Researchers pilot system using electrodialysis to produce safe drinking water

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Credit: AquaTT

The demand for cost-effective desalination is increasing with the

growing population and the need for safe drinking water, driving continuous innovation in the sector. REvivED water, a pilot project led by FUJIFILM Manufacturing Europe B.V., is focusing on the potential of electrodialysis for desalination applications, both as stand-alone systems and in combination with established desalination technologies.

Electrodialysis can be added as a pre-desalination step to existing Reverse Osmosis systems, increasing their water recovery; more drinking water will be produced from the same amount of seawater with lower energy consumption and at affordable costs. The REvivED water consortium has recently welcomed Trunz Water Systems AG, a Swiss water treatment company with distribution channels across Europe, Asia, Africa, Latin America and the Pacific. Trunz Water will build and operate a system in Spain that demonstrates the benefits of combining electrodialysis with Reverse Osmosis for sea water desalination. The test system is expected to be operational by the end of 2018.

The REvivED water project is also developing small scale stand-alone systems for rural areas powered by solar energy. The main target is off-grid applications in developing countries, where brackish water can be converted into safe drinking water. The first such system is under construction and will be tested from May 2018 onwards in Somaliland, Africa, demonstrating the role of electrodialysis in the provision of quality drinking water for the world's growing population.

Provided by AquaTT