

EWA Position

EWA Position paper on the Urban Waste Water Treatment Directive (UWWTD)



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Introduction

The raison d'être of systems for collection and treatment of urban wastewater is their contribution, through limiting pollution, to protect public health and attain a good quality of surface and ground water, and thereby making good quality water available for all legitimate uses, drinking water included.

The considerable investments and operational efforts based on the UWWTD have accomplished a far better quality of water resources while in the field of diffuse pollution sources, for example from agriculture, only small improvements were made. The Urban Waste Water Treatment Directive (UWWTD) has been very effective in reducing the contribution of urban wastewater to organic pollution, nutrient pollution, microbial pollution and pollution with suspended solids. However, it has been less effective in reducing the contribution of chemical micropollutants and microplastics to water pollution that came increasingly into focus.

The collection and treatment of urban wastewater are closely linked to the River Basin Management Plans under the Water Framework Directive. Assessments of treatment needs for urban wastewater therefore are required to be aligned, coordinated and synchronised with the development and adoption of the River Basin Management Plans. Stakeholders and civil society need to be fully involved by the competent authorities at an early stage and to be given opportunities to contribute to and inform about the assessments and the subsequent decision-making procedures.

Furthermore, urban wastewater treatment and collection systems provide a key contribution to other overarching EU and national targets, in particular in relation to the UN Sustainable Development Goals, public health, resource efficiency and the establishment of a circular economy. It is therefore important that the different legislations are aligned and that the regulatory framework ensures that the EU can attain these targets. It is also important that stakeholders and civil society become fully involved by the competent authorities at an early stage and are given the opportunities to contribute to all the assessments and the subsequent decision-making procedures.

Hence, full compliance with the current technical requirements of the UWWTD is now within sight. However, pollution containing chemical micropollutants, microplastics and some bacteria and viruses which are not regulated in the UWWTD remains a challenge.

Reducing further pollution with microplastics and chemical micropollutants should be based on considerations of cost-effectiveness and resource efficiency. The method of choice for reducing such pollution is therefore to reduce at source the input into urban wastewater at source, and not their elimination through wastewater treatment. The EU has an important responsibility to ensure that these issues are fully addressed by other relevant legislative frameworks for marketing, use, waste disposal and environmental and public health liabilities for different types of chemical products and plastics.

While there does not seem to be an acute need for a reassessment of the existing discharge requirements for all existing treatment plants, there are good reasons for the Commission to consider increasing the stringency of these standards for new plants.

1) Extend the scope of pollutants in the UWWTD

The current scope of the UWWTD, which continues to be relevant, is pollution with organic matter (BOD and COD), suspended solids and nutrients (N and P) in urban wastewater discharges and in discharges from certain food industries to rivers, lakes and coastal waters. As urban wastewater is also a significant source of other pollutants, its scope should be extended to:

Chemical micropollutants

The increasing number of chemical micropollutants, new knowledge about their impacts on health and the environment and new chemicals entering the market ("emerging pollutants") are issues for all treatment systems for urban wastewater and should therefore be included in the scope of the Directive. Sources include industrial wastewater discharge into sewer systems, atmospheric deposition of chemicals and pollution from the domestic, public and industrial use of products containing chemical micropollutants (auxiliary industrial materials, household chemicals, medicines, cosmetics, pesticides, etc.). While these pollutants should, as a priority, be treated at source by preventive measures such as Extended Producer Responsibility or use of marketing restrictions to be established, it may be necessary to apply additional treatment to ascertain urban waste discharges in order to meet quality standards applicable for rivers, lakes and coastal waters. In these cases, Member States should ensure the necessary provisions. Threshold values for certain parameters of chemical micropollutants in the UWWTD would be counterproductive.





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Microorganisms

The issue of health risks (bacteria and virus) linked to discharges of urban wastewater has been raised in the consultation process, in particular in relation to drinking water resources, waters used for food production (e.g. “shellfish waters”) and bathing waters. Some of these issues are directly addressed in the WFD for drinking waters (Art. 7), and in relevant specialized legislation (Bathing Water Directive)). However, outbreaks of potentially mortal diseases such as legionnaires’ disease and food poisoning from contaminated shellfish have been directly linked to urban wastewater discharges and would in the view of the EWA warrant an extension of the scope to ensure the protection of human health from impacts of pollution with bacteria and viruses. Where treated wastewater is used for agricultural irrigation, more stringent microbiological standards will be implemented anyway.

Microplastics

Microplastics are currently not covered by the scope of the Directive. They are also a source of chemical pollution and should be dealt with even though there is still research to do. Harmonised analytics and sampling is needed in the short term. Given the potential impacts on human health and ecosystems, the EWA considers that they too should fall under the scope of the Directive, albeit that, like for chemical micropollutants, pollution should first of all be prevented at source. State of the art wastewater treatment plants eliminate great amounts of microplastic from the inflowing wastewater (up to 99 %). The eliminated microplastic is then found in the sludge. This means that Member States should take appropriate measures to reduce pollution, where sludge is used as fertilizer.

Storm Water

EWA is of the view that storm water, which is a significant source of pollution, in particular by suspended solids and certain chemical pollutants, should fall under the scope of the Directive, not only when mixed with urban waste water in combined sewer systems. A stronger regulation of storm water would provide an important contribution to the protection of water quality and public health.

2) Eliminate chemical micropollutants and microplastics at source

As far as micropollutants and microplastics in wastewater are concerned, EWA considers that preventive measures at source should be the main instrument to limit such pollution.

In view of the constant evolution of chemical micropollutants and emerging concerns about these, the EWA proposes to include in the UWWTD requirements to ensure that, where neces-

sary to protect the quality of rivers, lakes and coastal waters in a river basin district and where cost-effective measures are not possible at the source of pollution, Member States must implement measures to significantly reduce chemical micropollutants from urban wastewater discharges.

3) New technical requirements in the UWWTD

There are a number of issues with the existing technical provisions of the Directive and their implementation that may give rise to significant pollution which can jeopardise attaining the targets of the Water Framework Directive and, in some cases, offset the benefits provided by the implementation of the current technical requirements of the UWWTD:

- Lack of effective control of pollution from combined sewer overflows (CSOs).
- Inadequate implementation of the generally vague requirements to ‘individual’ and ‘appropriate’ systems (IAS, UWWTD Art 3(1), subparagraph 3) and the requirements to small agglomerations (UWWTD, Article 7).
- Inadequate measures to reduce the nutrient content in waste water discharges
- Lack of control of urban run-off and storm water discharges.

As there is no one-size-fits-all solution for CSOs, IAS, small agglomerations and urban run-off /storm water discharges, EWA proposes introducing a proportionate assessment or audit and a decision-making procedure that, as a minimum, will ensure that lack of sufficient measures to address these pollution sources do not offset the benefits of treatment currently required under the UWWTD or hinder attainment of the objectives of the Water Framework Directive and those defined in the relevant River Basin Management Plan. The assessments should consider the full lifetime of the wastewater infrastructure and consider the impact of all relevant factors, including climate change. They should be carried out by the competent authorities in the Member States and, subsequently, regularly updated.

Removal of nutrients from wastewater discharges should be a universal requirement and the Commission should review the need to strengthen the requirements to the level of their removal.

4) Integrate the Waste Water Treatment System in the Circular Economy and Climate Change Policies

While the primary purpose of urban waste water collection and treatment is the protection of public health, water resources and the environment, there is also increasing attention on the fact that urban waste water is also a valuable resource and on the contribution of its management to greenhouse gas emissions. There is a need for better and more efficient use of this resource in line with the agreed UN Sustainable Development Goals (SDGs) and for contributing to EU greenhouse gas reduction targets. There are also close links and important synergies to be exploited between management of waste water collection and treatment systems, and water management and climate adaptation.

The resource efficiency issues that can potentially be addressed include improving their energy efficiency and in some cases even achieve energy neutrality, phosphate mines, producers of clean sludge for agriculture and soil improvement and producers of treated wastewater for use in other sectors, such as agriculture. Finally, waste water treatment and collection can also be integrated into wider industrial networks where waste heat, waste and treated waste water are recycled as input into other activities (“industrial symbiosis”). Other resource efficiency issues include prevention of leakage into and from sewers. Many waste water plants in Europe have already undertaken actions to improve resource efficiency.

There are no one-size-fits-all resource efficiency solutions and actions need to be suited to local conditions, taking account of issues of scale, cost-effectiveness and inter-sectoral issues while bearing in mind the primary purpose of wastewater treatment.

Therefore the EWA proposes that Member States should ensure that the competent authorities carry out proportional assessments or audits of the potential opportunities and that urban waste water treatment plant use technologies which are energy-efficient without compromising the quality requirements to the discharged effluent. Moreover, they should make decisions on how to integrate the waste water system into a system of circular economy and resource and energy efficiency. Requirements to do so could be integrated either into the UWWTD or into a wider legislative instrument to promote a circular economy.

Member States should furthermore ensure that unnecessary legal obstacles to regenerative energy production in urban waste water treatment plants are removed .

5) Address governance issues to improve UWWTD implementation

Lack of sufficient technical and administrative capacity at the appropriate administrative levels to establish and operate infrastructure has in some cases been a key obstacle to effective implementation. While availability of the necessary resources to establish this capacity clearly falls outside the scope of the UWWTD, it is an issue that needs to be addressed by the competent authorities as having this capacity is a precondition for effective implementation of the Directive and for harvesting the benefits of its implementation.

Other governance challenges include ensuring cost-effectiveness of infrastructure (including avoiding over- or undersized infrastructure), appropriate levels of cost recovery and affordability of waste water services, appropriate levels of asset renewal and maintenance, and appropriate training of staff for maintenance and operation of assets. The long-term sustainability of wastewater collection and treatment services is dependent on these issues being adequately addressed. Application of existing CEN standards for operation and maintenance and of the European Qualification Framework should be introduced as a mandatory minimum requirement.

Finally, it is important to strengthen and institutionalise the involvement of a wide range of potential stakeholders and civil society in the assessments and planning of the development of the sector. This will lead to a better integration of the waste water systems into water management, climate adaptation and overall in a circular - and resource-efficient economy.



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