PANEL 3: EMBEDDING PRODUCER RESPONSIBILITY IN WASTEWATER INVESTMENT

EFRWS 2025

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Research partner of WAREG in the ongoing study 'Research on Extended Producer Responsibility systems in Europe: lessons learned and recommendations for their application in the Wastewater sector'

Bruxelles -
4 December 2025

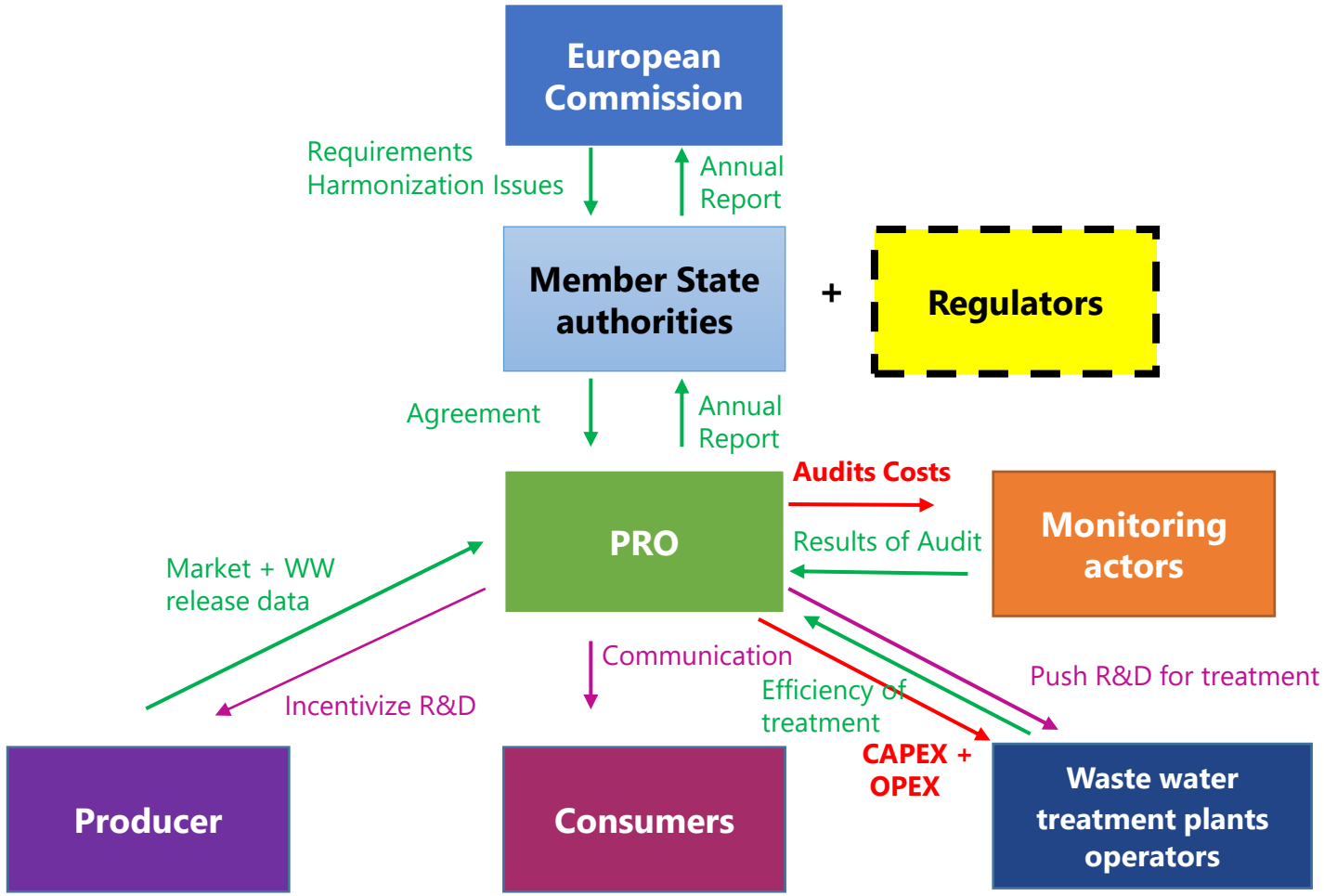
AGENDA

1. AN ANALYSIS OF THE EXISTISTING EPR SCHEMES IN 16 EU COUNTRIES
2. URBAN WASTEWATER TREATMENT DIRECTIVE: AN INTRODUCTION
3. MOVING EPRs SCHEMES FROM WASTE TO WASTEWATER
4. RELEVANT ISSUES AND THE ROLE OF REGULATORS
5. PRELIMINARY INSIGHTS

GLOSSARY

- **Collective Producer Responsibility (CPR)**: Collective Producer Responsibility (CPR) refers to an organisational model within Extended Producer Responsibility (EPR) in which producers jointly fulfil their legal obligations, such as financing, organising, or ensuring the proper treatment of products at end-of-life, through a shared system, typically a Producer Responsibility Organisation (PRO).
- **Individual Producer Responsibility (IPR)**: each producer is responsible for the collection and treatment of its products. It can include systems operated by individual producers and systems where producers share operational responsibility but remain individually responsible on a financial basis, thus not being affected by the behavior of competitors.
- **Eco – modulation**: Eco-modulation refers to the practice of modulating producer fees within an Extended Producer Responsibility (EPR) scheme based on the environmental performance of products.
- **Financial responsibility**: Financial responsibility refers to the obligation of producers to cover the costs associated with managing their products at end of life.
- **Organizational responsibility**: Organizational responsibility refers to the obligation of producers to ensure that the systems and arrangements needed for the proper end-of-life management of their products are effectively established. This may involve contracting waste or wastewater treatment operators, waste sorting facilities, monitoring activities (waste composition/wastewater analysis), coordinating logistics and the valorisation of waste on the market.
- **Industry-led**: Industry-led refers to an EPR model in which producers, and the organisations representing them, take the primary role in designing, governing and operating the system. In an industry-led model, producers make key decisions on system organisation, financing, contracting of waste operators and performance strategies, while public authorities focus mainly on oversight, enforcement and setting regulatory requirements.
- **State-led:** State-led (or government-led) EPR model refers to an approach in which the government plays the central role in organising, governing, and overseeing the EPR system. In a state-led model, the government typically defines how collection and treatment systems must operate, sets fees or fee-setting rules, manages or designates the operator of the scheme, and maintains strong control over compliance and financial flows. Producers still finance end-of-life management, but the strategic and operational decisions are primarily driven by the state rather than by industry.
- **Hybrid:** Hybrid models in the context of Extended Producer Responsibility (EPR) refer to systems where responsibility for end-of-life management is shared between producers and public authorities. In hybrid EPR models, producers typically provide financing (fully or partially), while operational tasks are carried out by public bodies or jointly with Producer Responsibility Organisations (PROs).

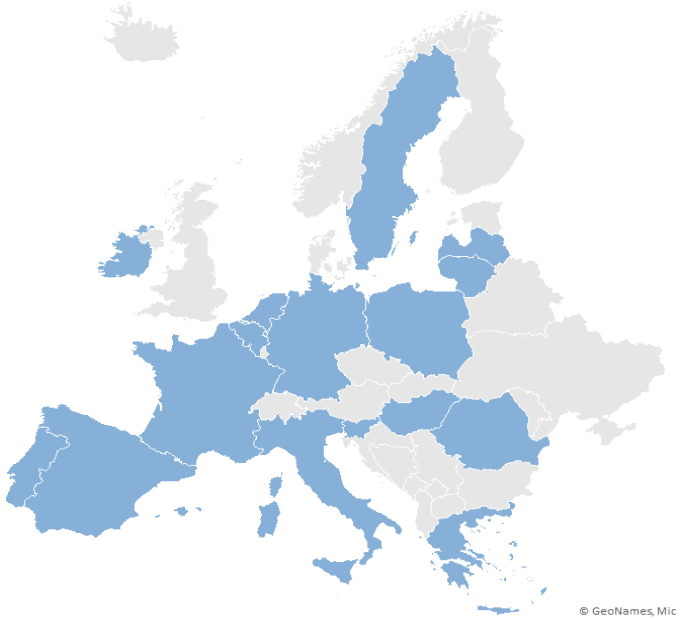
WHAT ARE WE TALKING ABOUT?



Source: Reworking of COMMISSION STAFF WORKING DOCUMENT, IMPACT ASSESSMENT Accompanying the document Proposal for a Directive of the European Parliament and of the Council concerning urban wastewater treatment (recast) {COM(2022) 541 final} - {SEC(2022) 541 final} - {SWD(2022) 544 final} – Annex 9

AN ANALYSIS OF THE EXISTISTING EPR SCHEMES IN 16 EU COUNTRIES

EPR SCHEMES ALREADY ESTABLISHED IN THE 16 COUNTRIES



About 130 active schemes – just few of them are relevant for EPR scheme in wastewater

	Mandated by EU legislation				Other EPR streams (a selection of waste streams)			
Country	Packaging and Packaging Waste	Waste Electrical and Electronic Equipment	Batteries	End-of-Life Vehicles	Single-Use Plastics	Textiles	Medicines	Tyres
Belgium	✓	✓	✓				✓	✓
France	✓	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓			
Greece	✓	✓	✓	✓				
Hungary	✓	✓	✓	✓	✓	✓	✓	✓
Ireland	✓	✓	✓	✓	✓			✓
Italy	✓	✓	✓	✓				✓
Latvia	✓	✓	✓	✓	✓	✓		✓
Lithuania	✓	✓	✓	✓	✓			✓
Netherlands	✓	✓	✓	✓	✓	✓		✓
Poland	✓	✓	✓	✓	✓			✓
Portugal	✓	✓	✓	✓	✓		✓	✓
Romania	✓	✓	✓					
Slovenia	✓	✓	✓	✓				✓
Spain	✓	✓	✓	✓		✓	✓	✓
Sweden	✓	✓	✓	✓	✓		✓	✓

EXTENDED PRODUCER RESPONSIBILITY: WASTE AND WATER

- The Extended Producer Responsibility (EPR) concept was first formally introduced at EU level in 2008 by the **Waste Framework Directive** (WFD – Dir. 98/2008/CE).

- EPR is **a policy approach** that makes **producers responsible** (physically and/or economically; fully or partially) **for their products along the entire lifecycle**

Waste sector	Wastewater sector
Producers finance **collection, sorting, and recycling/disposal** of their physical products.	Producers contribute to the **costs of removing** micropollutants found in urban wastewater requiring quaternary treatment
Producers are asked to reach progressive mandatory collection, recycling or recovery targets	Producers are expected to reduce the presence of micropollutants in their products as an aspirational goal

URBAN WASTEWATER TREATMENT DIRECTIVE: AN INTRODUCTION

URBAN WASTEWATER TREATMENT DIRECTIVE (UWWTD): REQUIREMENTS AND TIMELINE

- The revised **Urban Wastewater Treatment Directive** aims to better protect the public and the environment from the impacts of untreated urban wastewater.

- It requires Member States to **remove micropollutants** through **quaternary treatment**, financed via **Extended Producer Responsibility** applied to the **cosmetic and pharmaceutical sectors.**

January 1, 2025
Introduction of UWWTD

July 31, 2027
Deadline for UWWTD national transposition

December 31, 2028
Deadline for national EPR implementation

December 31, 2033
First deadline for quaternary treatment requirements

QUATERNARY TREATMENT REQUIREMENTS UNDER THE UWWTD

- Member States shall ensure that discharges from urban wastewater treatment plants treating urban wastewater with a **load of 150 000 p.e. and above satisfy**, before being discharged into receiving waters, **the relevant requirements of quaternary treatment** by

31 December 2033
for discharges from **20 %** of those urban wastewater treatment plants

31 December 2039
for discharges from **60 %** of those urban wastewater treatment plants

31 December 2045
for **all** discharges from those urban wastewater treatment plants.

- Member States shall ensure that discharges of urban wastewater from **agglomerations of 10 000 p.e. and above** satisfy, before being discharged into areas included in the list referred to in paragraph 2, the relevant requirements of quaternary treatment

31 December 2033
for **10 %** of those agglomerations

31 December 2036
for **30 %** of those agglomerations

31 December 2039
for **60 %** of those agglomerations

31 December 2045
for **100 %** of those agglomerations

EPR PRODUCERS' OBLIGATIONS UNDER THE UWWTD

- Producers must cover :

Quaternary treatments ALREADY ESTABLISHED	
Cost classification	**Entity in charge of operational responsibility**
Operational costs (current)	Utility (Recital (23))
Part of investment costs (considering the depreciation)	Utility (Recital (23))

NEW quaternary treatments	
Cost classification	**Entity in charge of operational responsibility**
Full costs (opex and capex) of quaternary treatments (at least 80%)	Utility (art.9(1))
Monitoring activities for micropollutants	PROs/Utility (art.9(1))
Collection, reporting and impartial verification of statistics on the quantities and hazardousness of products placed on the Member States market	PROs/Independent auditors (art.9(1), 9(3))
Other costs required to exercise their extended producer responsibility	PROs (art. 9(1))

AN ATYPICAL EPR SCHEME: DIFFERENT TARGETS FOR DIFFERENT ACTORS

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Tasks		
Producers		**Utilities**
• Quaternary treatment **cost coverage** (≥80%) • **Replacement of polluting molecules;** possible in cosmetics, but more difficult in pharmaceutical active ingredients (aspirational goal driven by eco-modulation).		• Responsible for the **upgrading of the plants** within the required timeframe (directive timeline). • Responsible for the **percentage removal of polluting substances** between the plant's input and output (Art. 8 – annexes). • Involvement in **monitoring activities**.

Effects		
Producers		**Utilities**
An individual producer **who reduces** the use of **micropollutants** or **replace them with less hazardous substances** may benefit from a **lower contribution to the EPR scheme.**		• **A reduction in the volume of pollutants** placed on the market does not necessarily lead to a **reduction in operating costs** • **Investment costs** for the plants are sunk costs

MOVING EPR SCHEMES FROM WASTE TO WASTEWATER

COMPARING EPR IN THE WFD AND UWWTD: KEY FEATURES AND TRANSFERABILITY ASSESSMENT (1/4)

Main EPR features	Lesson learned	Transferability
Scope *definition of producer*	**The Directive's definition aligns with the definition of "producer" commonly used within (recent) EU waste legislation**.	
Scope *products in scope*	**Under the UWWTD, the products falling within the scope EPR are specifically identified in Annex III of the Directive.**	
Mandatory vs Voluntary *EPR scheme*	There is no choice between establishing a mandatory or a voluntary EPR scheme. **EPR under the UWWTD is mandatory by law.**	
Producer's responsibility: *Individual vs collective*	All producers of products falling within the scope of the Directive must participate in collective EPR schemes established at national level.	

transferability level

- Not applicable
- High
- Moderate
- Low

COMPARING EPR IN THE WFD AND UWWTD: KEY FEATURES AND TRANSFERABILITY ASSESSMENT (2/4)

Main EPR features	Lesson learned	Transferability
Operational vs financial responsibility	Member States are expected to implement the new EPR framework under the UWWTD primarily as a **financial mechanism.**	
Governance model	**Multi-PRO competitive models** (e.g. dual systems) **Competition between PROs in this context is unlikely to produce any added value** and may instead increase the complexity of regulatory oversight and monitoring	

transferability level

- Not applicable
- High
- Moderate
- Low

COMPARING EPR IN THE WFD AND UWWTD: KEY FEATURES AND TRANSFERABILITY ASSESSMENT (3/4)

Main EPR features	Lesson learned	Transferability
Profit vs non-for-profit	Since competition between PROs is unlikely to provide any added value in this context, **a not-for-profit** model appears to be the most appropriate option.	
Eco-modulation	We expect **utilities to be involved in defining the eco-modulation criteria.** As in the waste sector, it would be **beneficial to harmonise fee-modulation criteria across Member States.**	

transferability level

- Not applicable
- High
- Moderate
- Low

COMPARING EPR IN THE WFD AND UWWTD: KEY FEATURES AND TRANSFERABILITY ASSESSMENT (4/4)

Main EPR features	Lesson learned	Transferability
Governance model	**Single-PRO monopoly models** (typically non-profit) The need for large, coordinated investments, uniform treatment standards, and close cooperation with public utilities **favours centralised management and cost pooling.** A **state–managed/public fund** approach would be especially relevant.	
PRO's internal governance	**The French hybrid public–private EPR model**, which combines producer financing with strong public oversight and includes representation from the scientific and non-profit sectors.	

transferability level

- Not applicable
- High
- Moderate
- Low

RELEVANT ISSUES AND THE ROLE OF REGULATORS

THE ROLE OF REGULATORS

Relevant Issues

1. Gradual implementation of the quaternary treatment requirements
2. Analytical definition of “full costs” to be covered
3. Cost coverage rate (at least 80%)
4. Possible regulatory incentive/disincentive mechanisms
5. Economic relationship structure between parties and oversight of financial flows
6. Contractual adjustment measures
7. Ensuring tariff affordability for consumers
8. Reporting harmonization
9. System-wide performance monitoring

PRELIMINARY INSIGHTS

PRELIMINARY INSIGHTS

- No need for **market competition**, as wastewater treatment is a highly regulated, fully centralised natural monopoly.
- **Central planning** is essential to provide **certainty to operators** concerning costs and investments and ensure compliance with quaternary treatment requirements
- **Regulators are essential** for:
  - **Benchmarking of quaternary costs in tariff**
  - **Ensuring tariff affordability for consumers**
  - **Guiding investment funding decisions**
  - **System-wide performance monitoring**

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