Conference: "Climate change and the European water dimension - Enhancing resilience" November 4-5, 2020 as a virtual event

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

**Conference-related project article:** 



## Water Projects

## EASME at WCEF, Fraunhofer City of the Future and Water from Air

On 18th of November there will be an digital <u>Side-Event [1] of the World Circular Economy Forum [2]</u> <u>from the Executive Agency for Small and Medium-sized Enterprises</u> (EASME) of the EU Commission for innovators, business and public authorities. Within 5 new Horzion 2020 projects of the Call "Building a water-smart economy and society" will be presented, an overview of more than <u>40 EU-related water</u> <u>projects can be found at the EU ICT4Water [3] cluster</u>. Just recently CNBC International [4] reported about its project Hydrousa in Greece that works on water-desalination for water-scarce Mediterranean areas.







Massachusetts Institute of Technology

[1] EASME Side-Event (PDF, english): <u>https://kurzelinks.de/sh0m</u>

[2] WCEF at Sitra (Finnland, english): <u>https://www.sitra.fi/en/projects/wcefonline/</u>

[3] ICT4Water Cluster (english): <u>https://ict4water.eu/projects-partners/</u>

[4] Video Report CNBC International (english): <u>https://twitter.com/HydrousaProject/...</u>

Researchers at German Fraunhofer IGB [1] also work on the nexus of water, energy, food and raw <u>materials</u>. The projects include technologies for fermenting sewage sludge to biogas, fertilizing and irrigating vegetable plants with wastewater, regaining nitrogen and phosphorus (magnesia-ammonium-phospours, 'struvite') from municipal wastewater in an electrochemical process and desalinating salt water by multi-stage vacuum evaporation making use of thermal solar energy. This work is also part of the Fraunhofer Morgenstadt Initative [2] for citys of the future, an german und internatioal innovation network for cities. An innovative approach for gaining drinking water has also been developed by german municipal water supplier Wasserverband Kinzig in cooperation with research institutes like IWW Water Centre [3, Anil Gaba], by safely cleaning and filtering river-water.

[1] Fraunhofer IGB (english): https://www.igb.fraunhofer.de/en/...

- [2] Fraunhofer network City of the Future (english): <u>https://www.morgenstadt.de/en.html</u>
- [3] IWW Water Centre (english): <u>https://iww-online.de/en/...</u>

In the year 2018 architect David Hertz [1] and his team received the Water Abundance XPRIZE in total of 1,5 Million Dollar by Australian Aid and Tata Group. Within a <u>small-scale unit titled Wedew (Wood-to-Energy Deployable Emergency Water</u>) leftover biomass is turned to biochar for agriculture by a gasifier generator, the gained electricity and heat is applied to condense water from air and biomass-gas in an atmospheric water generator. A recent experiment at MIT [2] by a team of Ms. Prof. Wang also demonstrated <u>how a solar-thermal powered approach can exract drinkable water from the air</u>.

- [1] ScySource (english): <u>https://www.skysource.org/wedew</u>
- [2] MIT News (english): https://news.mit.edu/2020/...

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