



Ensuring safe recycled content in food packaging: ambition vs reality

Executive Summary

December 2022 – Zero Waste Europe

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The current use of plastics and plastic products, and packaging in particular, is mostly linear, with high rates of single-use items and a low rate of recycling back into the economy. Plastic recycling in Europe is expected to grow significantly in the next five to ten years, particularly in response to increased pressure from regulators and consumers. Policy makers and major brands are continuously discussing needs and the best paths for improvement of the circularity of the plastics value chain. **Changing how society produces and manages the use of plastics in a more sustainable way and the rate at which we use recycled plastics will depend on the decisions taken today.**

If we are to justify the continued use of plastics, we must have better control over their production volumes, their material life cycle and look for and scale up solutions that can increase their reuse and durability and maintain their value when repeatedly used and recycled. **As continued material production is inherently unsustainable, use of [plastic packaging must be reduced](#) in the coming years.**

From the outset, all products must be sustainably designed with proven non-toxic chemicals. Following circular economy principles, recycling has an important role in closing the loop, but only after exhausting all prevention and reuse options. We cannot rely on the plastic producing companies to undertake these steps voluntarily. Corporate pledges to decrease plastic pollution are not translating into lower rates of virgin plastic use nor into less plastic pollution, because these voluntary commitments emphasise recycling instead of decreased plastic production. Cutting down on plastic consumption is also crucial to reach the EU climate goals.

At present, food packaging is a well-known source of a mixture of chemicals that can migrate from the packaging into food and beverages, and eventually may end up in the human body. Some of these chemicals have hazardous properties and are known to impact our health. The toxicity of many other chemicals used in food packaging is either not completely characterised or just unknown. A recognised issue is that **use of recycled materials potentially creates new pathways through which humans can be exposed to hazardous chemicals in contaminated recycled material flows.**

Recycling plastics for use in contact with food is subject to a complex interplay of regulations and needs to be addressed with a holistic approach. Nonetheless, it is often unclear what exactly needs to be done in practice to ensure compliance, and more so, how safety should be achieved and how it can be demonstrated.

Today, recycling technologies have not proved to be able to remove all toxic chemicals already present in plastic in the first place. Considering how plastic food contact materials and their recycling are regulated - including recent support for the development of innovative recycling technologies - the whole process shifts the responsibility for handling the toxic impact of recycling away from the plastic producers onto the recyclers who struggle to process many unrecyclable or difficult-to-manage plastics, often containing harmful chemicals (intentionally and non-intentionally) introduced during the (former) manufacturing process and use.

A radical change is needed. Thorough circular design principles ensure that material quality (in terms of chemical, physical and mechanical properties) is maintained or improved throughout recycling, and such principles enable high-value applications rather than downcycling (lower quality and lower value). This change should also include how we define 'safety'. Current regulatory framework defines food contact materials as "safe" if they comply with the regulations setting "safe levels" for a small set of well-studied chemicals, but legislation, so far, fails to ensure the real safety of products, namely the absence of hazardous and untested chemicals in consumer products ([see Recommendation 1](#)).

Recommendations

Realising a circular and toxic-free economy is a complex but achievable process, and closing the loop for plastic waste and plastic recycling is an important element in the equation.

Our paper provides the following recommendations for policy-makers, authorities and packaging manufacturers:

1. EU legislation should urgently phase out the most hazardous chemicals and ensure packaging and other food contact articles are truly safe for use, reuse and recycling. We, therefore, call on the European Commission to timely put forward an ambitious proposal for a revised Food Contact Material (FCM) Framework Regulation. In particular, the current FCM safety definition (Art. 3, 1935/2004) should replace "*quantities*" by "*no hazardous chemicals and no untested chemicals in materials and articles*", to eliminate risk to human health arising from the presence of hazardous substances in food packaging / food contact articles.
2. The revised Packaging and Packaging Waste Regulation (P&PWR) should adequately address non-toxic aspects of used materials and define 'high quality recycling', where elimination of risk to human health arising from the presence of hazardous substances in packaging or packaging components is incentivised.
3. Significant regulatory changes are on the horizon for various chemicals used in packaging already. FCM / food packaging industry leaders are therefore advised to develop a proactive approach towards their own hazardous chemicals phase-out plans.
4. Packaging and product designers should consider the full product lifecycle, and address the challenges of [toxic-free materials and products](#) for clean material cycles through ecodesign principles. As a principle, products that cannot be safely used, reused and recycled at the end of their life should not be produced or placed on the market in the first place.
5. Safety of plastics, both virgin and recycled ones, depends on availability of information. While existing FCM laws address, to a certain extent, harmful chemicals used during plastics production, safety information about polymers is missing due to lack of requirements on their registration. The Commission should ensure that all polymers used in plastic FCM will fall under obligatory registration under REACH, and that their chemical constituents are properly assessed for impacts on human health.
6. To ensure proper implementation and enforcement of the new regulation on plastics recycling, an integrated value chain approach, transparency and traceability of chemical aspects throughout the entire value chain, as well as rigorous standards are necessary.
7. Member States should secure necessary resources to enforce compliance with the existing laws, in particular through auditing recyclers and controls of the products placed on the market.
8. The Commission should facilitate establishment of rules concerning the analytical monitoring, as well as accredited methods, and support Member States to enforce the current regulations of FCMs through specialised guidelines and training.
9. The Commission should enforce more strict timelines for assessment and authorisation of any novel recycling technology, to minimise the risk of non-suitable technology being operating on the market for years.
10. The policies on real circularity, which require different business models (notably focused on waste prevention and reuse options), should be reinforced by legislation and remain at the top of the EU agenda. External parties, such as the finance sector, governments, consumers, or third-party certification systems, may aid in engaging large companies to promote upstream solutions.
11. Significantly more efforts beyond plastic recycling are required to effectively address plastic pollution challenges. The EU must set general and sectoral targets for reduction in resource use in line with the Paris Agreement's commitments, and create real incentives for dematerialisation and better resource use.

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Zero Waste Europe, 2022



Zero Waste Europe is the European network of communities, local leaders, experts, and change agents working towards the elimination of waste in our society. We advocate for sustainable systems and the redesign of our relationship with resources, to accelerate a just transition towards zero waste for the benefit of people and the planet.



[The Toxic-Free Food Packaging campaign](#) is a collaboration between Zero Waste Europe and other NGOs with the goal of creating a toxic-free environment where nobody should have to worry about the presence of health-harming chemicals in the products that come into contact with our food.



Zero Waste Europe gratefully acknowledges financial assistance from the European Union. The sole responsibility for the content of this material lies with Zero Waste Europe. It does not necessarily reflect the opinion of the funder mentioned above. The funder cannot be held responsible for any use that may be made of the information contained therein.