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Moving towards stronger packaging waste legislation in Germany: An analysis of the German Packaging Act



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Summary

With quantities of waste steadily rising across the world, packaging material and packaging waste have emerged as an important area for regulation at the national and global level. Some of the emerging themes enmeshed within the regulation of packaging waste are concepts of extended producer responsibility, economic instruments for promoting sustainable design and practices, concrete reporting obligations, and deposit schemes. At the European level, the European Parliament and Council Directive 94/62/EC on packaging and packaging waste of 1994 (amended in 2018) is important for setting the agenda and goals in the field of packaging waste.

In Germany, the relatively new German Packaging Act (*Verpackungsgesetz*, *VerpackG* for short) of 2019 builds upon its predecessor, the Packaging Ordinance (*Verpackungsverordnung*) of 1998, strengthening legislation pertaining to packaging and associated waste. Since the law came into force in January 2019, there have already been improvements in registrations and data reporting, recycling standards, and the information made available to consumers. With a view to keeping step with increased ambition in this field, as well as reducing the impact of packaging waste on the environment, the Packaging Act can be made even more robust.

This Policy Brief identifies three key areas where the Packaging Act can be strengthened and clarified.

■ **Recommendation 1:**
Introduce legal provisions and targets to reduce packaging waste.

The Packaging Act focuses on improving the recycling rate and recycling processes for packaging waste, but it can be further strengthened by including provisions aimed at reducing or avoiding packaging waste – the foremost goal in the waste management hierarchy of reduce, reuse, and recycle in Germany and the European Union.

■ **Recommendation 2:**
Incorporate strong market mechanisms to meet ambitious recycling targets.

The Packaging Act contains revised and ambitious recycling targets for various types of packaging waste, including plastic waste. While the eco-fee modulation regulations promote the use of recycled and recyclable material in packaging, without economic instruments such as a tax on virgin plastic, it may not be possible to realise the full potential of these measures.

■ **Recommendation 3:**
Clarify and strengthen the regulatory framework for the bottle deposit scheme.

The Packaging Act aims to promote a bottle deposit scheme and achieve the goal of reusable beverage packaging in more than 70% of all beverages. The legal provisions on the bottle deposit scheme need to be further clarified and strengthened, and potentially extended to bottles and containers for products other than drinks.

Context and Background

A record total of 18.7 million tons of packaging waste was generated in Germany in the year 2017, an average of 226.5kg of packaging waste per capita (Umweltbundesamt, 2019). Amid growing concerns about its adverse environmental effects, the regulation of packaging waste has moved higher up the legislative agenda in Germany in recent years. The German Packaging Act (*Verpackungsgesetz*, *VerpackG* for short) came into force on 1 January 2019, replacing the previous Packaging Ordinance (*Verpackungsverordnung*) of 1998. The new law seeks to implement the European Parliament and Council Directive 94/62/EC of 1994 on packaging and packaging waste, as amended by Directive 2015/720/EU of 2015. It also furthers the principle of extended producer responsibility laid down in section 23 of Germany's Circular Economy Act (*Kreislaufwirtschaftsgesetz*, *KrWG* for short) of 2012.

The Packaging Act contributes significantly to improving and strengthening certain systemic and procedural aspects of packaging waste management and extended producer responsibility. It provides, for example, for the establishment of a Central Authority (*Zentrale Stelle*) and obliges all manufacturers that place packaging material on the market to register with that authority (VerpackG, sections 7 and 9) and participate in the recycling system. As of March 2020, fifteen months after this law came into force, 179,000 producers have registered with the Central

Authority and entered into contracts to participate in recycling systems (Stiftung Zentrale Stelle, 2020a). The Packaging Act also requires that recycling systems meet specific targets (VerpackG, section 16) and data reporting obligations (VerpackG, sections 17 and 20), mandates the ecological design of fees for participating in the recycling system (VerpackG, section 21), and lays down a duty to inform consumers (VerpackG, section 32). The legislation has now been in force for about one and a half years, so it's a good moment to assess its implementation so far and reflect on the way forward for the regulation of packaging waste in Germany.

Since the Packaging Act was adopted by the Bundestag on 5 July 2017, the European Union's legal framework on waste has developed further. Relevant EU Directives have been updated¹ and a new Directive on the reduction of the impact of certain plastic products on the environment (EU Directive 2019/904) was adopted on 5 June 2019. Furthermore, two new policy documents, the European Green Deal and the Circular Economy Action Plan, both of which will have a bearing on packaging waste, were released in March 2020. It is, therefore, also a good opportunity to examine how European Union guidelines can be better transposed into Germany's legislation on packaging waste. Indeed, by taking progressive steps in the field of packaging waste, Germany can emerge as a circular economy leader in the European Union.

¹European Parliament and Council Directive 94/62/EC on packaging and packaging waste was amended by Directive 2018/852. And Directive 2008/98/EC on waste was amended by Council Regulation (EU) 2017/997 of 8 June 2017 and Directive (EU) 2018/851.

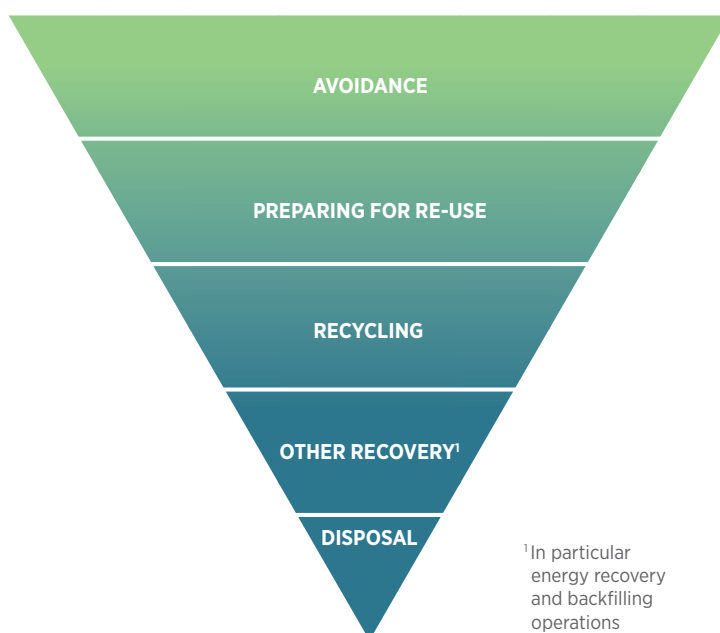
1. Introduce legal provisions and targets to reduce packaging waste.

The Packaging Act focuses on improving the recycling rate and recycling processes for packaging waste, but it can be further strengthened by including provisions aimed at reducing or avoiding packaging waste – the foremost goal in the waste management hierarchy of reduce, reuse, and recycle in Germany and the European Union.

Over the past decade, waste prevention has been continually prioritised in theory by the German government. The Circular Economy Act of 2012 identified it as one of the main pillars of the circular economy (KrWG, section 7) and proposed the following five-point waste hierarchy for Germany: avoidance, prepara-

tion for re-use, recycling, other recovery (e.g. energy recovery), and disposal (KrWG, section 6). It also foresaw programmes to set waste prevention targets and formulate concrete measures. A five-point plan for “less plastic and more recycling” released by the German Environment Ministry in late 2018 (BMU, 2018a and 2018b) underlined the importance of avoiding superfluous packaging, but this has not yet been translated into legislation. In June 2020, the Federal Cabinet introduced a new regulation (the *Einwegkunststoffverbotsverordnung*) to amend the Circular Economy Act, banning single-use plastic products from July 2021 in pursuance of EU Directive 2019/904 on single-use plastic products (BMU, 2020).

WASTE HIERARCHY



¹In particular energy recovery and backfilling operations

Source:
Section 6(1) of the
Kreislaufwirtschaftsgesetz.

Introduced in 2019, the Packaging Act aims to reduce the impact of packaging waste on the environment by regulating the behaviour of manufacturers so that packaging waste is avoided as a matter of priority and otherwise reused or recycled (VerpackG, section 1(1)). Yet this commitment to waste prevention has not yet been firmly anchored in legislation. While the Packaging Act outlines several measures, including ambitious targets, for improving the recycling of packaging waste, it is conspicuously silent on how best to prevent or avoid packaging waste. This remains an area for further legislation. As a first step, areas where packaging can be reduced should be identified. In addition, companies should be encouraged or compelled to set packaging waste reduction targets similar to the recycling targets mandated by the Packaging Act. A report by the European Environment Agency notes the importance of concrete waste prevention targets as reference points to guide the implementation and assessment of policy measures in the field of waste prevention (EEA, 2019).

'Reuse' models where packaging is used for multiple cycles rather than disposed of after single use, can also help to reduce and avoid packaging waste. The Ellen McArthur Foundation found that replacing just 20% of plastic packaging (by weight) with reusable alternatives can lead to a material savings of about 6 million tonnes and generate an economic opportunity of USD 9 billion (Ellen McArthur Foundation, 2017). The Packaging Act is mainly concerned with improving transparency, accountability, and efficiency in the extended producer responsibility framework involving producers, recycling systems, and the *Zentrale Stelle*. As such, it focuses on improved recycling of the kind of lightweight packaging material typically used and disposed of in households. Notably, the registration and reporting obligations it foresees for manufacturers do not apply to reusable packaging (VerpackG, sections 11 and 12(1)). To capture the entire range of packaging materials used, this legislation should also regulate reusable packaging with a view to incentivising reuse systems.

The Packaging Act defines the term "reusable packaging" (*Mehrwegverpackungen*) as packaging that is intended to be used several times for the same purpose

after use, and whose return and reuse is facilitated through adequate logistics and appropriate incentive systems, usually through a deposit (VerpackG, section 3(3)). It has set an ambitious target: the Act intends to increase the share of beverages filled in reusable packaging to over 70% (VerpackG, section 1(3)). To further reduce single-use packaging and strengthen reuse systems, policymakers could also consider extending the deposit scheme to packaging for other foodstuffs and household items such as soap, shampoo, and detergent.

This year, a number of companies, governments, and non-governmental organisations have signed the European Plastics Pact, collectively representing a "*public-private coalition that wants to achieve a truly circular European plastics economy by avoiding plastic waste and bringing all actors in the value chain together*" (European Plastics Pact, 2020b). One of the avowed goals of the European Plastics Pact is "[t]o shift towards a more responsible use of plastic packaging and single-use plastic products, aiming for a reduction in virgin plastic products and packaging of at least 20% (by weight) by 2025, with half of this reduction coming from an absolute reduction of plastics" (European Plastics Pact, 2020). This quantitative target for reducing plastic packaging made of virgin plastic has been adopted by several companies. For example, Nestlé has pledged to reduce its use of virgin plastics by one third by the year 2025. The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is a signatory to the European Plastics Pact, but its declaration on the Pact does not contain any reduction or avoidance targets, and emphasises the non-binding nature of the Pact (BMU, 2020a).

At the EU level, member states have recently been directed to develop concrete measures for the prevention and reduction of packaging waste.² The Circular Economy Action Plan released in March 2020 reiterated the goal of "reducing (over)packaging and packaging waste" through targets and waste prevention measures (EU Circular Economy Action Plan, 2020, p. 8 and Annex). German legislators should therefore consider the incorporation of waste reduction and avoidance targets as an important area for future policymaking in the field of waste management.

² This was made clear in the amendment of EU Directive 94/62/EC on packaging and packaging waste in 2018, which emphasized the importance of the prevention and reduction of packaging waste, as well as increasing the share of reusable packaging.

2. Incorporate strong market mechanisms to meet ambitious recycling targets.

The Packaging Act contains revised and ambitious recycling targets for various types of packaging waste, including plastic waste. While the eco-fee modulation regulations promote the use of recycled and recyclable material in packaging, without economic instruments such as a tax on virgin plastic, it may not be possible to realise the full potential of these measures.

The Packaging Act sets ambitious targets for the recycling of materials, including plastic (VerpackG, section 16). In order to promote the recycling of materials, it also provides for the eco-modulation of fees for participating in the dual system for waste management (VerpackG, section 21). As a starting point, the participation fees paid by manufacturers will be directly linked to the recyclability of the packaging material they produce. Within the framework of the participation fees, the systems are obliged to create incentives for manufacturers to produce packaging that utilises material and material combinations that can be recycled to the highest percentage, taking into account the process of sorting and recovery, and that promote the use of recyclates and renewable raw materials (VerpackG, section 21(1)).³

While these regulations incentivise companies to use more sustainable packaging material like recycled plastic, this does not necessarily make such recycled packaging material more price-competitive. At present, virgin plastic is still cheaper than recycled plastic, and companies may therefore be discouraged by the prevailing market prices from making the switch to recycled material. The gap between the cost

of virgin plastic and recycled plastic has further widened due to the Covid-19 pandemic and the crash in oil prices (Parker, 2020). Under these circumstances, the incorporation of concrete market mechanisms, such as a tax on virgin plastic, may be imperative for a shift towards recycled packaging material.

Some of the factors identified as significant obstacles to the circular economy in Germany are the relatively high costs of high-quality recycling, the low price of primary materials, and insufficient demand for recycling products (Brüggemann, 2019). Up till now, it has been relatively cheap to produce packaging and place it on the market, a trend that can be curtailed through meaningful economic instruments, which help reflect the true price of a good, including its environmental impact (Deutsche Umwelthilfe, 2020).

Interviews I conducted with industry experts revealed that companies that have incorporated recycled plastic as their packaging material usually do so at a significant cost to their business. The use of recycled material is a conscious attempt to attract customers who prioritise the ideal of sustainable consumption, and gradually gain a market share. However, based purely on market price, the decision to adopt recycled plastic (rPET) over virgin plastic is not one that is financially viable. The price of recycled materials is dependent on market factors. Increased demand for recycled plastics and increased investment in the capacity for producing such materials will play a crucial role in shaping future trends for recycled packaging material.

³Based on the consultative draft on the minimum standard for recyclability, for the purpose of determining recyclability, the unfilled packaging is to be considered as a whole, and the determination will depend on three factors: (i) the existence of a sorting and recycling infrastructure enabling high-quality mechanical recycling, (ii) the sortability of the packaging and, wherever applicable, the separability of its components, and (iii) the incompatibilities of constituent packaging components or substances that could render successful recycling impossible with the prevailing technology (Stiftung Zentrale Stelle, 2020).

In addition, economic instruments such as a tax on virgin plastic can fulfil a two-fold objective: disincentivising the purchase of virgin plastic for packaging material, and creating a revenue stream to financially support the circular economy. A tax on plastic is already imminent in a number of countries, including Italy (Tudball, 2020), the United Kingdom (UK Government, 2020), and Spain (Planelles, 2020). The European Green Deal, released in March 2020, alludes to a revenue stream based on non-recycled plastic packaging waste (European Green Deal, 2020), indicating that such material could constitute a future area of legislation in the European Union. Conversely, tax benefits could also provide a boost to recycled material. The first step towards this goal appears to have been made by the European Council at the end of July in its conclusions during a special meeting to plan a response to the COVID-19 pandemic. A tax of 0.80 cents per kilogram of non-recycled plastic packaging waste is proposed to be introduced from January 2021 (European Council, 2020, paragraphs A29, 146). Some experts are of the view that the tax is quantitatively too mild to effect a meaningful shift, and additionally, that taxing virgin plastic at source would be more effective than the proposed weight-based tax on non-recycled plastic (Baumgarten, 2020).

Although the Packaging Act sets percentual recycling targets for different kinds of packaging waste, it is silent on the number of cycles that packaging material is subject to. In practice, much of the recycled packaging waste the Packaging Act deals with is “down-cycled”, in other words, transformed into recycled plastic pellets that are then converted into objects requiring low-grade plastic. In this way, packaging waste fulfils the recycling requirements stipulated in the Packaging Act, but once these objects are created, they cease to be packaging waste, and are no longer subject to the recycling obligations of the Act. Furthermore, in practice, this recycled material can only go through a limited number of recycling cycles before it becomes brittle. Mechanisms that promote the circular economy by making loops as closed as possible should be implemented alongside recycling targets. This will promote greater resource efficiency (for example, by improving the quality of recyclates to reduce downcycling) and create a market for more sustainable and resource-efficient products.

3. Clarify and strengthen the regulatory framework for the bottle deposit scheme.

The Packaging Act aims to promote a bottle deposit scheme and achieve the goal of reusable beverage packaging in more than 70% of all beverages. The legal provisions on the bottle deposit scheme need to be further clarified and strengthened, and potentially extended to bottles and containers for products other than drinks.

According to the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the percentage share of drinks filled in reusable packaging fell across all categories (e.g. beer, soft drinks, mineral water, soft drinks, and mixed alcoholic beverages) in the period between 2004 and 2017 (BMU, 2019a).

At the very outset, the Packaging Act lays down certain waste management objectives, including the goal of increasing the proportion of drinks filled in reusable drinks packaging to over 70% (VerpackG, section 1(1)). However, unlike the enforceable time-bound and quota-based targets set for recycling (VerpackG, section 21(2)), this target of 70% is more in nature of a non-enforceable guideline, and it is not accompanied by a timeline.

The extended producer responsibility system that requires the manufacturers of packaging waste to participate in a recycling system and register with the *Zentrale Stelle* makes an exception for disposable drinks packaging (VerpackG, section 12(2)), which is instead regulated through a separate deposit system under the Packaging Act (VerpackG, section 31).

A survey conducted after the Packaging Act came into force, which studied the share of reusable beverage packaging across 31 discounters and supermarkets in Brandenburg, Hesse, Bavaria, North Rhine-Westphalia, Berlin and Hamburg, found that the discounters Aldi and Lidl no longer offered beverages

in reusable bottles for sale, while the percentage share of reusable beverage bottles sold in Netto, Rewe, and Edeka was about 35%, 35%, and 21%, respectively (Verbraucherzentrale Hamburg, 2019) – half or less of the target stated share in the Packaging Act. The introduction of more concrete and time-bound targets and penalties in this area can make manufacturers more accountable, strengthen the reuse model for beverage packaging, and enhance the deposit and return scheme for beverages envisaged under the Packaging Act.



Friends together at the reverse vending machine recycle plastic bottles | © shutterstock/ frantic00

A deposit scheme must be based on a deposit that is set at an optimum level: A very high deposit will affect the sale of the drinks and will be opposed by producers, while a low deposit will reduce the incentive for consumers to return the beverage packaging (Guangli Zhou et al., 2020, p.7). The Packaging Act establishes clear deposit and return obligations for non-reusable drinks packaging (VerpackG, section 31). Under the Packaging Act, a deposit of at least 25 cents per pack-

age is stipulated for single-use (*Einweg*) drinks packaging (VerpackG, section 31(1)). The legislation does not stipulate a deposit for reusable bottles, which is set by the drinks manufacturers themselves and is usually fixed at 8 cents or 15 cents. There is, moreover, a duty to inform the final consumer about whether the drinks packaging is single-use or reusable (VerpackG, section 32). The Packaging Act exempts certain categories of beverages from the deposit and return obligations, including certain wine and alcohol products, milk and mixed drinks with milk content of at least 50%, fruit and vegetable juices, and non-carbonated fruit and vegetable nectars (VerpackG, section 31(4)). Exceptions are also made based on the type of packaging: Beverage packaging for volumes of less than 0.1 litres or more than 3.0 litres, carton packaging, polyethylene tubular bag packaging, and foil stand-up pouches are all exempted from the deposit and return obligations (VerpackG, section 31(4)).

These exceptions mean that a sizeable proportion of drinks packaging remains outside the scope of the deposit system, something that conflicts with the Act's stated intention to strengthen extended producer responsibility for packaging. A survey of discounters and supermarkets found that between 28% and 58% of the beverage shelves contained drinks that were exempted from the deposit scheme under the Packaging Act (Verbraucherzentrale Hamburg, 2019). The law can be improved by creating stronger obligations for manufacturers of all types of beverages and beverage packaging, and by incentivising reusable beverage containers across beverage categories. Earlier this year, the German Federal Council recommended the extension of the deposit obligation to all plastic bottles for beverages, regardless of the category (Bundesrat, 2020). It is hoped that this will translate into appropriate amendments to the Packaging Act.

Although the deposit on single-use plastic bottles helps to ensure that these bottles do not end up in the environment, under this deposit scheme bottles

are recycled after a single use, which is ecologically less sustainable than the model of reusable bottles.⁴ As mentioned above, the recycling process often promotes “downcycling”, as the recycled products are usually of an inferior quality. Apart from fixing the deposit leviable on single-use beverage packaging, the Packaging Act does not do enough to disincentivise the use of such beverage packaging, or to promote the use of reusable bottles and increase their market share. In fact, in the last ten years, reusable glass and PET beverage packaging has lost over 20% of its market share, while single-use PET bottles and aluminium cans have gained 25% of the market share (NABU, 2017, p.3). To reverse this trend, the Act should be strengthened to promote reusable bottles. Given the typically shorter transport cycles and regional distribution of such bottles, this can also result in the co-benefit of supporting small and medium-sized companies and stimulating the creation of green jobs (Deutsche Umwelthilfe, 2019, pp. 8–9).

Another issue that should be further clarified in the Act is the treatment of the unredeemed deposits on beverage packaging, or the difference between the deposits and claimed refunds. Although the return on single-use beverage bottles in Germany has been estimated to be as high as 96% (for the year 2015), this still means that the 4% of the unreturned deposit, which at the rate of 25 cents per bottle translates into 180 million euros, is retained by the manufacturers of the beverage bottles (NABU, 2017, p. 5). There are examples from other countries where the unclaimed deposit is retained by the government regulators, or shared between the government and the beverage supplier, to avoid creating an incentive for beverage companies not to collect the packaging (Guangli Zhou et al., 2020, p. 7 and pp. 10–11). The Packaging Act can be strengthened by improving the data disclosure obligations for the deposit scheme to enhance transparency, and by laying down clear rules for the utilisation of the unclaimed deposit.

⁴ See, for example, “Mehrweg statt Einweg: Tipps für weniger Müll beim Getränkekauf”, NABU Tipps, https://www.nabu.de/imperia/md/content/nabude/verbraucher-tipps/130701-nabu_tipps_a6_mehrweg.pdf and “Mehrweg, wo bist du?”, Verbraucherzentrale Hamburg (November 8, 2019), <https://www.vzh.de/themen/umwelt-nachhaltigkeit/muell-verpackungen/mehrweg-wo-bist-du>.

Conclusion and Outlook

Germany's latest legislation on packaging waste, the Packaging Act, is an important step forward on the path to regulating a waste stream that continues to increase at an alarming pace and poses a serious threat to the environment. By establishing the Zentrale Stelle and an improved and more comprehensive regime for participating in recycling systems, the Packaging Act improves the recycling system. But it can be further strengthened by shifting the focus more towards the reduction and avoidance of packaging waste, introducing strong economic instruments such as a tax on virgin plastic, and making the current bottle deposit scheme more comprehensive. The

European Union has signalled its intention to regulate packaging waste in a more focused and effective manner in recent legislative interventions on packaging waste and single-use plastic and in the measures outlined in the European Green Deal and the Circular Economy Action Plan. The Packaging Act expresses a similar intention. It forms the bedrock for stronger legislation in the field of packaging, and should be further amended to keep step with the developments that have taken place since its text was first formulated in 2017. A stronger Packaging Act would allow Germany to emerge as a front runner in packaging waste regulation in the European Union. ■

About the author



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Parul Kumar is a German Chancellor Fellow of the Alexander von Humboldt Foundation from India. Parul is currently working at the IASS on her fellowship project on the legal and regulatory aspects of plastic waste management in Germany, the European Union, and India. She has a bachelor's degree in law and liberal arts from the National Law School of India University, Bengaluru, and an Erasmus Mundus Joint Master's degree in law and economics from Hamburg University, the University of Ghent, and the Warsaw School of Economics. Prior to starting her fellowship, Parul worked at the World Resources Institute (WRI) in New Delhi, where her research focused on energy policy in India. She is also an experienced dispute resolution lawyer, and has represented a variety of private and public sector clients in legal proceedings in courts, tribunals, and arbitral tribunals.

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