

DEMEAU Works for Cleaner Water

The water and waste water sectors face tremendous challenges to assure safe, cost-effective, and sustainable water supply and sanitation services. **DEMEAU promotes the uptake of prototypes and practices** from previous EU research projects to address emerging pollutants in water and waste water.

Essential in the DEMEAU approach is the **cooperation with water utilities** that have committed to act as launching customers for the selected technologies. Existing and improved performance assessment methodologies will be used to **benchmark the novel technologies** against existing ones. This is to demonstrate the suitability and cost-effectiveness of the prototype technologies.

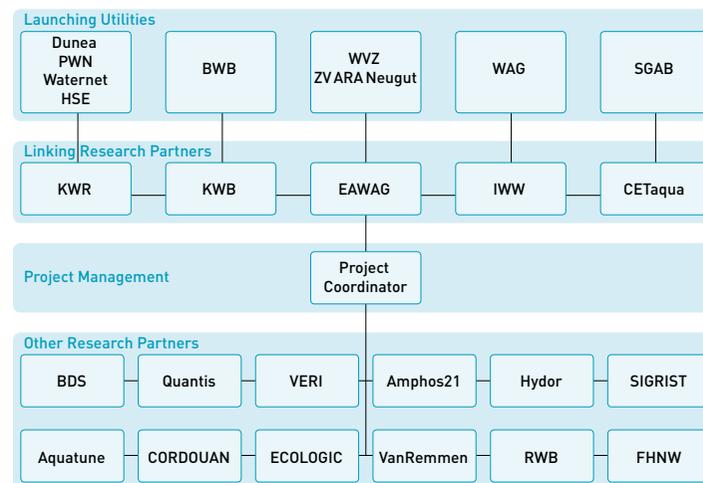
Demonstration sites launched by utilities will act as transfer points for the technologies and will generate market opportunities for the SME's involved.

The DEMEAU project runs from September 2012 until August 2015.



A Strong DEMEAU Consortium

The **DEMEAU consortium** consists of 17 members from five different EU countries. These members include universities, research institutions, innovative SME's, water utilities, and policymakers.



Demonstrating promising technologies to address emerging pollutants in water and waste water

<http://demeau-fp7.eu>

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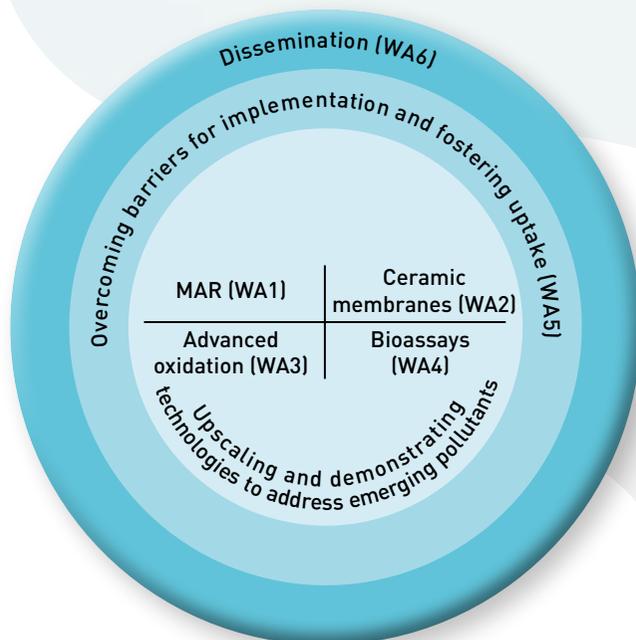


The EU funded FP7 project DEMEAU is a **three-year demonstration project on promising technologies that tackle emerging pollutants in water and waste water**. DEMEAU promotes the uptake of knowledge, prototypes and practices from previous EU research and focuses on four groups of promising technologies:

- Managed Aquifer Recharge (MAR)
- Hybrid Ceramic Membrane Filtration
- Hybrid Advanced Oxidation Processes
- Bioassays

The project aims to demonstrate these technologies through action research with universities, research institutions, innovative small and medium enterprises (SME), launching water utilities and policy makers. A Life Cycle Assessment of each of these technologies will also be conducted.

DEMEAU seeks cooperation with policy makers, regulators and standardization bodies at the Member State and European levels and aims at knowledge exchange between technology producers and users. DEMEAU addresses several EU Directives, including the Drinking Water Directive (DWD) and the Council Directive 98/83/EC.



Managed Aquifer Recharge (MAR)

MAR is a supplementary measure to reach good quantitative and good qualitative water status by regulating the water cycle on the basin scale. DEMEAU will address policy barriers to MAR through demonstrating best practices, clarifying benefits and limitations, and providing recommendations related to MAR authorization.

Hybrid Ceramic Membrane Filtration

Hybrid ceramic membranes can be used to remove pathogens, particles, and organics from water. Because they are more resilient under extreme conditions (e.g. high temperatures, extreme pH values, and chemical use), they have a better overall filtration performance than alternative membranes. DEMEAU will stimulate their application to remove emerging pollutants by addressing cost-efficiency and process optimization.

Hybrid Advanced Oxidation

UV-based and chemical oxidation processes are preferred treatment technologies for the elimination of emerging pollutants in drinking water and wastewater because of their flexibility, long-term stability, and controllability. DEMEAU's contribution to controlling these technologies at full-scale will improve the robustness of the processes, thereby facilitating the uptake of these technologies.



Bioassays

Recent technological developments have provided powerful, quantitative *in vitro* bioassays to effectively measure a wide range of toxicants in water. These rapidly expanding methods provide comprehensive monitoring systems for a wide range of toxicants at higher throughput and reduced costs, without the use of experimental animals. DEMEAU will work to increase regulatory acceptance of these *in vitro* bioassays and to further optimize and demonstrate them.

Fostering the uptake of novel technologies in the water sector

Environmental footprints and economic implications of novel technologies for micropollutants removal will be analysed by environmental Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) and compared with existing reference technologies. An analysis of stakeholders' experiences and expectations will identify drivers and barriers for the market uptake of these technologies. DEMEAU will propose effective technology implementation routes based on unique selling propositions. Water utilities planning to implement these technologies will benefit from a transparent decision support.

