



MULTISENSOR SYSTEMS AND HORIZON EUROPE PROJECT SAFECREW

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The safe and affordable supply of drinking water in the EU under the pressure of climate change is a key priority. Multisensor Systems is officially part of the European joint project SafeCREW, led by the DVGW Research Centre at Hamburg University of Technology, that will address this key priority over the next three and a half years.

SafeCREW will develop new methods for monitoring, quality assessment, treatment and distribution of drinking water and will derive guidelines for drinking water management and integrated risk assessment for water suppliers and authorities.

Part of this project will see Multisensor Systems Ltd. actively developing a new generation on-line THM analyser that will be able to differentiate between different THMs and will not require any reagents.

The project has received 3.9 million euros in funding from Horizon Europe to provide answers to this important question:

"How do we need to adapt technologies for European water supply in order to provide safe and healthy drinking water under climate change conditions?"



New EU project "SafeCREW" launched: Scientific expertise on safeguarding drinking water supply systems under climate change conditions.

Manchester, 15 December 2022 - The Safe-CREW research project has kicked off with a meeting in Hamburg on 1 and 2 December 2022. Together with ten partners from Germany, Italy, Spain, the Netherlands and the UK, the DVGW Research Centre at the Hamburg University of Technology (DVGW-TUHH) will conduct research on the conditions for climate-resilient water supply and develop guidelines and monitoring tools for action for water suppliers, policy-makers and regulatory authorities.

Climate change poses major challenges for the drinking water supply in Europe. With rising water temperatures and increasing heavy rainfall events, higher amounts of organic substances and microorganisms will also be present in raw water. Well-established processes that have so far guaranteed high drinking water quality will have to be changed and adapted. In southern Europe, disinfection of drinking water is already necessary today. It is possible that even northern European water suppliers will have to use disinfection in the future. One focus will be the investigation of previously unknown disinfection by-products and the further characterisation of already known ones and their formation. With the results, the participating companies intend to develop commercially available methods of quantifying and reducing these by-products so that negative effects on human health can be prevented.

The SafeCREW consortium of research institutes, European water suppliers, small and medium companies and the German Environment Agency (UBA) will use three case studies in northern Germany, Italy and Spain to drive the further characterisation of water quality, and develop new water treatment methods and better management of water distribution networks to maintain high drinking water quality. This will include all processes from source via treatment and up to distribution.

SafeCREW is funded by the European Union and targets stakeholders in the water sector: Water suppliers will receive support for integrated risk management, regulatory authorities will be able to use the data generated in SafeCREW to inform the approval of safe materials in the distribution networks, and last but not least, the research will ensure the further development and implementation of the EU Drinking Water Directive.

Further information on the project can be found at https://www.tuhh.de/wwv/en/dvgw-tuhh/ dvgw-research-centre-tuhh.html and https:// cordis.europa.eu/project/id/101081980

Project partners in the SafeCREW consortium

DVGW Research Centre TUHH (Coordinator, Germany), German Environmental Agency (Germany), Helmholtz Centre for Environmental Research GmbH – UFZ (Germany), KWB Kompetenzzentrum Wasser Berlin gGmbH (Germany), Tutech Innovation GmbH (Germany), Metropolitana Milanese SPA (Italy), Politecnio di Milano (Italy), Consorci Concessionari d'Aigues per als Ajuntaments i Industrie de Tarragona (Spain), Fundacio EURECAT (Spain), BioDetection Systems B. V. (Netherlands), Multisensor Systems Limited (United Kingdom)

Horizon Europe

Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion. It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth. The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. It supports creating and better dispersing of excellent knowledge and technologies.

The DVGW Research Centre TUHH

The DVGW (German Technical and Scientific Association for Gas and Water) Research Centre at the Hamburg University of Technology (TUHH) is one of four water research institutions run by the DVGW. It is affiliated with the University's Institute of Water Resources and Water Supply. The research conducted at the DVGW Research Centre is linked to current practice. The centre provides advice to water companies and industrial corporations. Its research areas range from water collection to water treatment and distribution. They include, among others, the optimisation of water treatment processes, hygiene issues concerning water distribution, and energy efficiency. A key area of its work is the North German water supply with its special characteristics.

Multisensor Systems Ltd

Multisensor Systems (MSS) is a developer and supplier of Environmental, Water and Air Monitoring instruments based in the United Kingdom, using "Electronic Nose" technology. Key to this technology is that it does not require polluting reagents or gases in the analysis process.

On-line monitoring THMs in drinking water is a core business for MSS. The MS2000 – an online Total THM analyser which provides measurements of THMs at low concentrations in water - is one of the best selling products of its type developed over the last 10+ years.

In response to market pressures and needs, MSS is exploring the possibility to develop cost-effective, on-line THM monitor using an "Electronic Nose" that can differentiate between chloroform, bromoform, bromodichloromethane and dibromochloromethane, providing not only a total value but also a breakdown of the THMs that comprise this total. The data provided by an on-line system would be crucial in the development of a model for THM Formation Potential in the water network, one of the targets of this project. MSS will focus on the development and provision of such system to the project enabling model development and will play a role in exploitation of the results from the project.

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Multisensor Systems is a developer and supplier of Water and Gas Analyzers specialising in oil in water, hydrocarbon analyzers, oil in water detectors, THM Analyzers and Ammonia Analyzers based in the United Kingdom.

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