

The challenges of water management in GCC FM

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Last month, it was announced that Sharjah Executive Council (SEC) has approved the development of a drainage network and water treatment plant worth \$73.7m (AED271m) in the emirate's Kalba area.

The infrastructure project was approved during SEC's meeting held this January, which was chaired by HH Sheikh Sultan bin Mohammed bin Sultan Al Qasimi, Crown Prince and Deputy Ruler of Sharjah and chairman of the council.

Ali bin Shaheen Al Suwaidi, chairman of Sharjah Public Works Department, highlighted the importance of the project in improving Kalba's sanitation and environment standards.

According to *WAM*, Al Suwaidi said the phases of the project would "be implemented concurrently with the city's development, in line with the increase in population".

The project is only one of Sharjah's initiatives to efficiently harness and conserve its water resources. Last September, it announced that systems that can detect water leakage have been installed in selected buildings across Sharjah. Government buildings, residential buildings, and mosques have been fitted with these devices.

The prepaid water control circuit systems, installed under the supervision of Sharjah Electricity and Water Authority (SEWA), are aimed at rationalising utility consumption under the National Strategy for Innovation. Dr Rashid Al Leem, chairman of SEWA, said the devices have "achieved promising results in detecting unseen leakages".

SEWA plans to expand the project to include all government departments, schools, mosques and high end-consumers in the emirate. According to *WAM*, Essam Al Mulla, head of SEWA's water unit, said the systems were installed in 25 mosques, eight government departments, and a number of housing units, adding: "Water consumption was reduced by 40% in government departments, 30% in mosques, and 20% in residential complexes."

While over-consumption is often charged – and penalised – across the region, ensuring a facility's plumbing infrastructure is solid goes a long way in reducing water wastage.

Alexander Karabet, managing director of Mansions Owners Association Management, tells *fmME* about the common concerns surrounding water management in Dubai's property market: "Plumbing is a major issue when the property is taken over from the developer, because we often find blockages – such as cement, waste, and grease – in the drainage system at this stage. These issues often come to fore a couple of years after handover, and can therefore hinder with the tenants and residents.

"Poor stormwater infrastructure means balconies could get flooded, with water overflowing into the apartment."

Plastic pipes also have a tendency to crack, Karabet points out, adding such an incident could cut-off water supply to the entire property.

"FM and mechanical, electrical, and plumbing (MEP) experts should be involved in the property's development from an early stage. Operators are often invited by developers to consult on topics such as parking flow, garbage disposal, access control, security room location, and so on. [Operator] planning can also help understand how to utilise MEP [zones], because technicians need enough room and reach to maintain the key assets of the system," he adds.

DIGITALISATION BENEFITS

Mike Axton and Brian Horton from consulting engineering firm Aurecon's water services team believe digitalisation could pave the way for a more water-efficient future.



Writing for Construction Week Qatar last month, the experts expressed: "Imagine a future where consumers can view how their behaviours affect the water supplies in real-time and make better decisions as a result of being empowered.

"For this to happen, current 'unintelligent' analogue systems can be progressively transformed into a 'smart network', boosted by predictive analytics to draw the best out of our limited water supply by offering simple, intuitive, and meaningful insights."

Qatar lost 29.13 million cubic metres of drinking water – enough to fill 11,600 Olympic-sized swimming pools – in 2012 through leaks, bursts, and overflows, the Aurecon experts added, citing Qatar's Ministry of Development Planning and Statistics and Kahramaa.

They concluded: "Connecting [digital] assets into a real-time monitoring network will reduce the time it takes to discover and solve problems that historically appear only when they literally surface. That same data can be applied as red alerts to motivate preventative maintenance and mitigated risk into the future."

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