# Public Private Partnerships for Water Finance

**September 2026**

IFC International Finance Corporation
WORLD BANK GROUP

Confident

# Why is it difficult to address NRW in India?



Weak baseline data / unclear water balance



Incomplete District Metered Area (DMA) isolation & high night flows



Limited ULB capacity for performance-based contract management



Fragmented O&M contracts and limited accountability



Weak billing, collection and customer databases



Low-cost recovery and dependence on municipal subsidies



Tariff and demand risks difficult to transfer



Poor bulk and consumer metering

Confident

# Los Cabos Water Project – Context and Need

| | |
|---|---|
| **City context and demand pressure** | • Los Cabos is a major tourism destination in Baja California Sur, Mexico<br>• The municipality includes Cabo San Lucas and San José del Cabo, connected by a high-end resort corridor<br>• Rapid demographic growth and tourism-led demand increased pressure on water services |
| **Water supply challenge** | • Existing installed capacity was around **729.56 lps / ~63 MLD**, insufficient for reliable 24x7 service<br>• Aquifers of Cabo San Lucas and San José del Cabo were overexploited<br>• Declining groundwater levels increased pumping costs and affected reliability of service |
| **Network and commercial inefficiency** | • Distribution network inefficiencies and commercial efficiency in the **low 60s** worsened the water deficit<br>• Some areas received water as infrequently as **once a week**<br>• Consumers relied on alternative supply, including water tanker trucks |
| **Core issue / key takeaway** | • Los Cabos faced a combined supply-side and efficiency-side water security challenge<br>• The project was structured to address both **“more water”** and **“less water loss”** together |

# Project Overview – Dual PPP Approach

| | |
|---|---|
| **Overall approach** | • IFC supported the Water Utility of Los Cabos in structuring two complementary PPP transactions<br>• The objective was to meet growing water demand through both new supply and improved system efficiency |
| **PPP 1: Desalination** | • **25-year PPP concession** for a new **21.6 MLD** seawater desalination plant, producing around **7.884 million m³/year**<br>• Private partner to design, finance, build, equip, operate and maintain the facility<br>• BOT structure with transfer of assets to the public authority at the end of the contract |
| **PPP 2: NRW reduction** | • **10-year performance-based PPP** contract for non-revenue water reduction<br>• Private operator to modernize, equip, operate and manage the potable water network<br>• Focus on reducing technical and commercial losses while improving service quality |
| **Innovation and expected impact** | • First-of-its-kind approach in Mexico combining new bulk water supply with Non-Revenue Water (NRW) reduction<br>• Additional drinking water and loss reduction expected to improve service reliability and benefit around **278,000 inhabitants** |

IFC International Finance Corporation WORLD BANK GROUP
Confident

# NRW PPP – Scope, Phasing and Performance Model

| | |
|---|---|
| **Project objective** | • Improve operation of the potable water supply system in Cabo San Lucas<br>• Increase technical efficiency from **67% to 77%** and commercial efficiency from **76% to 95%**<br>• Provide 24x7 water service with adequate pressure, quantity and quality |
| **Contract structure** | • 10-year performance-based PPP awarded to FCC Aqualia / Aqualia Mexico<br>• NRW project involved private investment of approximately **US$22 million**, with public subsidy support covering **49%** of the total investment<br>• Government pays fixed investment/O&M compensation plus variable incentive linked to achievement of efficiency targets |
| **Phased implementation** | • Project implemented in **four phases**<br>• **First three phases combine investment and operation, linked to achievement of defined objectives**<br>• **Fourth phase focuses on operation and maintenance after completion of earlier investment phases** |
| **Key activities and KPIs** | • User list and drinking water cadaster; hydraulic model and service area sectorization<br>• Household meters, micro-meters, macro meters and telemetry<br>• Closure of hydrometric sectors, leak detection, repair and control<br>• KPIs: technical efficiency, commercial efficiency, water quality, pressure and 24x7 service continuity |

IFC International Finance Corporation WORLD BANK GROUP
Confident

# Lessons – Clear Scope and Objective Definition

## Phase 1

- Receive sectors S23, S21, S34 and S41, a 24/7 and operate those sectors at 24/7 based on the KPIs: water quality, pressure, efficiency of at least 75% and 24/7 continuity.

## Phase 2

- Operate as closed sector S23, S21, S34 and S41 + the entire CSL system with the water supply from the current desalination plant, SJC aqueduct and Well 4 (160 LPS + 109 LPS + 40 LPS).
- It is worth mentioning that the developer would be operating at least four closed hydrodynamic (CHS) sectors and the rest of the system with open sectors, for which a differentiated payment will be made; Pa for closed sectors and Pb for open sectors. Pb will be 80% of face value of Pa.

## Phase 3

- It implies the same objective of PHASE 2, however, in this stage the new desalination plant starts operating, so the developer has the obligation to close more hydrometric sectors, the number of connections in open sectors will have to be less, hence, Pb will be 60% of Pa.
- Expansion of the Service Area Investment: this investment will only apply, in Phase 3, to actions that allow the expansion of the Service Area with Closed Hydrometric Sectors and concepts

## Phase 4

- Total system operation with supply from the current desalination plant + SJC aqueducts + new desalination plant + well 4 (160 LPS + 109 LPS + 250 LPS+40 LPS) with all Closed Hydrometric Sectors operating with the defined KPIs.
- For Phase 4, there will be no Pb payment, only Pa will be paid, since all sectors will be operated as closed hydrometric sectors.

# Lessons - Risk Framework and Bankability

| | |
|---|---|
| **Risk allocation principle** | • Risks were allocated based on the party best placed to manage them<br>• **Private sector took construction, technology, O&M and performance risks within defined project scope**<br>• **Public side retained core utility, payment and policy responsibilities** |
| **Performance and operating risk** | • Private operator responsible for executing investment activities and meeting performance KPIs<br>• Payment deductions apply for non-compliance with performance indicators<br>• Contractual penalties and termination rights apply for persistent failure |
| **Payment security and lender protection** | • Project Trust / SPV structure used to manage project resources<br>• FONADIN / BANOBRAS subsidy support improved affordability and bankability<br>• Alternate source of payment backed by Los Cabos Trust funded from municipal federal income allocations<br>• Step-in rights and termination payment framework protect lenders and the public authority |
| **Supervision, dispute resolution and key takeaway** | • Supervisory Manager monitors design, construction and early operations<br>• Disputes may be resolved through amicable settlement, independent experts for KPI/performance issues, and arbitration<br>• **The project combined performance-linked incentives, payment security, grant support and clear contractual remedies to make a municipal water PPP bankable** |

# Lessons - Implementation Readiness



- **Establish reliable baseline before bid finalization**
  NRW levels, consumer database, meter status, network condition and bulk water availability should be validated before setting binding KPIs



- **Prioritize DMA-based implementation**
  District Metered Areas should be created, isolated and monitored to make NRW reduction measurable and enforceable



- **Address metering and consumer database gaps upfront**
  Functional bulk meters, consumer meters, GIS mapping and updated billing records are critical for performance monitoring



- **Recognize brownfield constraints in Indian networks**
  Legacy pipelines, intermittent supply, unauthorized use and partial network information can affect achievement of NRW targets



- **Align capital works with operational improvement**
  Investment activities should be tied to service outcomes, not only asset creation, with clear responsibility for design, execution and O&M



IFC International Finance Corporation WORLD BANK GROUP
Confident

# Lessons - Bankability and Governance



- **Treat NRW reduction as a source of "new water"**
  Reducing losses can defer expensive supply augmentation and improve water security without relying only on new infrastructure



- **Provide credible payment security**
  Indian NRW PPPs may need escrow accounts, payment reserves, state support, or structured ULB payment mechanisms to improve bankability



- **Use viability support where affordability is constrained**
  Public funding or grant support can reduce tariff pressure and make performance-based NRW PPPs more attractive to investors



- **Appoint an independent monitoring mechanism**
  A supervisory manager / independent engineer should monitor baseline, works progress, KPI achievement and payment deductions



- **Combine incentives, oversight and clear remedies**
  The key lesson from Los Cabos is to combine performance-linked payments, payment security, independent monitoring and enforceable contractual remedies



IFC International Finance Corporation WORLD BANK GROUP
Confident

# THANK YOU!

Confident