



EU Regulation on Packaging and Packaging Waste

NABU's Policy Recommendations on the EU Commission's Draft Proposal



NABU welcomes the draft EU Packaging and Packaging Waste Regulation (PPWR) presented by the European Commission on 30 November 2022. NABU supports its speedy adoption in this legislative period, both in order to ensure its alignment with the timetable set down in the Circular Economy Action Plan, which ensures that crucial action is taken to protect the climate and increase resource efficiency, and in order to minimise the packaging industry's negative environmental impacts.

NABU highlights the progressive nature of the following measures defined in the PPWR draft, which should, under no circumstances, be watered down in the ongoing legislative process. In fact, NABU believes the individual targets could be even more ambitious.

- “Design for recycling” criteria and recycled content targets are crucial policy instruments. However, recyclability targets must be more ambitious than currently envisioned, and recycled content targets should be limited to include only mechanically recovered recycled materials (Articles 6 & 7). (-> page 2)
- NABU expressly welcomes the introduction of mandatory re-use targets for transport packaging and other materials in Article 26. However, we see no environmental justification for the exemption of cardboard. The PPWR should definitely address this waste stream: in Germany alone, paper, cardboard and paper-board transport packaging accounts for 20 percent of all packaging waste. **The exemption of cardboard in Article 26 (7) and (10) should therefore be revoked.** (-> page 7)
- **Progressive waste prevention targets** and re-use targets emphasise waste prevention as a priority in the EU waste hierarchy. However, the longer-term targets for 2030 and 2040 should be more ambitious (Article 38). (-> page 9)

NABU fully backs the approach outlined in the PPWR draft to address all final distributors, manufacturers and economic operators (Article 26) and the individual packaging unit or equivalent unit (Articles 7 & 27). In the further legislative process, it must be ensured that these reference points do not give way to mass balance systems or averaged quotas assigned to companies or Member States.

The following policy recommendations address individual articles of the current PPWR draft that, in our view, urgently require clarification or amendment.

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Articles 6, 7, 46 (among others) – Recycling in general

Making mechanical recycling a priority

In terms of their environmental impact, materials recovered through chemical recycling processes perform worse than materials recovered mechanically, as their processing requires significantly larger amounts of energy. However, the current PPWR draft promotes chemical recycling equally alongside mechanical recycling, which does not align with the EU's broader aims to minimise resource consumption and tackle climate change.

It is frequently argued that chemical recycling will not compete with mechanical recycling because it would primarily handle plastic sorting residues. This rationale falls flat for two reasons: firstly, the packaging recyclability targets set down in the PPWR draft will significantly decrease the amount of plastic sorting residues from 2030 onwards, if not earlier. Secondly, both chemical and mechanical recycling require clean waste streams, leading to competition over access to sorted materials such as polyolefins. To avoid this form of competition and ensure that chemical recycling handles only plastic sorting residues, legislation must limit the **incineration or landfilling of residual plastic waste in the medium term and redirect this waste stream towards chemical recycling facilities**. NABU therefore demands that all PPWR targets for recycling, recyclability and recycled content be met through mechanical recycling alone.

Promoting post-consumer recycled content

The PPWR must specifically promote the recycling of post-consumer plastic waste, especially from domestic collection. The recycling of post-industrial waste generated during manufacturing must be seen as a rational economic measure and should not be exploited to meet mandatory recycling targets. The PPWR must therefore ensure that recycling is defined strictly as the material recycling of post-consumer waste.

Article 6 – Recyclability

NABU expressly supports the EU Commission's planned plan to make all packaging recyclable, regardless of the material used. To ensure packaging circularity, NABU calls on the EU to define **ambitious recyclability criteria**. Recyclability grades should be based on recycling technologies with the best environmental performance. For plastic packaging, this means that targets should be aligned with feasible "design for mechanical recycling" criteria (see above).

In the initial phase, **effectively modulated EPR fees** should be used to incentivise manufacturers to effectively implement **design for recycling criteria** (oriented towards grade A). In the medium term, however, the recyclability of packaging should be made mandatory by gradually raising the minimum targets and avoiding nationally diverging EPR fee systems.

The **recyclability assessment procedure must be made as ambitious as possible**. Such ambition, however, is currently stalled by the recyclability grades listed in Table 2 of Annex II, which NABU considers insufficient. Grading packaging as recyclable although only 70% of its content is fit for recycling leads to high loss of material and does not align with broader resource conservation and climate action targets. Table 2 of Annex II should therefore be amended as follows:

Recycling in general

NABU demands that all PPWR targets for recycling, recyclability and recycled content be met through mechanical recycling alone.

Recyclability

The pending delegated acts setting down ambitious recyclability criteria must be adopted promptly, i.e. by 2025 at the latest. NABU also urges the Commission to define stricter recyclability grades.

Recyclability Performance Grade	Assessment of recyclability per unit, in weight
Grade A	higher or equal to 95% equal to 100%
Grade B	higher or equal to 90% 95%
Grade C	higher or equal to 80% 90%
Grade D	higher or equal to 70% 85%
Grade E	lower than 70% 85%

The targets must prioritise mono-material packaging and ensure that the use of composite packaging is reduced to a minimum. Table 1 of Annex II lists the packaging materials, types and categories. It should be amended to ensure the PPWR draws a **clear distinction between mono-material packaging and composite packaging** by defining the maximum content of foreign material allowed in “mono-material packaging”, including labels, inner and outer layers, container closures, lids. The Annex should also include a **negative list**, as envisioned by the EU Commission in previous PPWR drafts. This would prevent packaging that is unfit for high-quality recycling from even entering the market.

The effectiveness of the measures will, to a large extent, depend on the quality of the delegated acts through which the EU Commission will specify its recyclability criteria. Therefore, these **delegated acts should be prepared promptly to ensure they are adopted by 2025 at the latest**.

Article 7 – Minimum recycled content targets

General remarks

In our view, minimum recycled content targets are an effective instrument to promote investment in sorting and recycling infrastructure as well as the use of recycled materials. The same applies to the Commission’s **progressive plan to set these targets per packaging unit**, which will increase the use of recycled content for all types of plastic packaging. We also expressly welcome the approach outlined in Article 7 (6), which aims to employ financial EPR incentives to promote the use of recycled content beyond the PPWR’s minimum targets.

As for **reusable packaging** that is circulated and used for several years, it must be ensured that future initiatives to regulate design packaging allow such packaging to remain on the market until its end of life. Targets concerning the percentage of recycled content contained in a product, its recyclability and labelling should therefore not be applied to reusable packaging that is already in circulation when the respective act enters into force.

Amending recycled content targets laid down in Article 7 (1) & (2)

The recycled content targets set down in Article 7 should be applied to mechanically recovered recycled content only (see above). However, the supply of mechanically recovered recycled materials suitable for use in contact-sensitive packaging is currently limited. The early introduction of targets for contact-sensitive packaging would prematurely encourage a shift towards ecologically adverse chemical recycling technologies without having exhausted the full potential of mechanical recycling (for instance, through improved recyclability, sorting or reconditioning).

Since new procedures are still in the process of being developed and approved, there should be no targets for contact-sensitive packaging prior to 2040. This would give the sector the time it needs to achieve necessary advances in recyclability and develop suitable sorting and mechanical recycling technologies. In the meantime, more ambitious targets for non-contact-sensitive packaging and beverage bottles must be set. NABU therefore urges the Commission to amend the targets in Article 7 as follows:

1. From 1 January 2030, the plastic part in packaging shall contain the following minimum percentage of recycled content recovered from post-consumer plastic waste, per unit of packaging:

- (a) ~~60%~~ 60% for single use plastic beverage bottles; ~~30%~~ 30% for contact sensitive packaging made from polyethylene terephthalate (PET) as the major component;
- (b) ~~50%~~ 50% for non-contact-sensitive packaging; ~~10%~~ 10% for contact sensitive packaging made from plastic materials other than PET, except single use plastic beverage bottles;
- (c) ~~30%~~ 30% for single use plastic beverage bottles;
- (d) ~~35%~~ 35% for packaging other than those referred to in points (a), (b) and (c).

2. From 1 January 2040, the plastic part in packaging shall contain the following minimum percentage of recycled content recovered from post-consumer plastic waste, per unit of packaging:

- (a) ~~50~~ 60% for contact sensitive plastic packaging, except single use plastic beverage bottles;
- (b) ~~65~~ 90% for single use plastic beverage bottles;
- (c) ~~65~~ 80% for plastic packaging other than those referred to in points (a) and (b).

No future revisions or derogations as defined in Article 7 (9) & (10)

Unfortunately, Article 7 allows the legislator to amend, revise or derogate from recycled content targets – a counterproductive approach that puts the legislator at risk of undermining its own targets. NABU therefore calls on the Commission to delete Articles 7 (9) and 7 (10). The lack of availability of recycled materials, recycling technologies and facilities, or potentially excessive prices for recycled materials, are the very obstacles currently preventing the shift towards circularity that need to be resolved through ambitious recycled content targets.

The inclusion of these aspects in the Regulation as possible exceptions encourages deviations from its mandatory targets and has the potential to stall urgently needed investments to improve recycling infrastructure and the use of recycled materials until the Commission issues its review in 2028. The preferred approach should be to emulate the EU's Single-Use Plastics Directive, which does not allow for exceptions regarding recycled content targets, although excessive prices for recycled materials or insufficient plant capacities (may) play a role in this context as well.

Recycled content targets

Given the status quo, the PPWR's 2030 targets for recycled content in contact-sensitive packaging are unlikely to be met through mechanical recycling alone.

NABU therefore calls on the Commission to implement these targets no earlier than 2040 and to defining more ambitious targets for non-contact-sensitive packaging for 2030 and 2040.

Article 8 – Compostable packaging

In principle, high-quality recycling of packaging is to be given priority over its composting. **Sending packaging that has been used only once to be composted undermines the idea of circularity.** Article 6 should therefore prevent packaging made of biodegradable plastics for which there is no recycling infrastructure from entering the market.

The current stipulation that **lightweight plastic carrier bags** “shall be compostable in industrially controlled conditions in bio-waste treatment facilities” is environmentally unfeasible, as they are non-recyclable and can take many years to disintegrate in the natural environment if disposed of incorrectly. In addition, the German Environment Agency (Umweltbundesamt, UBA) has found that biodegradable plastics are less stable and that such packaging is easily colonised by degrading micro-organisms that have the potential to contaminate packaged food or products.¹

Article 9 – Cutting down on packaging

According to Article 9 (1), packaging “shall be designed so that its weight and volume is reduced to the minimum necessary for ensuring its functionality”. NABU believes that greater accuracy is needed in order to cut down as much as possible on redundant packaging material.

Article 9 should therefore be amended as follows:

- Article 9 (1): Here, the PPWR should specify that **marketing measures** used solely with the purpose of creating shelf visibility, highlighting non-mandatory product information, designing a visually distinct product, etc., **are not permissible grounds** for the use of packaging material.
- Article 9 (2): **Excess packaging** that is not needed to comply with product safety regulations, such as “double walls, false bottoms, and unnecessary layers”, **should be banned altogether, and not just if they are used “to increase the perceived volume of the product”**. Muesli sold in a plastic pouch and a cardboard box is a case in point: the purpose of the box is not to protect the muesli, and product safety could easily be ensured by discarding the box and using a slightly thicker plastic pouch.² The cardboard box is unnecessary; its purpose is to convince consumers that the product packaging is sustainable because they consider cardboard to be more eco-friendly than plastic.
- Article 9 (3): The stipulation to reduce **empty space in sales packaging** “to the minimum necessary” to ensure packaging functionality should be more ambitious. Manufacturers should be obliged to avoid all empty space in packaging. The use of protection and filling material must be reduced to a minimum that ensures product safety. Exceptions should only be permitted due to technical limitations.

Compostable packaging

NABU calls for an ambitious restriction of biodegradable plastic packaging, as composting and the anaerobic digestion of packaging do not align with circular economy principles. The same applies to lightweight plastic carrier bags.

Cutting down on packaging

For NABU, it is essential to reduce packaging to a minimum without compromising product safety. This can be achieved by specifying the stipulations laid out in Article 9.

The PPWR must prohibit the use of excess packaging materials that are designed to serve marketing purposes only and do not add to product safety.

¹ Website of the German Environment Agency (UBA): <https://www.umweltbundesamt.de/biobasierte-biologisch-abbaubare-kunststoffe#12-woraus-bestehen-biobasierte-und-biologisch-abbaubare-kunststoffe> (last accessed 14 March 2023)

² See ifeu (2021): Ökobilanzielle Expertisen zu verschiedenen Lebensmittelverpackungen im Auftrag des NABU e.V., Heidelberg, available in German at www.nabu.de/verpackungsvergleiche

Articles 11 & 12

Labelling of packaging and waste receptacles

General remarks

As a rule, mandatory labelling of packaging must always be clearly identifiable as **labelling that refers to the packaging and not to the product**. The label must identify both the packaging material and the recycled content. This labelling system must ensure that this distinction is always visible.

Labelling of packaging material as per Article 11 (1) & (8) and Article 12

NABU believes that labelling requirements that merely highlight the material composition of packaging are insufficient to ensure proper separate collection. **Instead, labelling must be based on the respective sorting system implemented in each Member State**. In Germany, for instance, only packaging containing over 95% paper, cardboard and paperboard is placed in the waste paper recycling bin, whereas in Austria, this threshold is set at 80%. Until we have in place a coherent EU-wide separate waste collection system, mandatory packaging labels will have to reflect such diverging practices. Similarly, labels used on waste receptacles should take into consideration the fact that these are often also used to collect non-packaging composed of equivalent materials.

Despite this diversity of systems, NABU argues that all labels should be based on an **EU-wide harmonised design** to allow consumers to grow acquainted with the symbols representing waste disposal/packaging.

Labelling of recycled content according to Article 11 (3)

For NABU, the labelling of recycled content only serves its purpose if the percentage of recycled content substantially exceeds the mandatory minimum requirements laid down in Article 7. Companies promoting these legal obligations as unique to their product would give consumers the impression that the packaging's recycled content is an exceptional feature setting it apart from competitors' products.

Article 21 – Obligation related to excessive packaging

NABU welcomes the proposal made in Article 21 (1) to introduce a maximum empty space ratio for grouped packaging, transport packaging or e-commerce packaging. In our view, however, this target **empty space ratio** should be lowered from a maximum of 40% to a **maximum of 20%**, because enterprises can be expected to choose adequately sized shipping and transport packaging.

For a large array of products, shipping pouches made of paper or plastic are available as alternatives to bulky cardboard packaging, which easily allow empty space to be reduced to a minimum (while also saving on material). As long as the effective volume of e-commerce packaging, for instance, is not fully reflected in the shipping charges, shipment-initiating enterprises will not voluntarily reduce empty space in their packaging.

Labelling of materials

NABU welcomes the introduction of mandatory labelling of packaging and waste receptacles. Uniform labelling systems that distinguish packaging based on the type of material seem unfit for this purpose.

To effectively facilitate separate waste collection from households, policies must take into account the fact that each Member State has in place its own disposal infrastructure.

Excessive packaging

NABU expressly endorses the quantified limitation of empty space laid down in Article 21 (1). In our view, however, this target limit should be lowered from 40% to 20%. Empty space in sales packaging must be prohibited under Article 9.

Article 22 in connection with Annex V

Restrictions on use of certain packaging formats

NABU expressly welcomes the fact that the restrictions set down in Article 22 in connection with points 2 to 5 of Annex V are not just limited to plastic packaging but address all materials. Especially in the case of fresh fruit and vegetables (point 3), we have seen that operators are simply shifting from plastic to paper and cardboard packaging instead of omitting disposable packaging altogether. As the current range of packaging-free products shows, omitting packaging does not compromise the quality of most fruit and vegetables.

A mandatory requirement to phase out single-use packaging and disposable plates and cups for on-premise consumption in the HORECA sector is overdue. Enterprises need to play their part in avoiding waste and must be obliged to switch to reusable options when serving foods and beverages on-site. Those that already use traditional tableware and organise their own dishwashing logistics should not have to face additional financial burdens. Fibre-based disposable packaging for food and beverages contaminated through use or made of composite materials is unfit for recycling and treated as residual waste. The waste of resources caused by on-premise consumption must be stopped – sooner than 2030 and ideally by 2025.

Article 26 – Re-use and refill targets

No exceptions for cardboard in Article 26 (7) and (10)

Article 26 (7) and (10) set targets for transport packaging and grouped packaging respectively. Shortly prior to publishing the PPWR draft, the Commission added exceptions for cardboard, which lack justification from an environmental perspective. Through its exemption of cardboard, the EU would miss a low-threshold opportunity to drastically reduce the high use of paper packaging in the bloc.

20% of all packaging waste in Germany is transport packaging made of paper and cardboard (excluding shipping boxes), as a study commissioned by NABU has shown.³ This means that the PPWR would fail to address up to 3.8 million tonnes of packaging waste produced in Germany alone, where disposable packaging (including disposable cups) accounts for around 0.2 million tonnes of paper and cardboard waste per year, while shipping packaging contributes 0.9 million tonnes annually.

Scientific studies have highlighted the environmental benefits of efficient re-use systems in the transport sector.⁴ Still, paper industry associations have been working to undermine re-use systems for years, ignoring not only the severe environmental impact of single-use cardboard transport packaging, but also the fact that in Germany alone, its production requires an estimated 600,000 tonnes of fresh cellulose per year, despite the high percentage of recycled paper used in transport packaging. Supporting the switch from single-use cardboard boxes to reusable plastic boxes in the transport sector would enable enormous amounts of wood, water and energy to be saved across the EU.

Restrictions on use of certain packaging formats

For NABU, it is crucial to ensure that the restrictions proposed by the EU Commission in Article 22 in connection with points 2 to 5 of Annex V comprehensively target all packaging materials. This stipulation must be preserved.

Obligations to reduce the use of on-site single-use packaging (point 3) should enter into force no later than 2025 (instead of 2030).

Re-use targets

NABU expressly welcomes the initiative to set mandatory re-use targets.

The exemption of cardboard in Article 26 (7) and (10) for transport packaging and grouped packaging lacks justification from an environmental perspective and must be urgently revoked.

In Germany, paper and cardboard transport packaging accounts for 20% of all packaging waste. This must be addressed by the PPWR.

³ GVM (2022): Potenzial der Materialeinsparung bei PPK-Transportverpackungen durch den Einsatz von Mehrwegverpackungen, Mainz (www.NABU.de/transport-studie)

⁴ See Bertling, J., Dobers, K., Kabasci, S., Schulte, A. (2022): Kunststoffbasierte Mehrwegsysteme in der Circular Economy – eine Systemanalyse, Oberhausen/Dortmund

By including cardboard in the PPWR, the EU could drastically minimise its use of paper packaging while making the recycled paper previously used for transportation packaging available for other applications, such as the manufacturing of paper products that can be less easily replaced.

There are several established re-use systems in the transport sector (for products including fresh fruit & vegetables, pharmacy items, bread and eggs) and it is imperative that these be developed further. **The PPWR should oblige every sector to develop re-use systems for transport boxes.** Our impression is that re-use systems are easier to implement in the business-to-business segment than in the business-to-consumer segment as there are fewer stakeholders and logistics processes are clearly defined. NABU therefore urges the Commission to **revoke the exemption of cardboard in Article 26 (7) and (10)**, as initially planned:

- (7) Economic operators using transport packaging in the form of pallets, ~~plastic~~ crates, foldable ~~plastic~~ boxes, pails and drums for the conveyance or packaging of products in conditions other than provided for under paragraphs 12 and 13 shall ensure that: (...)
- (10) Economic operators using grouped packaging in the form of boxes, ~~excluding cardboard~~, used outside of sales packaging to group a certain number of products to create a stock-keeping unit shall ensure that: (...)

Additional remarks & demands concerning Article 26

- Article 26 (2) to (10): Here, given the generous time frame, the EU should set more ambitious re-use targets for 2030 and 2040.
- Article 26 (2) & (3): NABU expressly welcomes the initiative to set re-use targets for sales packaging of take-away food or beverages irrespective of material.
- Article 26 (3): Re-use targets should take into account other settings beyond the HORECA sector. Ready-prepared food sold in supermarkets or similar points of sale for take-away should also be subject to these obligations, as is the case with beverage containers under Article 26 (2).
- Article 26 (4) to (6): NABU endorses the approach to oblige all manufacturers and final distributors of the beverages listed in these paragraphs to meet re-use targets. This obliges all enterprises to take environmental action by setting up sector-wide re-use systems or joining an existing scheme.
- Article 26 (8): NABU supports the Commission’s suggestion to include cardboard in its re-use targets for e-commerce transport packaging.

NABU supports the introduction of standards for re-use systems **that help to prevent inefficient or “fake” systems.** However, these standards **must not create an environment in which single-use packaging is favoured** as sustainable re-use systems are considered too challenging and complex.

Without a **cushion to minimise the additional costs involved in setting up efficient re-use systems**, these systems will fail to penetrate the market. For this reason, NABU calls on the Commission to promote the creation of new, and the optimisation of existing, re-use systems. This could be financed through EPR fees and/or the introduction of a single-use packaging charge.

**Re-use targets
Sales packaging for beverages**

NABU endorses the approach to oblige all manufacturers and final distributors of the beverages listed in Article 26 to meet re-use targets based on the individual packaging unit. This would oblige all enterprises to take environmental action.

Article 29 – Plastic carrier bags

NABU welcomes the reduction of single-use plastic carrier bags in Germany following the amendment of the PPWD in 2015. However, no data have been collected to monitor whether plastic bags have been replaced by single-use paper carrier bags, which, in environmental terms, perform even worse than their plastic counterparts.⁵

NABU therefore calls on the Commission to set EU-wide reduction targets that also apply to single-use paper carrier bags. Existing obligations must be amended to oblige all Member States to collect and share data not only on the use of single-use plastic carrier bags, but also on the use of single-use paper carrier bags. These data should also include small single-use paper carrier bags and lightweight plastic carrier bags (see Article 8).

Article 38 – Waste prevention

NABU welcomes the introduction of targets to progressively reduce the packaging waste generated per capita as a milestone in circular economy policy that paves the way for an urgently needed reversal of the current trend. However, NABU insists that the Commission must increase its level of ambition to achieve a genuine effect. To reverse the increase in packaging waste that Germany has seen over the past decade alone, reduction targets need to be set at 10 percent for 2030, 15 percent for 2035 and 20 percent for 2040 (as compared to 2018).

NABU therefore calls for all targets set down in Article 38 (1) to be raised by a minimum of 5 percentage points. Additional reduction targets for individual materials are needed to avoid enterprises meeting waste prevention targets simply by shifting from heavy glass packaging to more lightweight plastic packaging.

Plastic carrier bags

NABU calls on the Commission to set EU-wide reduction targets that also apply to single-use carrier bags made of paper. The PPWR should oblige all Member States to collect and share data on the use of single-use carrier bags, irrespective of material.

Waste prevention targets

NABU supports more ambitious waste prevention targets, which should be set at:

a minimum of 10% by 2030
a minimum of 15% by 2035
a minimum of 20% by 2040

⁵ For an overview of life cycle assessment studies on single-use plastic carrier bags (in German), see <http://www.nabu.de/plastiktuete>