

Tackling PFAS pollution in water

Date: Tuesday, 29 April 2025

Theme: Marine Protection & Restoration

Summary

The session addressed the issue of PFAS, or per- and polyfluoroalkyl substances, in the Baltic Sea. Organised by the [EMPEREST](#) project, the workshop provided a comprehensive look at the impact of PFAS on the aquatic environment and human health, as well as the challenges it creates for the sustainable blue economy. Experts shared their insights on PFAS monitoring, mitigation measures at the local level, and the importance of transnational cooperation to phase out these harmful micropollutants.

The session began with an introduction to the PFAS problem presented by **Piia Leskinen**, Principal Lecturer at [Turku University of Applied Sciences](#). Piia explained that PFAS are man-made chemicals used in numerous products for their properties – e.g. the ability to resist water, grease and heat. PFAS comprise thousands of compounds with diverse chemical properties, making them difficult to trace and regulate, especially given the lack of transparency in their application across Europe. Due to their extreme persistence, PFAS accumulate in the environment and living organisms, contaminating soil, water, rain, and even human blood, while posing serious health risks such as immune suppression, developmental disruption, and increased cancer risk. Although regulatory action is progressing, such as EU-wide bans, restrictions, and proposed universal limits, many companies still substitute banned PFAS with unregulated ones. Municipalities have a critical role in mapping contamination hotspots, minimizing PFAS use through procurement, and ensuring water quality, yet they face significant resource and knowledge gaps. Therefore, local authorities are encouraged to engage in initiatives like EMPEREST to better understand the risks and take informed action to protect citizens and ecosystems.

Next, **Markus Raudkivi**, Project Coordinator at [Baltic Marine Environmental Protection Commission \(HELCOM\)](#), addressed the current state and emerging concerns surrounding PFAS pollution in the Baltic Sea. He discussed findings from the [3rd HELCOM Holistic Assessment of the Baltic Sea 2016-2023 \(HOLAS 3\)](#), which assessed perfluorooctane sulfonate (PFOS) concentrations in water and biota, revealing poor water quality in some areas but no clear impact on biota. In the broader EU context, recent policy updates under

the Zero Pollution Action Plan propose stricter PFAS thresholds for biota and more lenient limits for marine waters. In response, EMPEREST has developed harmonised methodological recommendations for PFAS monitoring and assessment across the region. As part of this effort, a data call resulted in a comprehensive database of 140,000 PFAS measurements across water, sediment, and biota. Analysis of the data shows that while most water samples remain under the environmental quality standards (EQS), nearly 90% of fish samples exceed the new EU thresholds, largely due to six key PFAS compounds. Despite this, long-term trends show no consistent rise in PFAS concentrations, suggesting that changing industrial practices make monitoring increasingly challenging. Markus concluded the presentation by outlining EMPEREST's [Methodological recommendations for the monitoring and assessment of PFAS in the aquatic environment](#), released in March 2025.

Agnieszka Ilola, Head of Secretariat at the [Union of the Baltic Cities \(UBC\) Sustainable Cities Commission](#), outlined how EMPEREST supports transnational efforts to eliminate PFAS pollution in the Baltic Sea Region. EMPEREST helps local authorities, water utilities, and policymakers tackle PFAS through improved monitoring, strict regulation, innovative technologies, and targeted capacity building. The project, funded by the Interreg Baltic Sea Region Programme, brings together 14 core partners and 8 associated organisations across multiple countries. EMPEREST's four key solutions include regional monitoring recommendations, a user-friendly PFAS risk assessment tool for municipalities (tested in 18 cities), mobile pilots of advanced wastewater treatment technologies in seven locations, and tailored digital training materials now hosted on the [Baltic Smart Water Hub](#). To expand impact, the project also conducted roadshows, study visits, and workshops, while collaborating with EU-level initiatives and policy areas. EMPEREST concludes with a call to action through upcoming events in Poland, Sweden, and Germany, fostering innovation and cooperation in PFAS mitigation across the region.

The session, moderated by **Lotta Lehti**, EMPEREST Project Coordinator from UBC, concluded with roundtable discussions:

1. PFAS pollution and blue economy
2. Public PFAS awareness
3. PFAS risk identification and local-level measures

In the discussions, it was asked **if authorities are doing enough to tackle the PFAS problem**; there seems to be a gap between scientific knowledge of the harmfulness of PFAS and the actions to phase out PFAS. PFAS risk identification at the local level is a first step in managing PFAS contamination, enabling cities to understand potential exposure pathways and prioritise appropriate mitigation measures. Participants agreed that **investing in local capacity building and awareness raising**, such as training initiatives and improved access to technical expertise, would support this initial phase.

The discussions also showed that the level of knowledge and understanding of PFAS varies significantly across BSR countries, highlighting the need for more harmonised approaches and shared learning. Industry stakeholders, such as people from fisheries and seafood production, turned out to be well informed about PFAS. This is because of both new legislation about food safety and increased public awareness and media attention. Regarding PFAS hotspots, it was pointed out, e.g. that offshore windfarms may be important sources of PFAS pollution.