

Boosting closed loop glass recycling in Europe: Why Deposit Return Schemes are not the way forward

For decades, glass has been successfully collected for recycling via kerbside and bottle bank collection across the EU under Extended Producer Responsibility (EPR) schemes to achieve the current 78% collection for recycling rate.

Across Europe, there is an ambition to increase packaging recycling rates, reduce litter and find circular economy solutions. To tackle the collection of plastic beverage containers and achieve the objectives of the Single-Use Plastic Directive, more and more countries are considering the introduction of a Deposit Return Scheme (DRS) for single-use packaging. While aiming to tackle a plastic specific problem, cans and glass are often considered at the same time for a recycling DRS.

Unlike many other waste streams, there is a high demand for recycled glass and the average collection rate across Europe is currently 78%, with most of the bottles recycled being reprocessed back into bottles. There is potential and ambition to do more and, as part of the multi-stakeholder partnership [Close the Glass Loop](#), FEVE aims to boost the European collection for recycling rate to 90% by 2030 and improve the quality of recycled glass, so that more recycled content can be used in a new production loop. We support improved Extended Producer Responsibility schemes and municipal waste management systems that make collection simple and convenient for the consumer and optimal for the recycling value chain. When applied to plastic containers, a Deposit Return Scheme can help reduce littering, boost collection rates and optimise plastic recycling processes for food contact applications. Evidence across Europe shows however that DRS do not maximise quantity or quality of collected glass and instead have negative consequences and put the existing collection and recycling system at risk.

Extended Producer Responsibility (EPR) schemes already ensure that all types of glass containers are effectively collected and recycled at the end of their life

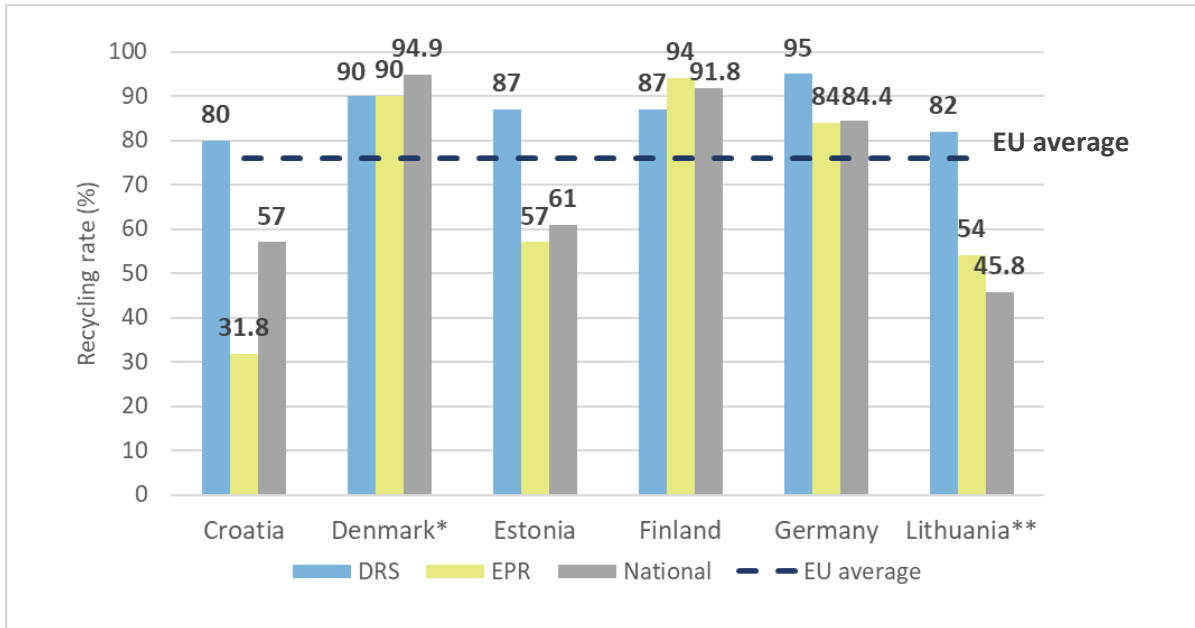
- Contrary to DRS systems, which are typically only used for beverage containers (beer, water, soft drinks), EPR schemes already ensure that all glass packaging types – and not simply a small portion – are collected and recycled effectively via kerbside and bottle bank collection. All food and non-food container glass can be collected together via bottle banks or kerbside collection, without adversely impacting the process of closed loop recycling back into food and beverage packaging. A bottle of perfume can be collected with a bottle of wine, with no issue in terms of recycling or risk to the consumer once recycled.
- The limited scope of DRS systems means a supplementary system is required to recover the ‘non-DRS’ material, i.e. a “dual EPR/DRS system”. DRS cannot be considered a mainstream solution for tackling waste glass as the 6 DRS for one-way glass packaging in operation across Europe (Croatia, Denmark, Estonia, Finland, Germany, and Lithuania) account for only 5% of the waste glass generated in these countries. Only in Croatia and Finland is the DRS the major collection mechanism, while in the other 4 countries less than 20% of glass is collected via the DRS.
- Additionally, the best practice EPR schemes can be considered a whole lifecycle approach from eco-modulation that can be used to deter producers from placing difficult to recycle waste streams onto the market to the financing of recycling facilities or littering campaigns. DRS cannot



be considered a whole lifecycle approach, instead it centres on the maximisation of collection rates of ‘in-scope’ materials to facilitate an increase in recycling.

- Out of the 10 Member States with a glass recycling rate above 80% only 3 operate a dual DRS/EPR system (Denmark, Germany and Finland, with respectively 16%, 2% and 61% of glass in the country in the scope of the DRS) and the other 7 operate an EPR only scheme. The collection rate in the EPR scheme in Denmark and Finland is actually higher than in the DRS stream.

Comparison of the glass recycling rates (%) for DRS and EPR in countries operating a dual system in 2017



*The 90% figure for EPR in Denmark is a minimum estimate based on the national glass recycling rate of 94%.

**The 45.8% national recycling rate in Lithuania reported by Eurostat appears low since it is below the recycling rate for both the DRS (82%) and EPR (54%).

Diverting glass packaging away from EPR schemes through a recycling DRS puts at risk the viability of continued kerbside and bottle bank collections of glass and undoes decades of investment in infrastructure & education

- DRS are in operation in Croatia, Estonia and Lithuania and although the recycling rates for glass in the DRS are high, the overall national recycling rates are below the EU-27 average and placing all three countries within the eight lowest recycling nations in Europe. In the case of Lithuania, the recycling rate for glass since the implementation of the recycling DRS in 2016 has been below the 2015 rate of 74.3%. This is because the introduction of the DRS has resulted in a lack of investment, planning or system management in EPR. In fact, the implementation of a recycling DRS could impact on the efficient collection by the local authorities of out-of-scope material and undoes decades of investment in infrastructure & education.

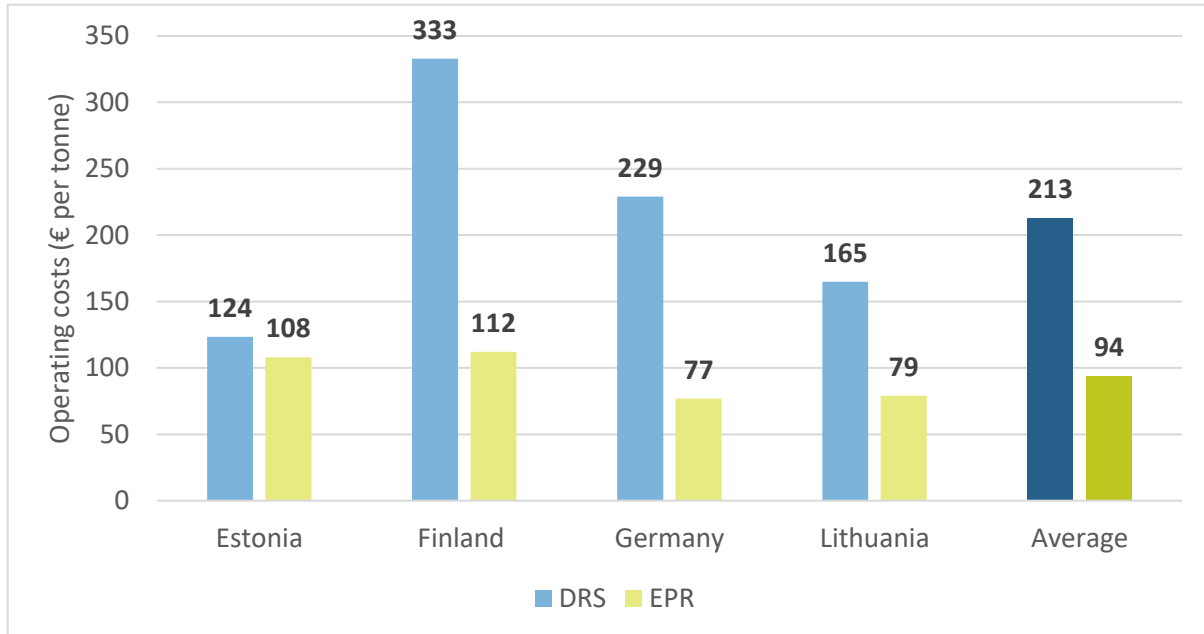
The cost of operating a DRS scheme is substantially higher than that of EPR schemes – especially for glass

- Evidence from existing DRS shows that the handling and management of glass is far harder than PET or cans and this is reflected in the material level producer fees. The inclusion of glass in a recycling DRS results at best in marginal gains but at a very high cost. The cost of operating the



DRS varies considerably from €124 per tonne in Estonia to €333 per tonne in Finland, with an average cost across the four countries of €213 per tonne. The operating costs associated with the Extended Producer Responsibility (EPR) scheme can be seen to be far more consistent across the four countries. These vary from €77 per tonne in Germany to €112 per tonne in Finland, with an average cost of €94 per tonne. This means that the inclusion of glass in a recycling DRS results at best in marginal gains but at a very high cost. EPR schemes are a much more cost-effective solution.

Comparison of operating costs for DRS and EPR for glass in countries operating a dual system in 2017



Please note: Denmark and Croatia are not included due to no data being publicly available.

Running two glass collection systems in parallel can lead to confusion among consumers – meaning less effective recycling

- The majority of the countries that operate a recycling DRS had or still have a well-established refillable DRS and consumers have been accustomed to the two-system approach, and hence, the transition to the recycling DRS was easy. However, in many of the Member States the refillable markets have disappeared and consumers are used to just the one system of recycling. Therefore, running two glass collection systems in parallel is more confusing for citizens, and risks less glass being recycled as a result of a dual system.
- Additionally, it is burdensome for consumers to identify DRS waste packaging, for which they can claim a deposit, from non-DRS waste packaging.

The inclusion of glass in the recycling DRS risks shifting the packaging market away from glass and into PET (or metal cans)

- Glass finds itself caught up in the plastics debate with the argument being that excluding it from any DRS for one-way packaging will cause market distortions, i.e., consumers switching away from plastic due to the inconvenience and perceived additional cost associated with the deposit. In reality, the inclusion of glass in a DRS has more market distorting effects than its exclusion.
- The unintended market distorting effects of DRS for glass are clearly visible within market data. The impact of DRS on the market share of glass for in scope products is very stark, with those countries operating a dual EPR/DRS system having a glass market share 65–78% lower than those without an existing DRS.



Market share of glass across product categories in European countries with and without a dual system

Product categories in scope	Product category	Market share of glass (%)	
		Non-DRS	Dual system
Typically included in a DRS	Beer	44.14	9.86
	Soft drinks	7.57	1.82
	Water	3.02	1.03
Typically excluded from a DRS	Cosmetic and toiletries	5.72	5.88
	Food	4.78	4.84
	Hot drinks	5.58	5.94
	Household care	0.51	0.40
	Spirits	95.87	96.33
	Wine	87.32	96.00

Source: Produced by Oakdene Hollins using GlobalData

Our aim is to have people recycling more and better and we do not believe a DRS is the right recycling system for glass. We consider that the highest recycling rates for glass can be achieved when there is a separate single glass collection system, consistent kerbside and bottle bank collections, and effective public communication initiatives, under a system of Extended Producer Responsibility. We therefore support improved Extended Producer Responsibility schemes and municipal waste management systems that make collection simple for the consumer and optimal for the recycling value chain.

About FEVE

FEVE is the association of European manufacturers of glass containers. The glass packaging industry generates 125 000 direct and indirect jobs thanks to 160 Container glass production sites in Europe producing a wide range of glass packaging products for food and beverages, perfumery, cosmetics and pharmacy for European and global customers. FEVE members have plants in 23 European countries. Container glass is one of Europe’s best recycled products. See more on www.feve.org.