ZERO WASTE EUROPE

Towards safe food contact materials in a toxic-free circular economy

Policy briefing

May 2020 – Zero Waste Europe

Introduction

Food Contact Materials (FCMs) are materials and articles[1] that come into contact with our food during the supply chain, such as storage containers, factory equipment, kitchen utensils and food packaging. FCMs are a major source of exposure to chemicals. In Europe, more than 8,000 different chemicals are used in FCMs: many of these chemicals can harm our health and leach into the environment, and many more may also be responsible for similar damage as only a fraction of the chemicals present in FCMs have been assessed for their impacts on health.

This policy briefing looks into the **threat that FCMs poses both to human health and the environment, with a focus on food packaging, and highlights the opportunity for ambitious reform of the EU policy framework which would contribute to the transition towards safe, cost-efficient and reusable packaging that protects human health and guarantees a toxic-free circular economy**.

Human health and the environment at risk from single-use food packaging

Food packaging, most commonly single-use, is not only wasteful and contributes to environmental pollution, but can also harm consumers' health as chemicals contained in the packaging migrate into the food and eventually our bodies. Among the scientific community there is growing evidence of, and concern over, the impact of food contact chemicals on the nervous, endocrine and immune systems.

Presence of hazardous chemicals in FCMs

A recent peer-reviewed scientific statement[2] highlights that many of the 12,000 chemicals used in the manufacture of food contact materials globally (over 8,000 in Europe) have not been adequately tested for toxicity. These intentionally added chemicals, as well as 30,000 to 100,000 non-intentionally added substances (NIAS), have the potential to migrate into food from various FCMs, in particular food packaging.

In the case of plastic packaging, a wide array of chemicals are used as additives to provide a number of characteristics, including flexibility (softeners and plasticizers), durability against heat or sunlight (stabilizers and antioxidants), coloring, or as fillers. Plasticizers can constitute as much as 80 percent of the final product for some plastic products.[3]

Most plastic additives are not bound to the polymer matrix and therefore easily leach into the surrounding environment, including the food inside the packaging.[4] Also, as the plastic particles degrade (e.g. through scratches on the surface), new layers are exposed and more additives are likely to leach from the core of the packaging to the surface, and then to the food.

[1] There is a distinction between food contact chemicals, food contact materials and food contact articles. However, this briefing uses the wording of food contact materials (FCMs) to refer both to food contact materials and articles (products).
[2] Muncke, J., Andersson, A., Backhaus, T. *et al.* Impacts of food contact chemicals on human health: a consensus statement. *Environ Health* 19, 25 (2020) ehjournal.biomedcentral.com/articles/10.1186/s12940-020-0572-5
[3] See Christoph Buchta et al., Transfusion-related Exposure to the Plasticizer di(2-ehthylhexyl) phthalate in Patients Receiving Platletpherisis Concentrate, 45(5) Transfusion 798, 798-802 (2005), www.ncbi.nlm.nih.gov/ pubmed/15847671.
[4] The potential of plastic additives to leach depends on the properties of each chemical, the environmental conditions (changes in temperature, exposure to heat or to sunshine), the properties of the substances that plastic is in contact with (for example, the pH or fat content of food contained in plastic packaging, etc

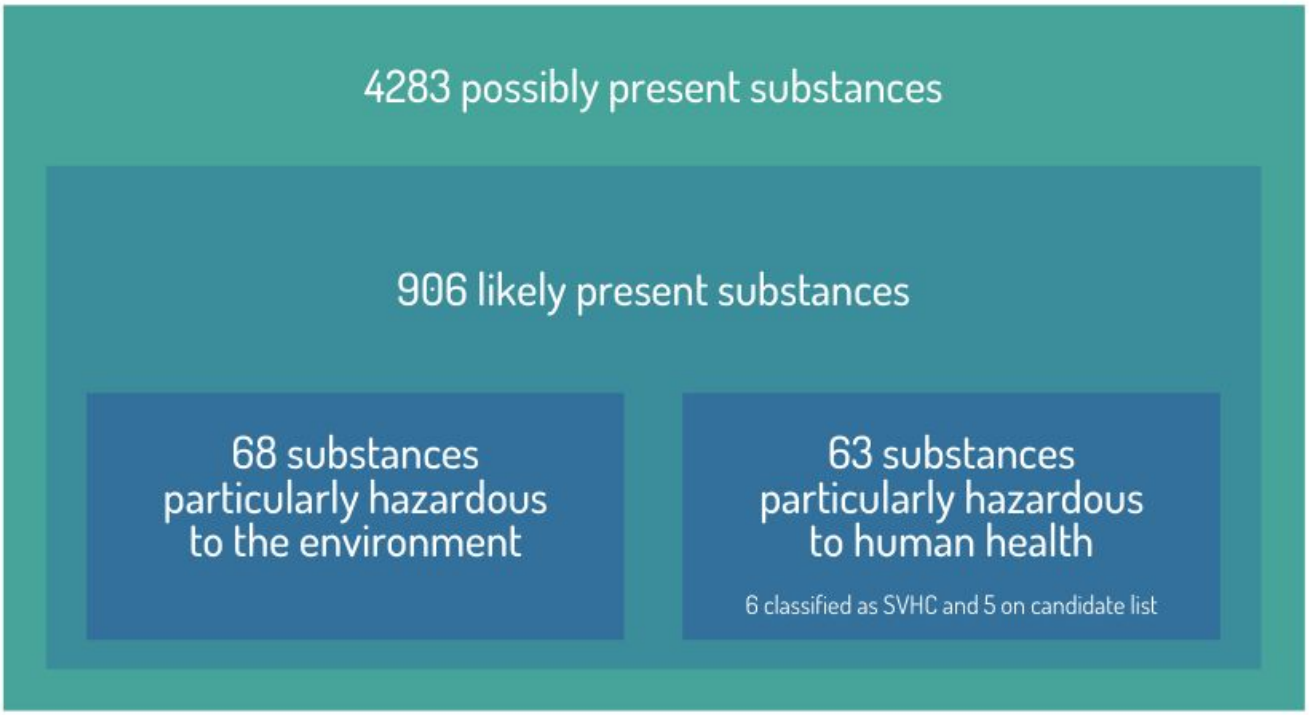

Figure 1 : Chemicals associated with plastic packaging according to the database of chemicals 2018 Food Packaging Forum HCPP Prioritization Report[5]

A database of chemicals associated with plastic packaging shows that over 4,000 chemicals are *potentially* present in plastic packaging. Among those chemicals, 906 were identified as *likely* to be present in plastic packaging, and of those, 68 chemicals were identified as being particularly hazardous for the environment and 63 were identified as being particularly hazardous for human health. Out of those 63 chemicals, 6 are notably classified as substances of very high concern (SVHC), under the EU chemical legislation *REACH*, based on their toxicity for reproduction and their endocrine disrupting properties, and a further 5 are featured on the SVHC candidate list. The researchers that compiled this database of chemicals associated with plastic packaging highlight that there was no harmonised toxicity classification available for many other chemicals, and therefore this list is not a complete list of the most hazardous chemicals.

Many chemicals additives are also used to manufacture paper and board (cardboard) packaging to achieve certain functionalities (strength resins, softeners, dyes and pigments),[6] and those too can migrate into food as paper and board are permeable materials. Phthalates, mineral oils[7] and PFAs[8] are commonly found in paper and board food packaging. The presence of these hazardous chemicals in paper and board (in packaging and beyond) raises particular challenges and concerns for the integration of recycled paper in food packaging, due to the risk of contamination during the recycling processes. In addition to threatening human health, the presence of hazardous chemicals is also an obstacle to ensuring good quality toxic-free recycled content and therefore to achieving a toxic-free circular economy.

[5] www.foodpackagingforum.org/fpf-2016/wp-content/uploads/2018/09/HCPP-prioritization-report_Sept-2018.pdf
[6] www.foodpackagingforum.org/food-packaging-health/food-packaging-materials/paper-and-board
[7] Foodwatch, Mineral oil in food - results of foodwatch test, 2015: www.foodwatch.org/en/reports/2015/mineral-oil-in-food/
[8] FIDRA, "Forever chemicals in the food aisle: PFAS content of UK supermarket and takeaway food packaging", 2020 www.pfasfree.org.uk/wp-content/uploads/Forever-Chemicals-in-the-Food-Aisle-Fidra-2020-.pdf

Certain chemicals hazardous to human health raise particular concerns as they continue to be widely present in food packaging.

PHTHALATES	BISPHENOLS	PFAs
The risks posed by (many) phthalates, notably due to their endocrine disrupting properties, have been repeatedly recognized, reviewed, and assessed by various authorities all over the world. Impacts on health include child development impairment, adult reproductive toxicity, insulin resistance, overweight and cancer.[9] This group of over 30 chemicals are largely used as plasticizers and have notably been found in significant amounts in human urine samples.[10] Several countries, such as Canada and Hong Kong, restrict the use of some phthalates in toys and other products for babies and children.[11] In Europe, eight phthalates are subject to authorisation under EU chemical legislation *REACH*, and in July 2018, the European Commission proposed to restrict four phthalates in consumer articles. However, due to the lack of alignment between *REACH* and the legislation on FCMs, those phthalates (DBP, BBP and DEHP) can still be legally used in food contact plastics *(Commission Regulation (EU) No 10/2011)*. Besides these restrictions, phthalates are still widely used in consumer products, including plastic films in many parts of the world, including Europe.	The most known and commonly used bisphenol is Bisphenol A (BPA). BPA is used for the production of polycarbonate plastics (used in electronic kitchen appliances and water bottles) and for the lining of aluminium cans. Food consumption is the largest source of exposure to BPA.[12] There is broad evidence that BPA may have adverse effects on reproduction, the nervous system, the immune system, and has been associated with cancer risks (e.g. breast cancer), as well as having implications for the metabolic and cardiovascular systems.[13] The European Chemical Agency in 2017 listed BPA as a substance of very high concern (SVHC) because of its endocrine disrupting properties for humans. The EU has restricted the use of BPA for certain products (e.g. plastic baby bottles), but those restrictions are limited in scope. BPA has often been replaced by another substance of the bisphenols family, Bisphenol S, for which there is also growing evidence of adverse effects on health.[14]	PFAs (per- and polyfluorinated alkyl substances), a group of over 4,000 chemicals, are widely present in food packaging, especially greaseproof paper food packaging such as those used in fast-foods and for microwave popcorn bags, as well as in other applications (e.g. non-stick pans, waterproof coats and cosmetics). These chemicals are persistent, bioaccumulative and mobile, and therefore are found in remote places and notably, in drinking water. The toxicity of many PFAs, including their effects on the reproductive, hormonal and immune systems, have been proven, yet only a few PFAs have been regulated so far.[15] In September 2019, Denmark decided to ban PFAs from paper and board starting in 2020.[16] In 2015 too, the Danish grocery store chain Coop had already decided to remove certain products from its shelves due to the fact that they contain PFAS. The EU is looking at developing a specific action plan for PFAs but concrete measures are still missing.

[9] Benjamin, S., et al. (2017). "Phthalates impact human health: Epidemiological evidences and plausible mechanism of action." *Journal of Hazardous Materials*,(2017).
[10] rezero.cat/noties-mainmenu-2/194-actualitat2019/788-plastic-health-campaign
www.imim.cat/media/upload//arxius/porta
[11] for example, Canada, since 2011, restricts the use of six phthalates in soft vinyl toys and child care articles, and Hong Kong 2014 "Toys and Children's Products Safety (Additional Safety Standards or Requirements) Regulation" includes restriction on the use of phthalates
[12] CEF. 2013, Draft scientific opinion on the risks to public health related to the presence of bisphenol A (BPA) in foodstuffs – Part: exposure assessment. EFSA Journal.
[13] www.foodpackagingforum.org/fpf-2016/wp-content/uploads/2015/11/FPF_Dossier01_BPA_ohne-Blase.pdf
[14] Ben-Jonathan N, Hugo ER. Bisphenols Come in Different Flavors: Is "S" Better Than "A"?. *Endocrinology*. 2016;157(4):1321-1323. doi:10.1210/en.2016-1120: www.ncbi.nlm.nih.gov/pmc/articles/PMC4816743/
[15] chemtrust.org/wp-content/uploads/PFAS_Brief_CHEMTrust_2019.pdf
[16] www.foodpackagingforum.org/news/denmark-to-ban-pfas-in-paper-board-in-2020

Food packaging, a major source of exposure to hazardous chemicals

Food consumption is a major source of exposure to chemicals,[17] due to the way our food is produced, packaged and stored; as well as the migration of chemicals from food packaging.

Food packaging, most commonly single-use, accounts for a significant part of packaging produced and used.[18] It has invaded shelves, with processed food almost always heavily packaged, and even fruits and vegetables are commonly wrapped in packaging. Both the on-the-go consumption and home-delivery culture have contributed to the development of other packaging applications, such as takeaway single-use containers and pre-prepared food wrapped or packaged in single-use packaging, often plastic. Small format packaging, such as condiment sachets and single-serve containers (e.g. for butter, milk and spreads), are also common items in the food services sector.

PLASTIC PACKAGING: THE POSTERCHILD OF A WASTEFUL LINEAR ECONOMY

Europe's packaging waste levels (for all types of packaging) are among the highest in the world, responsible for more than 200kg of waste per year and per capita in some Member States (Eurostat). Plastic packaging is a large contributor to this waste, with an average 30kg of plastic packaging waste generated per year and per capita in Europe.

In Europe, plastic waste is still mainly landfilled (31%) or incinerated (39%) and post-consumer plastic waste collected for recycling (less than 30%) is most often exported out of Europe or destined for low value applications (downcycling).

Not all food packaging is created equal, and some represent a higher source of exposure to chemicals than others. Materials such as glass, stainless steel and ceramic are known to be more inert (stable) materials, due to their chemical structure - meaning that they are less likely to allow chemical migration to food.[19] Plastic, paper and cardboard are, on the contrary, non-inert materials: meaning that chemicals can more easily migrate directly from the material to the food (and many hazardous chemicals can be present in plastic and paper, as mentioned above).In addition, chemicals from outside the material (such as chemicals contained in inks on the outside surface of the packaging) can migrate through the material (plastic or paper) to the food, creating additional risk of exposure.

Food packaging is often multi-material; for example paper and board packaging can have a plastic lining or coating and single-use aluminium and steel cans typically have a plastic lining. Also, the closure (caps and lids etc.) of the packaging can be of a different material to the main part of the packaging, labels too are often made of different materials . This can lead to food packaging with very complex structures with a variety of chemicals that can migrate into the food.

Generally speaking, inert materials (glass, ceramic, stainless steel) are normally used for reusable food packaging and tableware, while non-inert materials (plastic, paper and cardboard) tend to be used mainly for single-use, and often in complex multi-layered structures. **With plastic, paper and cardboard packaging accounting together for more than 70% of food packaging sales globally (while glass represents about 10% of the market share),[20] the way we currently package and distribute food is not only wasteful and harmful to our environment, it also threatens our health.**

[17] Kofi Asante-Duah "Public Health Risk Assessment for Human Exposure to Chemicals", 2017
[18] 41% of global packaging was used for food packaging in 2007, see Muncke, J., Exposure to endocrine disrupting compounds via the food chain: Is packaging a relevant source? Science of The Total Environment, 2009. 407(16): p. 4549-4559.
[19] www.foodpackagingforum.org/food-packaging-health/migration
[20] Rexam Consumer Packaging Report 2011/2012, www.yumpu.com/en/document/read/packaging-report-2011-12-packaging-unwrapped

An opportunity to reform an inadequate EU policy framework on FCMs

The EU legislative framework on FCMs

The *EU framework regulation on FCMs (EC) 1935/2004*, together with the *EU Regulation on Good Manufacturing Practices for materials and articles intended to come into contact with food (EC) 2023/2006,* set the overall EU rules on food contact materials.

The regulation aims to "ensure the effective functioning of the internal market in relation to the placing on the market in the Community of materials and articles intended to come into contact directly or indirectly with food, whilst providing the basis for securing a high level of protection of human health and the interests of consumers"[21], and clearly states that the constituents of the FCMs (i.e. migrating chemicals) must not be transferred into the food in quantities which could endanger human health.

The framework legislation allows for specific rules to be adopted for the 17 types of FCMs identified. However, so far, specific rules have only been adopted for 5 types of food contact materials: i) ceramics, ii) regenerated cellulose film, iii) active & intelligent materials, iv) plastics and v) recycled plastics.

The specific legislation for plastic FCMs[22] sets a number of specific rules, including a Union list of substances authorised and specific migration limits. It applies to single-layer plastic materials, multilayer plastic materials and plastic layers in multi-material multi-layers, plastic coatings on lids of cans, as well as printed or coated plastic materials. Yet it does not currently apply to adhesives or printing inks, nor to colorants and solvents used in plastics. It is accompanied by a specific legislation on recycled plastics,[23] which does not set a list of recycled plastics (or substances) for FCMs but focuses on setting a list of recycling processes authorised for recyclates to be used in recycled plastic FCMs.

Insufficiency and inadequacy of the current framework

In addition to the exclusions already outlined, there are several other important limitations to the current EU FCM legislative framework (including for harmonised materials), with many provisions which date back from 1976. These limitations are outlined below:

- **The lack of EU harmonised rules for all FCMs**

  This is a major insufficiency of the current legislative framework. Largely used food contact materials, such as paper and cardboard, and newer ones such as bamboo, are not regulated at the EU level. Each Member State sets its rules and a FCM sold in one country (in respect of the rules of that Member State) can be sold in all other Member States, in application of the principle of mutual recognition. This leads to a very different level of protection in different countries around Europe and to the promotion of the lowest common denominator due to the mutual recognition principle. This is a major source of concern, and increasingly so in light of recent stronger

[21] Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC
[22] Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food.
[23] Commission Regulation (EC) No 282/2008 of 27 March 2008 on recycled plastic materials and articles intended to come into contact with foods and amending Regulation (EC) No 2023/2006

regulations on plastic packaging, with some industries regrettably moving towards single-use paper and bamboo alternatives, rather than switching to inert and reusable alternatives.

- **Inadequacy of the the risk assessment to protect human health:**
    - The risk assessment is focused on the starting substances and not on the final food contact articles/products despite many transformations happening during the manufacture, and most citizens becoming exposed during the final article/product stage (including the inks, labels and closures).[24]
    - The risk assessment also does not properly take into account non-intentionally added substances (NIAS), formed from reaction,degradation products and impurities, despite the fact that this constitutes a large part (most) of the substances migrating to the food.
    - Finally, the assessment does not take into account the multiple sources of exposure humans have to chemicals (e.g. from pesticides, air pollution etc) creating a combination effect, also referred to as the cocktail effect of chemicals. Migration limits (for example for plastics) are set without taking into account this "cocktail effect" instead only assessing the exposure through food contact materials.

- **Allowed presence of the most hazardous chemicals restricted under *REACH***

  There is no direct link made between the FCM regulation and *REACH*, meaning that chemicals classified as carcinogenic, mutagenic or toxic for reproduction (CMRs) under *REACH* as well as endocrine disruptors chemicals (EDCs) can still be (and are) used in FCMs, including food packaging. This is despite the fact that those chemicals can have serious health impacts even at low doses.

- **Lack of enforcement**

  There is a serious lack of enforcement of FCM (EU and national) rules across Europe, due notably to a lack of capacity (technical, human, financial) from the national enforcement authorities.[25]

- **Lack of transparency and traceability**
    - Poor transparency of the chemicals present in products, including food packaging, as well as a lack of traceability of those chemicals along the supply chain is a significant problem. Public authorities lack the level of information necessary to properly enforce the rules, and guarantee the actual safety of FCMs. In addition, given that the safety of products is currently not properly ensured by public authorities, this indicates the need for public access to information on what chemicals are in the products and packaging they use on a daily basis, and the risks associated with them.
    - The lack of traceability means that waste managers and recyclers lack information on the chemicals in the products they deal with. This poses a risk of contamination to waste streams and recycling processes, and hinders the achievement of a toxic-free circular economy, while also raising questions over the ability to adequately protect the health of workers in the waste management sector.
    - The lack of traceability is also a significant obstacle to ensuring the safety of recycled content and FCMs integrating recycled content. The current legislation does not ensure that increased recycling and integration of recycled content in products - much needed to reduce resource use and waste (together with waste prevention and reuse measures) - does not come at the expense of public health.

[24] Muncke, J. et al. (2017). "Scientific challenges in the risk assessment of food contact materials." Environmental Health Perspectives (2017): ehp.niehs.nih.gov/

[25] Jürg Daniel, Karsten Hoetzer, Gregor McCombie & Koni Grob (2019) Conclusions from a Swiss official control of the safety assessment for food contact polyolefins through the compliance documentation of the producers, Food Additives & Contaminants: Part A, 36:1, 186-193, DOI

An opportunity to strengthen EU policy rules

An evaluation of the EU FCM legislative framework and its implementation has been carried out in 2019. Yet to be published, it will undoubtedly mention some of the insufficiencies mentioned above.

The European Parliament has called on the European Commission to reform the current FCM framework in 2019 and 2020,[26] after having already highlighted in 2016 that the lack of uniform (EU) measures on FCMs is detrimental to public health and the protection of the environment.[27]

This reform has also been long called for by NGOs and consumer organisations, amongst others. A reformed FCM legislation should be based on key principles[28] to ensure a higher level of protection of human health across Europe while guaranteeing a toxic-free circular economy.

It should notably:

- **increase transparency and traceability of chemicals in FCMs**: consumers are largely kept in the dark about the chemicals present in the food packaging and other FCMs, and the lack of information to waste managers on chemicals in products also hinders recycling and the circular economy
- **set stronger assessment of substances**, taking into account NIAS as well as the combined effects on human health from multiple sources of exposure to chemicals
- ensure that the measures in place are applicable (not less stringent) as well as appropriate for recycled food contact materials and articles, and that **no exemptions are granted for recycled materials** so as to ensure the same level of protection for virgin and recycled materials - helping to ensure consumer trust in recycled materials
- be fully consistent with other EU legislation such as *REACH* and prohibit the use of the most hazardous chemicals in FCMs, as well as being consistent with EU legislation related to products and waste.

A reform of FCM legislation presents a great opportunity to strengthen EU rules on FCMs for the benefit of both human health and the environment. At the crossroads of EU chemicals policy, food, and farm to fork strategies alongside the achievement of the circular economy action plan, an ambitious reform of the FCM legislative framework will be an essential element of a successful *European Green Deal*.

[26] European Parliament resolution of 18 April 2019 on a comprehensive European Union framework on endocrine disruptors (2019/2683(RSP)): www.europarl.europa.eu/doceo/document/TA-8-2019-0441_EN.pdf
European Parliament resolution of 15 January 2020 on the European Green Deal (2019/2956(RSP)): www.europarl.europa.eu/doceo/document/TA-9-2020-0005_EN.pdf
[27] European Parliament resolution of 6 October 2016 on the implementation of the Food Contact Materials Regulation (EC) No 1935/2004 (2015/2259(INI)): www.europarl.europa.eu/doceo/document/TA-8-2016-0384_EN.html
[28] "Five key principles for future EU regulation of chemicals in food contact materials" led by ChemTrust: chemtrust.org/wp-content/uploads/KP-sign-on-document-word-sept-19.pdf

Moving towards reusable and safe food packaging in a toxic-free circular economy

The proliferation of disposable food packaging has been the posterchild of our linear economy and throw-away culture in which packaging loses over 90% of its value after its first and only use. Low reuse and recycling rates, large use of chemicals and significant leakage into the environment are all symptoms of a globalised food system, with important transport and processing stages involved between the production and the consumption of food.

Around 200 civil society organisations signed a Declaration of Concern[29] in March 2020, calling for transparency and traceability of chemicals in food packaging, and strong policies that restrict hazardous chemicals and ensure safe and circular food packaging.

Given the fact that, generally speaking, the materials used for reusable packaging are more inert and easier to trace than those materials for disposable applications, the EU should naturally privilege the former over the latter. Indeed, one would expect that EU policies, including on FCMs and packaging, foster the transition towards toxic-free cost-efficient reusable food packaging. Time is of the essence because with the recently approved regulations on plastic packaging, some industries are moving towards single-use paper, cardboard, metal and bamboo alternatives, rather than switching to both reusable and more inert alternatives. This is a missed opportunity which contradicts the objective and spirit of the Directive on single-use plastics that is to move towards reusable alternatives. Yet this shift towards other single-use options for certain products cannot be ignored, and should be addressed both because of the potential impacts on the environment and on human health.

The EU must ensure, through a reformed FCM legislation that all food contact materials and articles available on the EU market, be it single-use or reusable, are actually safe. Certain materials, such as plastic, paper and board and inks typically are of higher concern due to the large presence of chemicals and the level of migration. As mentioned above, some other materials typically used for reusable packaging, containers or crockery, such as glass, stainless steel and ceramic, are more inert.

The European Parliament in its 2016 resolution on FCMs highlighted that "*the adoption of further specific measures at EU level would encourage business operators to develop safe reusable and recycled FCMs, thereby contributing to the EU's efforts to establish a more effective circular economy"* and pointed out *"that one precondition for this would be better traceability and the phasing-out of substances in FCMs which could pose a threat to public health."*[30]

There are ample examples of new businesses based on reuse and refill growing across Europe, many of them using more stable materials. For example, Tiffin boxes first began to be used in Mumbai, India, with 200,000 meals delivered daily in reusable stainless steel tins, and they have recently made their way to Belgium[31] and the UK, while Jean Bouteille[32] provides returnable glass bottles for food in bulk (drinks, oils, etc) in France and Belgium (and expanding), and many more initiatives are growing across Europe and globally.[33] Germany has had in place a systematised deposit return scheme (DRS) for reuse of plastic and glass bottles for drinks (water, sodas and beers) for decades. DRS for reuse and/or refill

[29] zerowasteeurope.eu/wp-content/uploads/2020/03/Declaration_Of_Concern_3March2020.pdf
[30] European Parliament resolution of 6 October 2016 on the implementation of the Food Contact Materials Regulation (EC) No 1935/2004 (2015/2259(INI)): www.europarl.europa.eu/doceo/document/TA-8-2016-0384_EN.html
[31] tiffin.be
[32] www.jeanbouteille.fr/en.html
[33] rethinkplasticalliance.eu/wp-content/uploads/2019/10/bffp_rpa_reusable_solutions_report.pdf

bring large economic, social and environmental benefits,[34] and notably also allow for professional and controlled cleaning and sanitisation of the food packaging before it is used again.

Scaling up toxic free and reusable food packaging, in the business to business and business to consumers sectors, has a key role to play in developing food systems that are resilient and localised and design waste, packaging and chemicals from the system at large. The longer the supply chain, the more chemicals are needed and the harder it is to ensure traceability of substances, and even more so if part of the supply chains are outside the EU. On the contrary, shorter supply chains facilitate the direct exchange of information among the individual actors within it and generally need less processing and use of chemicals. Also, while it is often argued that plastic packaging contributes to reducing food waste, data shows the opposite, i.e. levels of plastic packaging and food waste show similar growth patterns over the last few decades.[35]

The COVID-19 pandemic has highlighted how little resilience there is in our system, notably the way we currently produce, distribute and consume products and food. **This wake-up call has to be answered with ambitious and systemic rethinking, building on existing solutions that strengthen our economic and social fabric, keep the value of resources, and do not damage our health and our environment, ultimately supporting the resilience of our society.** Ensuring safe, cost-efficient and reusable packaging, as part of transitioning towards just, local, zero waste and toxic-free food systems that provide nutritious and diverse food to all and protect our health and our environment, can largely contribute to building this resilience. Advancing and furthering the *European Green Deal*, including the *Circular Economy Action Plan*, the *Farm to Fork Strategy* and the *Just Transition Fund*, should therefore be at the core of the upcoming EU response to the COVID-19 pandemic.

[34] zerowasteeurope.eu/wp-content/uploads/2019/12/2019_12_10_zwe_drs_manifesto.pdf
[35] zerowasteeurope.eu/Unwrapped_How-throwaway-plastic-is-failing-to-solve-Europes-food-waste-problem_and-what-we-need-to-do-instead

Recommendations

ZWE calls on the European Union to:

- **Ambitiously reform the EU legislation on FCMs to achieve a high and uniformed level of protection for human health and a toxic free circular economy across Europe**, notably by ensuring that the EU reformed legislation:
    - regulates all (or most) types of FCMs across the EU (including paper and board, as well as inks and adhesives),
    - prevents the use and presence of the most hazardous chemicals (CMRs and EDCs) in the first place, ensuring synergies with the *REACH* regulation,
    - takes into account the cocktail effect from combined exposures to chemicals from different sources
    - increases transparency and traceability along the value chain, including recycling processes
- **Ensure consistency and complementarity of the reformed FCM legislation with other policies related to food, products and packaging to transition towards food production, distribution and consumption systems that design out chemicals, superfluous packaging and waste**. They should build on recent policy decisions and guidelines to move away from disposability and phase out waste (*SUP Directive*, *Circular Economy Action Plan*, upcoming revisions of the essential requirements for packaging and development of a sustainable products legislation)
- **Support new business models and innovative solutions for food packaging and other food contact articles, based on circular materials that are safe for reuse and recycling**; this can be done though a combination of regulatory measures, economic incentives and financial support including under the *European Green Deal* and the upcoming recovery funding.

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Zero Waste Europe, May 2020

Zero Waste Europe is the European network of communities, local leaders, businesses, experts, and change agents working towards the same vision: phasing out waste from our society. We empower communities to redesign their relationship with resources, to adopt smarter lifestyles and sustainable consumption patterns, and to think circular.

Zero Waste Europe gratefully acknowledges financial assistance from the European Union. The sole responsibility for the content of this event materials 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.