

Implementation of novel rapid and quantitative bioassays for water quality monitoring

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INTRODUCTION TO DEMEAU

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. Demonstration sites launched by utilities will act as transfer points for the technologies.

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.

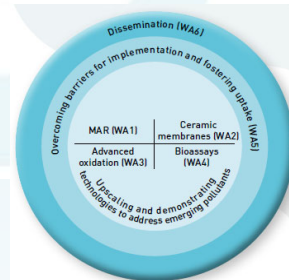
The DEMEAU project runs from September 2012 until August 2015.



OTHER WORK ACTIVITIES WITHIN DEMEAU

DEMEAU will focus on four promising technologies to tackle emerging pollutants in water and waste water.

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



WA4: IMPLEMENTATION OF NOVEL RAPID AND QUANTITATIVE BIOASSAYS FOR WATER QUALITY MONITORING

Recent technological developments have provided **powerful quantitative bioassays to effectively measure a wide range of major classes of toxicants**. These **effect-based tools** hold great promise in being introduced and integrated in current monitoring strategies, albeit facing barriers such as a lack of current legislation.

Work Activity 4 will provide a **generic roadmap** to the implementation of innovative bioassays in the water sector and address existing barriers for implementation. It contains **two Work Packages (table 1)** each involved in different steps in the wide-spread implementation of novel cost-effective steps of bioassays for water quality determination.

WP4.1 will focus on the selection and validation of a minimal panel of bioassays for cost-effective screening.

WP4.2 will focus on the technical implementation of a selected and validated rapid toxicity screening panel at a selection of water utilities.

Table 1. Time schedule Work Area 4

DEMEAU WA4	Year 1	Year 2	Year 3
WP4.1 - Validation			
1) Selection of bioassays	■	■	
2) Automation		■	■
3) Trigger values	■		
4) Validation		■	■
WP4.2 - Implementation			
1) Regulatory acceptance		■	■
2) Testing framework			■
3) Intro to labs of water utilities			■
4) Demonstration study			■