From Telemetry Data to Recovered Water

How IIASA's Knowledge as a Service (KaaS), powered by TaKaDu, helped SAPAL in León reduce Non-Revenue Water

89 priority cases → 504 leaks repaired → 1.15 million m³ of NRW recovered → MXN $34.48 million (USD $1.95 million)



Figure 3. SAPAL telemetry video wall

The Challenge

SAPAL, the water and sewerage utility of León, is one of the three most recognized water utilities in Mexico, supplying more than 513 thousand connections and almost 2 million inhabitants. For decades it has invested in network control, and since 2020 all 434 of its sectors have had telemetry-based measurement and monitoring.

Yet Non-Revenue Water (NRW) still stood at 28.12% of the 84.95 million m³ produced each year (23.7 million m³), with a goal of reaching 25% within two years. Having data was not enough: it had to be continuously watched, interpreted and turned into action in the field.

The Solution: Knowledge as a Service

In June 2025, SAPAL adopted KaaS, IIASA's integrated service built on TaKaDu's AI-based CEM platform. It covers 260 sectors, equivalent to 60% of the city and 262 thousand connections.

IIASA's specialists monitor the network continuously. Using historical information and network behavior, they identify hydraulic and telemetry events, interpret them, validate them and prioritize them by relevance. SAPAL receives priority cases that are ready for action, so its teams can concentrate on fixing problems rather than finding them.

Who	What they do
IIASA (KaaS)	Continuously monitors the network on TaKaDu's AI-based CEM platform; detects, interprets, validates and prioritizes events; communicates priority cases and follows them up
SAPAL	Receives validated priority cases and focuses on field action: verifying and repairing leaks and correcting inter-sector transfers

Results

Between June 2025 and August 2026, IIASA reported 89 priority cases to SAPAL. Acting on them, SAPAL's teams detected and repaired 504 leaks and corrected 15 inter-sector transfers.

This recovered an estimated 1,149,176 m³ of NRW, worth MXN $34.48 million (USD $1.95 million) at a unit value of MXN $30/m³ (≈ USD $1.70/m³), for an estimated ROI of 12.8X.

Indicator	Result
Monitoring period	Jun 2025 – Aug 2026
Priority cases reported to SAPAL	89
Leaks detected and repaired	504
Inter-sector transfers found and corrected	15
Associated NRW	1,149,176 m³
Value associated with NRW	MXN $34.48 million USD $1.95 million
ROI	12.8X

Table 1. Main results.

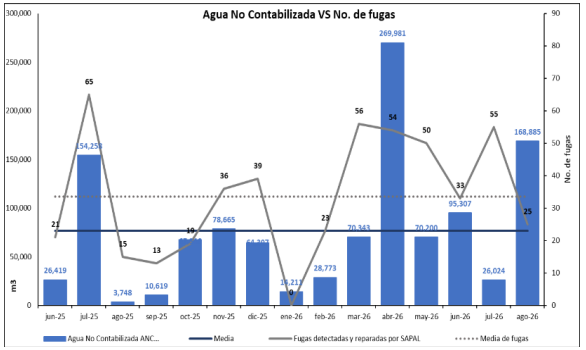


Figure 1. Monthly distribution of NRW vs. number of leaks.



Figure 2. Event monitoring and analysis at the IIASA control center.

These results show what a managed service makes possible. IIASA's continuous monitoring and specialized hydraulic analysis, powered by TaKaDu's AI platform, gave SAPAL a clear list of what to fix, and SAPAL's operational capacity and teamwork turned that list into recovered water.

Utilities that already have telemetry in place can follow the same model.