

Position Paper: Safeguarding the Role of PET Trays Under the PPWR

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1. Introduction: The PPWR and its relevance for PET packaging

PETCORE Europe is the European association based in Brussels representing the whole PET value chain in Europe, with more than 160 members including global brands, rPET and vPET manufacturers, global converters and other Associations with a total turnover in 2024 exceeding 15 billion€ and more than 27 k employees.

Our vision is to achieve widespread recognition of the performance of PET as the circular material of choice for packaging and promoting PET collection and recycling

We support the objectives of the Packaging and Packaging Waste Regulation (PPWR)¹¹: to reduce unnecessary packaging, to ensure that all packaging is recyclable or reusable by 2030, and to build a truly circular economy. Regulation is also crucial for harmonizing diverging national rules, which have led to fragmentation across the single market.

However, we are concerned that Annex V of the Regulation, as currently drafted, sweeps PET trays into the same category of problematic, unrecyclable plastics. This risks unintended consequences for Europe's competitiveness as it impacts the PET industry as well as its climate and circularity goals.

Also, it risks affecting the EU's agri-food economy which is a strategic sector that supports nearly 10 million jobs across farming, food processing, and related services, and generates about 4% of EU GDP (European Commission, DG AGRI, 2023). The EU food and drink industry alone is the bloc's largest manufacturing employer, with over 4 million workers and €750 billion in annual turnover. Disruptions to established packaging formats could therefore have downstream impacts on food preservation, market access, and competitiveness, particularly for perishable products and rural economies.

PET is widely used in bottles, trays, and films due to its strength, barrier properties, and food-safety performance. However, PET trays would fall within Annex V's bans on a broad category of "single-use plastic trays." Without clarification on the need to restrict such applications, we believe that they are arbitrarily considered unnecessary and risk being restricted for certain uses, notably, for their use as protective packaging for unprocessed fresh fruits and vegetables sold in quantities not exceeding 1.5 kg. This is despite them being widely recognised for their recyclability design and their essential role in food preservation.

We believe that PET trays must not be bundled together with difficult to recycle plastics or replaced by less sustainable packaging formats (e.g. multi-material composites) but must be instead recognized as a packaging format capable of delivering circularity in line with the PPWR's objectives and therefore exempted from the bans listed in Annex V, row 2.

Therefore, our call is to ensure that PET trays are clearly differentiated from problematic single-use plastics, recognising their compatibility with established recycling systems and their essential role in food preservation.

¹ Regulation (EU) 2025/40 of the European Parliament and of The Council of 19 December 2024 on packaging and packaging waste, amending Regulation (EU) 2019/1020 and Directive (EU) 2019/904, and repealing Directive 94/62/EC.

We also urge the Commission to define a transparent, science-based **exemption** pathway in its forthcoming Implementing Guidance — to be adopted under Article 25(6) of the PPWR by February 2027. This Guidance will be critical to clarify the scope of Annex V restrictions, provide legal certainty to industry, and prevent divergent national interpretations that could undermine the Regulation’s harmonisation objective and damage, food safety, and the agri-food markets.

2. Understanding the matter

Annex V currently lists “plastic trays” as a broad category that could include, among others, PET, polypropylene, polystyrene, EPS, PVC, multilayer plastics, and composite paper. Under Article 25 and Annex V, trays would have to be banned as of 1 January 2030 if they are to be used as packaging for less than 1.5 kg of pre-packed fresh fruit and vegetables, as well as for foods filled and consumed within the premises in the HORECA sector (i.e. all eating areas inside and outside a place of business, including shared consumption spaces offered by multiple operators).

This broad-brush approach risks lumping PET - a circular, high-performance material - together with less recyclable and less sustainable formats. If Annex V restrictions were applied uniformly to all trays, PET trays would face an unnecessary and unjustified ban despite being already widely recycled, fully recyclable by design, incorporating recycled content, and therefore aligned with EU circularity and climate objectives. Moreover, such a ban would overlook the essential role PET trays play in preserving food quality, extending life, and maintaining hygiene and safety standards across the agri-food value chain. Given the sector’s scale - supporting nearly 10 million jobs and ~4% of EU GDP - clarity on recyclable PET trays has direct implications for food security, rural economies and export competitiveness².

The fruit, vegetable, meat, fish, and dairy sectors in particular rely heavily on PET trays to maintain product integrity during storage and transport, ensuring compliance with food safety and export requirements. For example, Lidl has transitioned its entire fish range to trays containing 80% recycled PET, demonstrating how the material already supports high recycled-content applications and tangible reductions in virgin plastic use³. Lidl has introduced such new fish trays using 80% recycled PET (rPET) as part of its REset Plastic strategy, which aims to reduce virgin plastic use and promote a circular economy. This initiative, which also includes ocean-bound plastic in some packaging, shows how PET can help prevent a significant amount of virgin plastic from being created and ensures 100% of its packaging is recyclable by 2025.

Quantitatively, what is at stake is significant investments. According to Plastics Recyclers Europe, over €300 million in new thermoform-to-thermoform recycling capacity - that specifically anticipates higher volumes of post-consumer PET trays and tray-grade rPET as Annex VII ‘recyclability at scale’ benchmarks are phased in - has been planned or installed across the EU⁴. This scale of investments is a crucial step toward meeting the EU’s circular economy goals and increasing the capacity to recycle waste plastic into high-quality materials for new products. However, these initiatives have been challenged by a slowdown in the overall

² DG AGRI, ‘The agri-food sector in numbers’, 2023/2024

<https://packagingeurope.com/news/fish-trays-from-lidl-constitute-80-rpet-in-bid-to-reduce-virgin-plastic/12047.article>

⁴https://www.plasticsrecyclers.eu/wp-content/uploads/2024/11/Plastics-Recycling-Industry-Figures_2023.pdf

growth of the plastic recycling sector in 2023, with growth rates decreasing and new investment levels dropping significantly compared to previous years. This is to say that a direct investment in circular infrastructure that depends on the continued collection and processing of PET trays is threatened by restrictive or ambiguous regulation. Therefore, the guidance to be adopted by the Commission should prevent additional risks of stranding these investments and slowing progress toward the 30% recycled content target for food-contact PET by 2030.

In summary, a lack of differentiation among PET and other alternatives would therefore undermine Europe's ability to:

- Meet recycling and recyclability objectives embedded in the EU's Circular Economy Action Plan and the PPWR;
- Close the recycling loop, using PET recyclate in new food-grade packaging and supporting compliance with the Regulation's recycled content targets;
Protect ongoing investments in tray-to-tray recycling, design-for-recycling standards, and advanced sorting technologies such as digital watermarking; and
Prevent food waste, which remains one of the largest contributors to EU greenhouse gas emissions and a critical target under the Farm to Fork Strategy.

3. Why PET trays are different

3.1 PET is circular and in line with the PPWR circularity objectives

Unlike other plastic materials such as expanded polystyrene (EPS), PVC, or multi-material and composite trays, PET trays are widely recycled in Europe and fully compatible with tray-to-tray recycling⁵. They are designed and collected in systems that already demonstrate high recovery rates and circular potential.

Further to this and as claimed by Plastics Recyclers Europe, new dedicated investments are underway: new thermoform recycling lines, digital watermark sorting, and design-for-recycling standards are being developed to ensure that PET trays remain on a clear trajectory to meet the "recycling at scale" benchmarks envisioned by the PPWR. This is consistent with the JRC's finding that environmental performance depends on full lifecycle outcomes rather than simple material labels⁶. These initiatives reflect the PET value chain's proactive efforts to align with evolving EU policy and technical standards.

Another key example of this commitment is the Tray Circularity Evaluation Platform (TCEP)⁷, an initiative launched by PETCORE Europe with backing from EPRO and Plastics Recyclers Europe. The platform brings together technical experts to independently evaluate innovations and packaging designs, ensuring they remain compatible with recycling processes across Europe. It has developed design guidelines and test procedures to assess whether new packaging formats can be efficiently recycled in existing infrastructure.

⁵ Eunomia Report "Pet Market in Europe State of Play - Production, Collection & Recycling Data 2022". Full report available here.

⁶ JRC, 'Exploring the environmental performance of alternative food packaging', 2023

⁷ <https://www.tcep-europe.org/>

When a product or technology passes these tests, the platform issues a technical opinion confirming that it does not create barriers in recycling streams, provided defined conditions are met. This ensures that PET trays are circular by design, continuously improving recycling rates and the quality of recycled output that can be reincorporated into new packaging.

This leadership position places PET trays ahead of the curve and directly in line with the “circularity by design” objective that the PPWR establishes for all packaging placed on the EU market. The convergence with forthcoming standards is underway via the CEN/TC 261/SC 4 work on recyclability and design-for-recycling criteria, which will underpin PPWR design requirements and market surveillance. Moreover, this industry-driven work is reinforced by ongoing standardisation at EU level: the European Committee for Standardization (CEN), through CEN/TC 261/SC 4, is currently developing harmonised recyclability standards that will underpin the PPWR’s design-for-recycling requirements. PET trays are already being adapted to comply with these emerging standards, ensuring alignment between industrial practice and upcoming EU technical guidance.

The European Commission’s Joint Research Centre (JRC), in its 2023 study “Exploring the environmental performance of alternative food packaging,”⁸ finds that no material is inherently more sustainable. Performance depends on full life-cycle factors such as production, transport, reuse, and recycling. It cautions against simplistic “plastic vs non-plastic” distinctions and shows that, in many scenarios, plastics like PET can perform comparably or better when effective recycling systems are in place. The study supports a science-based, lifecycle approach to material assessment, reinforcing that design and infrastructure, not labels, determine true environmental impact. This scientific evidence supports the view that well-designed PET packaging can, as it is already the case, outperform alternatives in terms of carbon footprint, food preservation, and resource efficiency — particularly when recycling systems are mature and scaled.

In fact, beyond design innovation, PET is already among the most circular polymers available. PET polymer recycling capacity for flake production has the highest average throughput per plant across all polymers, averaging over 20,000 tonnes per facility. It is also one of the only polymers capable of safely integrating high levels of recycled content in food-contact applications, a fact recognised by EFSA through multiple positive safety evaluations⁹.

PET trays, in particular, can incorporate recycled PET (rPET) derived from discarded PET beverage bottles, thus closing the material loop and reducing the need for virgin feedstock. Packaging is the dominant end-use for rPET in Europe — with 48% used in bottles and 25% in trays — showing that the circular flow between bottle and tray recycling is already established¹⁰. In 2022, the average recycled content rate reached 24% for beverage bottles and an even higher 44% for trays, demonstrating that thermoformed PET packaging is leading the transition toward high-quality, food-grade recycling¹¹. Technical evidence also shows that PET trays can reach up to 70% recycled content, further confirming that thermoformed

⁸ Sinkko Taija; Amadei Andrea; Venturelli Sara; Ardente Fulvio. (2024). Publications Office of the European Union. Exploring the environmental performance of alternative food packaging products in the European Union <https://publications.jrc.ec.europa.eu/repository/handle/JRC136771>

PET is a viable high-recycled-content food packaging format¹². Together, these developments confirm that PET trays are not a problematic single-use format, but rather an enabler of circularity that meets the EU's environmental, technological, and regulatory ambitions.

3.2 PET trays are unique and outperform other materials

In view of the above, bundling PET trays with difficult-to-recycle formats would not only penalize one of the most circular packaging formats but also risk substitution with alternatives that are less recyclable¹³ and sometimes with a higher environmental footprint. It is demonstrated that the ill-gauged substitution of plastics with less performing materials¹⁴, can have an adverse effect and result in increased emissions and resource use¹⁵. Therefore, we ask for a granular and science-based approach to market restrictions and requirements, which must take in due consideration the evidence of reliable LCAs.

4. Food waste prevention: a crucial reason to exclude PET trays from the Annex V bans

PET food trays are essential and irreplaceable for food protection and shelf life extension. Therefore, they must be exempted from the bans of Annex V of the PPWR.

Their excellent barrier properties¹⁶ safeguard freshness, prevent spoilage, and reduce food waste, which has a much higher environmental footprint than the packaging itself, and especially if compared with other plastics¹⁷.

⁹ EFSA Scientific assessments mostly cover authorisation for food grade PET. For reference, the large majority positive opinions released by EFSA cover rPET. <https://www.efsa.europa.eu/en/topics/topic/plastics-and-plastic-recycling>

¹⁰ PETCORE Europe, European PET Market Report 2023/2024

¹¹ Eunomia Report "Pet Market in Europe State of Play- Production, Collection & Recycling Data 2022"

¹² Unionplast / PRO FOOD, Imballaggi in plastica per alimenti freschi: Contenitori trasparenti in PET, PP e non colorati in XPS, International EPD System, Registration No. S-P-02029, revision dated 16 November 2021. <https://profooditalia.it/wp-content/uploads/2022/03/ESECUTIVO-EDP-2021-16-11-2021.pdf>

¹³ Amadei, A., Venturelli, S. and Manfredi, S., *Plastics materials flows in the EU-27 and their environmental impacts – Unveiling the European plastic value chain*, Publications Office of the European Union, 2025, <https://data.europa.eu/doi/10.2760/6579757>

¹⁴ Among various, Bell Publishing. (2025, May 28). *Recyclable plastic trays more environmentally friendly than laminated paperboard packaging*. Food & Drink Technology; National Association for PET Container Resources. (2024, December 12). *2023 PET Recycling Report*. NAPCOR. <https://napcor.com/reports-resources/> (This report includes data on PET Ecosense Foundation. (2021, February 3). *PET trays vs. PP tray: what is the difference?* Ecosense Foundation. thermoforms); Ecosense Foundation. (2021). *PET vs. PP tray: what is the difference?*; avigloplast. (2025). *rPET Trays: Cutting Carbon, Costs, and Waste in Food Packaging*; Food and Drink Technology. (2025). *Recyclable plastic trays more environmentally friendly than laminated paperboard packaging*.

¹⁵ Meng, F., Brandão, M., Cullen, J. M. (2024). Replacing Plastics with Alternatives Is Worse for Greenhouse Gas Emissions in Most Cases. *Environmental Science & Technology*, 58(6), 2716-2727. <https://doi.org/10.1021/acs.est.3c05191>

¹⁶ The OTR (Oxygen Transmission Rate) measures the quantity of gas that goes through a substance, per surface unit, during a specific timeframe. The lower the OTR the more resistant the polymer is to gases going through it. While PP has

an OTR range (cm³.m⁻² per day), at 20–23°C, of 93-300, PET has a range of OTR of 1,8-7,7. Source: <https://www.sciencedirect.com/topics/engineering/oxygen-transmission-rate>.

¹⁷ <https://ecosensefoundation.org/en/pet-tray-vs-pp-tray-what-is-the-difference/>

Evidence shows how PET contributes decisively to preventing food waste by extending food shelf life and preserving product quality. The JRC's 2023 report "Estimating food waste generated and packaging placed on the market", which quantifies EU food waste and frames the packaging's role in system-level outcomes, underscores the scale and urgency of the challenge: the EU generates around 59 million tonnes of food waste annually, equivalent to 131 kilograms per person, with an estimated economic value exceeding €130 billion¹⁸. Food waste accounts for nearly 10% of the EU's total greenhouse gas emissions, making its prevention one of the most effective levers for climate mitigation within the food system.

This magnitude highlights the critical role of packaging innovation in protecting food value, optimising resource use, and reducing emissions across the agri-food chain. Well-designed packaging solutions such as PET trays directly prevent premature spoilage and damage, maintaining the nutritional and commercial value of products from farm to consumer. By extending freshness, ensuring hygiene, and preventing physical deterioration, PET packaging safeguards the economic and environmental value of Europe's agricultural output.

Moreover, by enabling longer shelf life and facilitating efficient distribution, PET trays support the stability of food supply chains, reducing losses during transport, retail, and consumption. Their contribution is therefore twofold: environmental — through reduced waste and emissions — and economic, by protecting producers' and retailers' margins in a sector that represents roughly 4% of EU GDP and supports nearly 10 million jobs. In this sense, PET trays are not merely a packaging solution but a strategic enabler of the European Green Deal's objective to halve food waste by 2030, and a cornerstone of the EU's transition toward a more resilient, circular, and resource-efficient agri-food system.

In fact, A fuji study¹⁹ shows how PET trays lead a notable reduction in food waste and a decrease in climate-change impact associated with packaging and food loss. Food waste at the consumer stage carries significant environmental impacts and is strongly influenced by packaging design and its role in preserving freshness. This 2024 research applied life-cycle assessments (LCA) to compare packaging systems with different shelf-life performances, concluding that shelf-life extension has a decisive effect on total environmental outcomes. While no standardized models yet exist for such assessments, this study provides one of the first in-depth comparisons of available methodologies, highlighting the urgent need for validated models linking packaging functionality and food waste reduction.

In this context, the above mentioned JRC 2023 study, "*Exploring the environmental performance of alternative food packaging*," reinforces the same principle: PET can perform comparably or better when effective recycling systems are in place. This supports a science-based, lifecycle approach to material assessment, where design, infrastructure, and circularity performance—not labels—determine environmental impact.

¹⁸ Eurostat, 2023; DG AGRI, 2024

¹⁹ Tetteh, H. and others (2024). Environmental comparison of food-packaging systems: The significance of shelf-life extension. *Cleaner Environmental Systems*, 13, 100197. <https://doi.org/10.1016/j.cesys.2024.100197>

Notably, in the context of the PPWR, PET trays provide excellent freshness to fruit and vegetables through several mechanisms, thus extending shelf-life²⁰:

- **Moisture control:** PET has excellent moisture barrier properties. This prevents the produce from losing water, which can lead to wilting and weight loss. It also helps to prevent condensation buildup inside the packaging, which can lead to spoilage and mold growth²¹;
- **Gas Regulation:** Many PET trays are designed for Modified Atmosphere Packaging (MAP). They are either sealed with a specific film or have perforations that are carefully calibrated to allow the produce to "breathe" at an optimal rate. This balances the levels of O₂ and CO₂ inside the tray, slowing down the natural respiration and ripening process, thereby extending the shelf life. A 2009 study on 'Fuji' apples, for example, showed that a functional PET tray extended the shelf life by several weeks compared to no packaging²²;
- **Physical Protection:** PET trays are rigid and durable, protecting delicate fruits and vegetables from physical damage, such as bruising and compression, during transport and handling.

These results highlight how PET packaging that enhances shelf life can greatly bolster environmental sustainability by minimizing waste and lowering overall emissions. Thus, such considerations should be duly made when a ban could cause regrettable substitution that can have undesired effect on waste generation, emission and resource efficiency.

Further to the above, the uniqueness of PET is also confirmed by the Ellen McArthur Foundation (EMF), which finds PET a material that has a strong potential for a circular economy because of its high recyclability. EMF encourages the use of recycled PET (rPET) and support initiatives that increase the collection and recycling rates of PET bottles and other packaging, ensuring they do not become waste.

This is a critical point for Annex V discussions: unlike other plastics, PET trays are not easily replaceable. Their oxygen and moisture barrier properties, combined with their suitability for Modified Atmosphere Packaging, make them essential for bringing perishable products like fresh fruit, meat and fish safely to market. Without PET trays, EU farmers and food producers would face higher spoilage, increased food waste, and reduced market access, all of which run directly counter to the European Green Deal's objective of halving food waste by 2030.

Therefore, we urge the Commission to **explicitly recognize PET trays used for fresh fruits and vegetable exemption under Annex V**. This would safeguard a proven tool for reducing food waste, protecting farmer livelihoods, and supporting the resilience of Europe's agri-food supply chain.

A UN Environment-led Meta analysis of more than 33 LCA studies concludes that for food products with the highest environmental impact shelf-life extension be prioritised more than packaging waste

²⁰ Resealable mono-PET tray that helps extend the shelf life of fresh food. By allowing consumers to reseal the tray, it helps to preserve freshness, reduce food waste, and eliminate the need for secondary storage containers. [Grupo Lantero](#), 2025. ²¹ Šćetar, M., Kurek, M., Čigalić, K. (2010). Trends in Fruit and Vegetable Packaging – a Review. *Croatian Journal of Food Technology, Biotechnology and Nutrition*, 5(3–4), 69–86

²² Chung, D. S., Lee, Y. S. (2009). Application of functional tray for packaging to extend the freshness of high-quality 'Fuji' apples. *Korean Journal of Food Preservation*

prevention²³. The analysis showed that PET, for many types of highly prone to perishment foods (meat, fish, fruits and vegetables), has low environmental impact compared to other materials and the food waste prioritization must be preferred at the presence of packaging with low environmental impact. Further to fruits and vegetables we also call for any possible restrictions and bans under Annex V to be based on and justified by impact analysis that take into consideration the sustainability and resource saving added values that packaging can offer. Food packaging solutions are able to minimize environmental externalities while maximizing the economic sustainability. That is also the case of PET in the HORECA sector, where studies have shown that new PET based packaging solutions could considerably extend the shelf life of pastries such as cheesecakes, thereby reducing food waste and decreasing the overall environmental impact²⁴.

Furthermore, a ban on such applications could undermine the integrated production at scale of PET packaging that are also used for other foods. A ban on a widely used tray format for fruits and vegetable, could have adverse effects on the production of trays for meat and fish. This could impact not only the market of such packaging, its costs and uses; also, it could lead to additional food waste caused by PET undergoing regrettable substitutions.

For example, the unavailability of PET trays could trigger the increased waste generation of poultry and meat. A case study on chicken meat packaging highlights that extending shelf life from 6 to 15 days in a PET tray with modified atmosphere packaging—despite requiring the highest packaging-to-food ratio reduced food waste substantially, from an average of 47% down to 15% of production at the slaughterhouse stage. This translated into an approximate 78% decrease in climate change impacts. Depending on the model applied, food waste estimates ranged between 24% and 66%, yet sensitivity analysis confirmed that the comparative outcomes remained stable, reinforcing the importance of food waste in shaping environmental results. Overall, the study stresses the urgent need for a validated methodology to link shelf life with food waste when designing sustainable food packaging.

5. A targeted exemption pathway

We are not asking to overturn Annex V. We fully understand the political and environmental need for clear restrictions—particularly to phase out packaging formats that are inefficient, non-circular, or that contribute to increased waste generation, whether food or packaging waste.

However, given that PET trays are resource-efficient, highly recyclable, and play a proven role in preventing food waste, we call on the European Commission to use its implementing guidance under Article 25(6) to define clear, evidence-based criteria for exemptions, including (i) demonstrated recyclability at scale (collection + recycling rate $\geq 70\%$ by 2030 for the relevant stream), (ii) minimum 30% certified recycled

²³ UN Environment (2022) Single-use supermarket food packaging and its alternatives. Recommendations from LCAs. <https://www.lifecycleinitiative.org/wp-content/uploads/2023/03/UNEP-D010-Food-Packaging-Report.pdf>

²⁴ Michele Mario Gutierrez, Marta Meleddu, Antonio Piga. (2017) Food losses, shelf life extension and environmental impact of a packaged cheesecake: A life cycle assessment. *National Center for Biotechnology Information*

content where food-contact approvals apply, and (iii) documented contribution to shelf-life extension or food-waste reduction for defined agri-food categories.”

These criteria should explicitly recognise packaging formats that, similarly to PET trays:

- are recyclable at scale in existing EU systems,
- contain significant levels of recycled content, and
- demonstrably contribute to food preservation and waste reduction.

Such an approach would provide legal clarity, maintain the environmental integrity of Annex V, and ensure alignment between DG ENV’s circular-economy objectives and DG AGRI’s goals on food security and waste reduction.

This balanced, science-based method is supported by a study²⁵ which found that plastics outperform non-plastic alternatives in 15 out of 16 applications, resulting in 10% to 90% lower lifecycle GHG emissions. The study underscores that generalized bans, without lifecycle consideration, risk increasing emissions, resource use, and overall waste generation.

This study presents compelling evidence that, for most applications, plastics currently have a lower carbon footprint than non-plastic alternatives. Policy efforts should therefore take into account the performance of plastics in specific applications and ensure it is assessed against lifecycle-based assessments that account for all relevant environmental trade-offs.

Furthermore, if such an assessment is valid for plastics, it must be emphasised that it is even more so for PET, which typically surpasses other polymers (like PVC, LDPE, PP, PS) in recyclability, safety, and carbon footprint. In fact, PET is the most recycled plastic packaging material in Europe: in 2022, approximately 5 million tonnes of PET were placed on the market (EU27+3), with bottles representing ~68%, and sheet/trays about 1 million tonnes²⁶.

PET collection and sorting improve consistently, and tray recycling still trails bottle recycling, highlighting the potential for growth.

Exemptions are therefore necessary and justifiable

Article 25(6) of the PPWR²⁷ gives the Commission the flexibility to provide exemptions through guidance. Thus, we call for PET trays that are designed for recyclability and contain recycled content could be explicitly exempted.

²⁵ Fanran Meng, Miguel Brandão, Jonathan M Cullen. (2024), [Replacing Plastics with Alternatives Is Worse for Greenhouse Gas Emissions in Most Cases - PubMed](#)

²⁶ Eunomia Report “[Pet Market in Europe State of Play - Production, Collection & Recycling Data 2022](#)”.

²⁷ Article 25.6 PPWR states that ‘By 12 February 2027, the Commission shall publish guidelines, in consultation with Member States and the European Food Safety Authority, which explain Annex V in more detail, including examples of the packaging formats in scope, and any exemptions from the restrictions, and provide a non-exhaustive list of fruits and vegetables that are excluded from point 2 of Annex V.’

This approach would:

- Ensure that bans target difficult-to-recycle formats;
- Reward circular, food-waste-preventing solutions such as PET trays and packaging;
- Maintain bans of challenging packaging while safeguarding genuine sustainability progress.

With a well-designed exemption in the upcoming Guidelines, the Commission will secure its adherence to the Green Deal objectives while ensuring proportionate, evidence-based legislation.

Annex

Notes from JRC²⁸ on most recycled polymers:

Table 3. Recycling rates [%] pre-export of the polymers under scrutiny. These rates were estimated as the total quantity of recyclates produced out of the polymer-specific total waste generated.

Sectors	PET	HDPE	LDPE	PP	PVC	PS	EPS	PUR	ABS
Packaging	46.8%	51.3%	25.4%	25.8%	38.0%	23.7%	23.9%	0.4%	-
Construction	-	16.7%	16.7%	16.7%	14.7%	16.7%	16.3%	0.0%	0.0%
Transport	-	0.7%	0.7%	17.3%	0.7%	0.7%	-	0.0%	0.0%
Electronic	0.7%	0.7%	0.7%	21.4%	0.7%	22.4%	-	0.7%	20.4%
Agriculture	-	28.3%	28.0%	23.0%	1.9%	-	-	-	-
Textiles	1.4%	-	-	0.2%	-	-	-	-	-
Fishing	9.7%	17.9%	17.4%	14.1%	-	-	-	-	14.6%
Healthcare	-	-	-	-	-	-	-	-	-
Other	4.0%	7.3%	7.1%	5.8%	5.5%	6.3%	6.8%	5.6%	6.0%
Total recyclates pre-export [Mt]	1.8	1.7	1.5	1.4	0.6	0.2	0.1	0.1	0.04

Source: JRC elaboration.

PET specific indicators

Indicator	Value / Estimate	Source / Notes
PET collection rate in 2022	~ 60 %	ICIS / Petcore “State of Play 2024” (ICIS Explore)
Average recycled content in PET beverage bottles (EU)	~ 24 %	Petcore “State of Play” (2024) (petcore-europe.org)
Sorted-for-recycling PET volume in Europe (2022)	~ 2.7 million tonnes	Plastics Recyclers Europe / PET Market in Europe report (Plastics Recyclers Europe)
Packaging waste generated in EU (2022)	~ 83.4 million tonnes	Eurostat / Eurostat-derived reporting (European Commission)
Plastic packaging recycling rate (EU 2022)	41%	Eurostat reporting (European Commission)
EU annual food waste	~ 59 million tonnes (~€132 billion)	European Commission / DG AGRI / Eurostat (Food Safety)

PET in packaging (EU market) ~ 5 million tonnes placed
on the market in 2022

PETCORE / market reports (petcore-europe.org)

PET trays / sheets por.on ~ 1 million tonnes (of the 5 Mt)

PETCORE break-down (petcore-europe.org)

These data show that in 2022, Europe sorted about 2.7 million tonnes of PET for recycling, within an installed recycling capacity of ~ 3 million tonnes (1.4 million tonnes earmarked for food-contact uses). The average recycled content for PET beverage bottles in the EU is ~ 24 %. Meanwhile, the EU's plastic packaging recycling rate stood at 41 %, and the bloc generated ~ 83 million tonnes of total packaging waste in 2022. In parallel, the EU generates roughly 59 million tonnes of food waste each year, with an estimated value exceeding €130 billion, highlighting the urgency of packaging that can protect food. In this context, the agri-food sector—supporting ~ 10 million jobs and representing ~ 4 % of EU GDP—is directly dependent on innovation in packaging (like PET trays) that can preserve product value and reduce waste.

