

The Middle East leads the way on decarbonising water

The growth of lower-carbon desalination has had a significant impact on water's energy footprint. Wastewater should be next on the agenda, says [Tom Scotney](#)



The Middle East and Africa region – if it's possible to talk about such a diverse region at all – has found itself in the unexpected position of being a world leader when it comes to net zero commitments.

This might seem like a strange thing to say at first glance, while wealthy countries in the Gulf are thriving on robust energy prices, and developing economies elsewhere in the region are focused more on the daily cost of living and making basic services universal than they are on their carbon footprints.

But while Western countries are weakening their environmental commitments in the face of tough economic conditions (very obvious here in the UK at the moment), and China's cooling economy looks unlikely to be in position to make the required changes, the Middle East has stepped up to take centre stage. This is demonstrated with the recent locations of the COP meetings, with last year's COP27 held in Egypt, and COP28 due to take place in Dubai starting at the end of this month.

It's easy to be cynical about the COP meetings, and indeed there has been a huge amount of talk, and a whole lot of aeroplane fuel burnt to bring in the dignitaries responsible for that talk, without there yet being any concrete signs that emissions or global warming are being addressed. But if we are looking for a concrete development to point to that has seriously improved the world's carbon problem, then there is an easy example in the Middle East – the decarbonisation of the seawater desalination process through investment in membrane desalting in place of the existing thermal installations.

The decarbonisation of the drinking water process in the Gulf is one of the few concrete and measurable industrial movements towards emissions reduction that the world can be proud of. As desalination as an option for drinking water supply becomes more prominent around the world in the years and decades to come, it will be an important movement for global emissions, with the Middle East leading the way.

What would be an even more important move would be pivoting this approach into the wastewater sector, and properly taking advantage of the energy and decarbonisation benefits of reuse.

Too often, utilities in the Middle East are investing heavily into wastewater treatment to meet the needs of growing populations, without sufficient thought being given to the ways

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that the produced water, biogas, and sludge can be effectively reused to reduce the footprint of a country's water sector as a whole.

This was one reason why it was so pleasing to see Dubai taking a holistic view of its wastewater sector in its recent push to invest heavily in the collection, management and disposal of sewage. I hope that the wastewater plans of Dubai Municipality and the emirate as a whole will play a big role when COP28 arrives in town this month.

The decarbonisation of the drinking water sector through membrane desalination was ultimately a move that was pushed into action by cost considerations, rather than by a pure desire to improve environmental performance. Those same conditions are there in the wastewater/reuse sector if regulators and government authorities are willing to embrace them.

Environmental causes don't have the same global cachet as they used to, particularly in a situation where countries are having to deal with increasingly harsh economic conditions. While parts of the Middle East are enjoying their time in the sun, they can seize the chance to start leading the discussion.

Next month's issue of GWI will evaluate the discussions and commitments made at COP28 in Dubai, and the implications for the global water sector. It will be interesting to see if the region can use its prominent position to advance the cause of decarbonisation in new areas of the water cycle.

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