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# Implementing the Polluter Pays Principle for micropollutants

## EurEau's response to Deloitte's study on Extended Producer Responsibility (EPR)[1] (January 2020)


### Summary

**This document provides a short reaction to and additional thoughts on the Deloitte study into Extended Producer Responsibility, accompanied by complementary information on the water services sector.**

**The increasing presence of micropollutants and microplastics in the aquatic environment calls for regulatory action. In line with Article 191.2 TFEU and the European Commission's zero pollution ambition, EurEau assigned Deloitte to examine how EU legislation needs to be adapted to address this problem and, to what extent EPR schemes can be used to remove the financial burden of mitigation measures from water consumers, thus improving the affordability of and the accessibility to water services.**

**EurEau largely supports the study's outcome. The study builds a solid case in favour of mandatory control-at-source measures, complemented, where necessary, by other mitigation measures along the supply chain and financed through mandatory EPR schemes. The study also highlights the need to adjust the relevant EU legislation, conduct a solid cost-benefit analysis of all mitigation measures and set up an inclusive process to develop fair, proportionate and effective EPR schemes.**


[1] In Extenso, Deloitte: Study on the feasibility of applying extended producer responsibility (EPR) to micropollutants and microplastics emitted in the aquatic environment from products during their life cycle (2020).


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# 1. Background

Micropollutants and microplastics are a growing concern for consumers, policy makers and scientists. These molecules and particles are increasingly found in the aquatic environment and pose significant problems to drinking water and waste water operators[2].

The European legislative basis to tackle this problems is very clear with the TFEU (Art. 191.2) stipulating that the *"Union policy on the environment … shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay."*

More directly related to the water sector, Article 9 of Directive 2000/60/EC[3] addressing the recovery of costs for water services, explicitly refers to environmental and resource costs and calls for the application of the polluter pays principle. However, for most of the pollutants and microplastics found in the water cycle, control-at-source measures remain largely insufficient and the polluter-pays principle is not applied.

On the other hand, the co-legislators show increasing willingness to implement this Treaty article in practice. Examples include REACH restriction dossiers for certain PFAS and intentionally added microplastics or the implementation of the Polluter Pays Principle through EPR schemes for single use plastics[4].

Given the legislative framework, the key question is therefore not **whether** control-at-source measures and the Polluter Pays Principle should be applied to micropollutants and microplastics in the water cycle. Answers are needed as to **how** these principles can be applied in a fair, proportionate and effective manner.

EurEau engaged Deloitte to deliver one part of the answer relating to the required regulatory changes in EU legislation to control the release of pollutants and microplastics at the source and, if these measures are not sufficient, to implement the Polluter Pays Principle to finance mitigation measures at other life-cycle stages through extended producer responsibility.

# 2. Why is the water sector particularly concerned?

The key mission of the water sector is to provide safe, wholesome and clean drinking water and to ensure that waste water is properly treated with a view to protecting human health and the environment. According to Directive 2000/60/EC (Recital 1) (the Water Framework Directive), "water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such."

[2] More details can be found in the EurEau position paper on the holistic approach to addressing micropollutants and the EurEau briefing note on microplastics and the water sector.
[3] Directive establishing a Framework for Community Action in the Field of Water Policy (WFD).
[4] Directive 2019/904 on the reduction of the impact of certain plastic products on the environment.

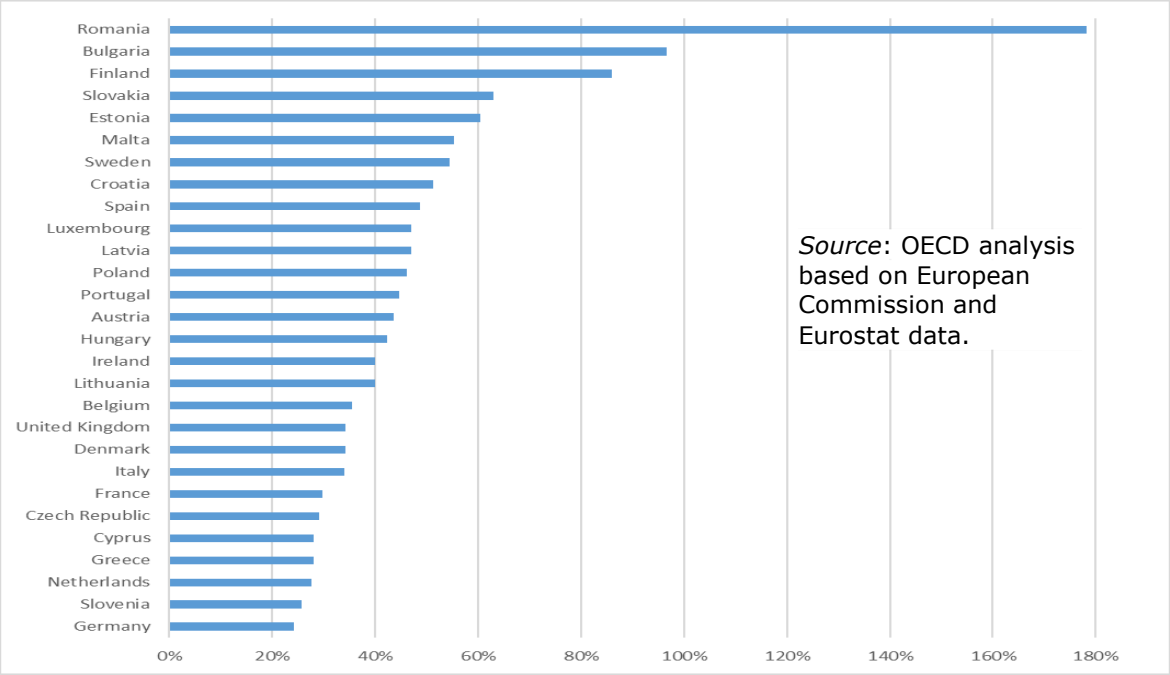
The United Nations define the human right to water through five indicators:

- Availability
- Accessibility
- Affordability
- Acceptability
- Safety

The release of micropollutants and microplastics into the aquatic environment may negatively affect all five of these, but most particularly **accessibility** and **affordability**.

A recent OECD study for the European Commission estimates that, depending on the Member State, a 24-180% increase in investment is necessary to achieve full compliance with the current (1998) Drinking Water Directive (DWD) and the Urban Waste Water Treatment Directive (UWWTD) by 2030, ensure efficiency of the system and provide increased access to water for the vulnerable members of our society. This translates into the staggering sum of €289 billion[5].

**Projecting financing needs (per annum additional expenditures by 2030): BAU + Compliance + Efficiency vs. Baseline**




The cost of additional treatment to meet future drinking water and waste water requirements is not included in these estimates. The Deloitte study provides estimates of these costs. The additional treatments are largely caused by the presence of micropollutants and microplastics in the water supply.

[5] Estimating investment needs and financing capacities for water-related investment in EU member states (draft), OECD (2019).

In addition, due to the socially sensitive character of water tariffs, many countries / regions already face a certain degree of underinvestment, mainly regarding infrastructure maintenance and renewal. At the same time, financially sustained efforts are necessary to achieve climate change resilience and realise the energy efficiency/generation and circular economy potential of the sector.

Water operators will continue to place highest priority on the protection of public health and the environment. However, with ever more substances and products brought to the market in ever shorter intervals, water operators cannot be expected to shoulder the financial burden of constantly increasing the number of treatment steps to fulfil their mission. Only effective control-at-source measures and, where these are not sufficient, extended producer responsibility schemes can achieve this.

# 3. How does EurEau judge the study conclusions?

EurEau fully shares the study's conclusions that

- Micropollutants and microplastics represent an increasing problem for the aquatic environment. Current regulatory measures must, therefore, be considered as insufficient.
- Control-at-source measures must be taken first, not only because it is a requirement stemming from the TFEU, but also because such measures are usually far more effective due to the many pathways of micropollutants and microplastics to the environment. Therefore, EPR alone will not be able to solve the problem, but it is an important tool to finance downstream mitigation measures when control-at-source measures alone are not sufficient.
- Mandatory control-at-source and EPR requirements are generally more effective and acceptable then voluntary initiatives. EU legislation offers many pathways to include EPR provisions with some pieces of legislation (pharmaceutical, pesticides) being more easily adaptable than others.
- A full cost-benefit analysis is required not only covering end-of-pipe measures but measures along the full product life-cycle ranging from product development down to waste treatment options. Its goal is to determine at which life-cycle stage mitigating measures would be most effective while ensuring the affordability of the related services. This analysis was not part of the study.
- More work is necessary to develop fair, effective, efficient and proportionate EPR schemes for micropollutants and microplastics, in particular with regards to the identification of responsible producers and avoiding free riders. EurEau understands that this was not covered by the study. It appears logical to have the producers, and possibly the whole supply chain, closely involved in this development process.

# 4. Additional questions regarding EPR schemes for micropollutants and microplastics

## What is EPR?

"Extended producer responsibility scheme" means a set of measures taken by Member States to ensure that producers of products bear financial responsibility or financial and organisational responsibility for the management of the waste stage of a product's life cycle (Directive on Waste 2018/851).

EPR is a concept where manufacturers and importers of products should bear a significant degree of responsibility for the environmental impacts of their products throughout the product life-cycle, including upstream impacts inherent in the selection of materials for the products, impacts from manufacturers' production process themselves, and downstream impacts from the use and disposal of the products. Producers accept their responsibility when designing their products to minimise life-cycle environmental impacts, and when accepting legal, physical or socio-economic responsibility for environmental impacts that cannot be eliminated by design.[6]

## Who does EPR address?

Questions may be raised as to who should be considered the polluter and should therefore finance the EPR scheme. As a matter of example, the value chain for pharmaceuticals for human use is particularly complex, involving manufacturers, wholesalers, prescribers, hospitals, retailers (pharmacies etc.), patients and waste water operators.

EurEau strongly believes that EPR schemes should primarily address those that produce and/or makes available on the market products releasing micropollutants or microplastics. This interpretation is underpinned by the definitions applied to producers in directives 1999/44/EC (Directive on certain aspects of the sale of consumer goods and associated guarantees), 2001/95/EC (Directive on General Product Safety) and 2019/904 (Directive on the reduction of certain plastic products in the environment).

## Won't this make products more expensive, some of which might be relevant to human health?

Water services are highly relevant to the protection of human health. Hence, although they seem far from one another, both the pharmaceutical industry and the water sector are operating in the field of public health. The WHO states that a "significant amount of disease could be prevented through access to safe water supply, adequate sanitation services and better hygiene practices." It is estimated that diarrhoeal disease due to

[6] OECD. Environment Directorate, Paris, France (2006)."Extended Producer Responsibility." Project Fact Sheet.

unsafe water supply, sanitation and hygiene alone is responsible for 842 000 deaths per year[7]. Through effective water services and hygiene standards for our water, this is not the case in Europe.

EPR should always be implemented in connection with control-at-source measures and should finance those measures which are most effective and cost-efficient in minimising pollution. This combination makes far better use of available funds than just investing in end-of-pipe measures.

On the other hand, it is likely that producers pass the cost increase on to consumers. In many cases, consumers can switch to more sustainable but equally effective solutions. Furthermore, EPR should trigger investments in eco-designed products not falling under EPR obligations.

In the case of pharmaceuticals, it should be established for which active substances mitigation measures should be taken, at which life cycle stage measures would be most effective and what the impact of EPR on sales prices would be.

## Why is EPR the right tool?

There are different ways to implement the Polluter Pays Principle. EurEau sees EPR as the most adapted tool in that:

- The pollution of the aquatic environment can be reduced through many different actions along the product value chain. Politicians may feel tempted to require additional end-of-pipe treatment at waste water treatment plants (WWTP's), because it appears appropriate to entrust the water operator with this task from a regulatory point of view. However, as the OECD points out, this extra-treatment would not be the most sustainable solution and it should therefore be complementary to other measures, particularly at the source[8]. EPR would ensure that measures are taken where they are most efficient and cost-effective.
- EPR ensures the full involvement of producers. In fact, the EPR scheme can be designed in a way that industry fully manages it from collecting funds to selecting and financing the most effective mitigation measures.
- It is not a tax raised by the government. Rather, it is a tool to meet agreed threshold values in the aquatic environment and will have to be paid only by those producing or making available on the market products that emit micropollutants and microplastics.
- It ensures that the funds collected through EPR fees are used for mitigation measures. Hence, they must have a finalist legal and economic nature. Unlike many taxes, the funds will not disappear in a larger budget but be exclusively used for mitigation measures on pharmaceuticals in the environment.

[7] https://www.who.int/water_sanitation_health/diseases-risks/en/.
[8] Pharmaceutical Residues in Freshwater: Hazards and Policy Responses, OECD (2019).

## EPR works for tangible waste (batteries, WEEE etc.). Can it also work for diffuse pollution originating from chemical substances and microplastics in water?

EPR is indeed well established for a number of tangible end-of-life products. More recently, the EU co-legislators introduced EPR requirements for diffuse pollution (littering) through the Single Use Plastics Directive (2019/904). Although the individual products (cigarette filters, wet wipes) found on beaches and streets cannot be attributed to an individual producer, the industry as a whole is seen to have a financial obligation to cover the environmental impacts of their products. EPR schemes for micropollutants and microplastics would go one step further, but follow the same logic.

## How to develop an acceptable EPR scheme?

EPR schemes for micropollutants and micro-plastics must be fair, efficient, effective and proportionate. They should follow the principles set out in directive 2018/851 (waste directive) and leave room for adaptation to national circumstances. Producers and, possibly, the full value chain should be involved in its development. EPR schemes might work with modulated fees, based on the hazard level of a substance, paid into national / regional funds. BDEW suggested a possible fund model[9].

**Fair:** The risk of free riders must be minimised. Hence, imported products must be covered as well. The definition of 'producer' should address this point as it comprises both manufacturers and importers. However, free riders also occur when advanced drinking water or waste water treatment removes substances / particles released by products not covered by the EPR scheme. This risk could be minimised by taking mitigation measures at other life cycle stages, upgrade those WWTP that are hotspots for the target substances/particles and, very importantly, include more substances/particles in EPR schemes.

**Proportionate:** It seems logical to modulate the amounts to be paid according to the quantities released by each producer and the properties (bioaccumulation, persistency, toxicity, mobility) of the substance/particle released.

**Effective:** The EPR schemes should ensure that the maximum permissible concentration levels in the aquatic environment are not exceeded.

**Efficient:** The involvement of producers will ensure that funds are spent in the most efficient way and with a minimum of red tape. They can decide at which life cycle stage measures should be implemented as long as there is compliance with the maximum permissible concentration levels in the aquatic environment.

[9] Civity for BDEW (2018).

## At which levels should mitigation measures be taken?

While the OECD acknowledges that WWTPs may have a role to play, it also states regarding pharmaceuticals in the environment that *"A focus on preventive options early in a pharmaceutical's life cycle, may deliver the most long-term and large-scale benefits... Relying on end-of-pipe WWTP upgrades only is costly, energy intensive and toxic transformation products may be formed."*

Hence, control-at-source measures must have absolute priority. If this is not sufficient, mitigation measures at other life cycle stages, including end-of-pipe treatment, should be implemented based on a thorough cost-benefit analysis taking into account aspects such as energy consumption, $CO_2$ footprint, impact on the circular economy etc.

### About EurEau

EurEau is the voice of Europe's water sector. We represent drinking water and waste water operators from 29 countries in Europe, from both the private and the public sectors.

Our members are 32 national associations of water services. At EurEau, we bring national water professionals together to agree European water sector positions regarding the management of water quality, resource efficiency and access to water for Europe's citizens and businesses. The EurEau secretariat is based in Brussels.

With a direct employment of around 476,000 people, the European water sector makes a significant contribution to the European economy.