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DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY  
Food Safety, Sustainability, and Innovation  
**Food Processing Technologies and Novel Foods**

# **Study on sustainability in the context of food contact materials (FCM) in view of a possible revision of the FCM legislations**

## **Description of the study prior to its start**

- DISCLAIMER –

This document is prepared by the Commission services and has not been officially adopted by the Commission. It serves only as a source of information on the study objectives prior to its start and is based on the Terms or References on which basis the study was procured. It is released to facilitate discussion and understanding on the objectives of the Commission Services prior to the study and during its early stages. It does not commit the European Commission, and should not be interpreted as expressing a position on the present or future sustainability of food contact materials.

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## 1. INTRODUCTION

Food contact materials ('FCMs') include food packaging, everyday household items such as kitchen and tableware as well as machinery and surfaces used in food manufacturing, preparation, storage, transport and distribution ([https://food.ec.europa.eu/safety/chemical-safety/food-contact-materials\\_en](https://food.ec.europa.eu/safety/chemical-safety/food-contact-materials_en)). Whilst they are vital to food safety and to the integrity of the food supply chain, chemical substances can migrate from FCMs into food and thus contribute to consumers' exposure to those substances. In order to protect consumers, [Regulation \(EC\) No 1935/2004](#) therefore establishes basic Union rules for all FCMs, which aim to secure a high level of protection of human health, and ensure that the internal market functions effectively.

At present, ensuring the sustainability of the FCM supply chain, including the manufacture, transport and use of FCMs – including the food it supports – is not an objective of FCM legislation, rather to ensure the chemical safety of FCMs to protect consumers and to support the internal market. However, given that achieving the UN sustainable development goals<sup>1</sup> is a key EU policy objective, the extent to which the revision of the EU FCM legislation could contribute to these goals and how to achieve that should be explored. This study will help determine to what extent, if any, the revision of EU FCM rules may address sustainability, or whether these goals are more effectively achieved under other legislation or policies.

Introducing sustainability in FCM policies would seek to contribute to several goals of the United Nation's 2030 Agenda for Sustainable Development (SDGs), notably: SDG 2 (Zero hunger), SDG 3 (Good health and well-being), SDG 9 (industry, innovation and infrastructure), SDG 11 (Sustainable cities and communities), SDG 12 (Responsible consumption and production), SDG 13 (Climate action), SDG 14 (Life below water) and SDG 15 (Life on land).

If introducing sustainability in FCM policies on the basis of the SDGs, the Commission must ensure coherence with the application of sustainability in the context of other EU policies, including the Circular Economy and Farm to Fork Strategy, and that any rules are sufficiently specific and relevant for the production and use of FCMs. In order to achieve this, an improved understanding of potential gaps in those EU policies is needed in order to highlight whether existing or proposed policies may already deal with the sustainable production and use of the materials and articles fall within the scope of FCM legislation, or if there is a need to address those gaps by means of developing specific policy measures as part of a possible future legislation on FCMs. The specific goals of the sustainability objectives are described in section 2.2 below.

Finally, if deemed necessary, such policy measures should become implemented as part of future revised FCM legislation, functioning as a third objective whilst respecting the present two objectives regarding safety and safeguarding the internal market, and should

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<sup>1</sup> <https://sdgs.un.org/goals>

ensure that FCMs placed on the market can be regarded as ‘sustainable FCM’ (i.e. as FCMs that support sustainable development).

A list of relevant background documents useful for the tender specification and the study is available in Annex B.

It is to be noted that most of these policies are new and still being developed and/or negotiated across the institutions.

## **2. CONTEXT OF THE EU INTERVENTION AND OF THE LEGISLATION ON FCMs**

### **2.1. 3.1 Regulation (EC) 1935/2004 and the revision process**

In order to ensure food safety, Regulation (EC) No 1935/2004 (hereinafter referred to as “Regulation”) sets basic EU rules for all FCMs, which aim at securing a high level of protection of human health and the interests of consumers as well as to ensure the correct functioning of the internal market. The Regulation requires FCMs to be manufactured so that chemical substances do not transfer into foods in amounts that would endanger human health. It also sets other rules such as those on labelling and traceability.

The Regulation has two objectives: to **prevent that constituents of materials transfer to food in hazardous amounts (safety/health protection)**, and to **ensure free circulation on the market of food contact materials (single market)**.

Furthermore, the Regulation also allows specific rules to be introduced to ensure the safety of particular materials and establishes a procedure for the risk assessment of substances that the Commission may authorise for manufacturing those materials provided the European Food Safety Authority (EFSA) assessed that use favourably. The main specific regulation that was enacted in this manner is Regulation (EU) No 10/2011 on plastic FCMs, which sets out compositional rules for plastics, including a list of nearly 1000 substances authorised for the use in the manufacture thereof. It also establishes restrictions, such as migration limits. For many other materials, such as paper and cardboard, metal and glass materials, adhesives, coatings, silicones and rubber, specific rules do not exist at EU level and national legislation may apply.

The market value of the entire FCM sector in the EU is significant and estimated to be around EUR 100 billion per year, with a direct impact on the entire food chain and consumers. Actors in the FCM production chain include manufacturers of raw materials, recyclers, intermediate (‘convertors’) and final FCM articles, importers and distributors. The FCM production chain delivers to actors in the food chain, both to food businesses and to consumers at home.

An evaluation of EU legislation on FCMs was recently carried out (see annex B, relevant background documents), which identified several fundamental problems, the following being directly relevant for sustainability:

- **Rules are geared towards traditional chemistry**, e.g. manufacturing of plastic polymers, rather than sustainable alternatives such as plant-based (e.g. wood,

bamboo), recycled or reusable materials. Thus, current rules do not encourage nor facilitate the development of safer and more sustainable alternatives.

Other identified issues relate to safety for the consumer and the internal market but may be indirectly relevant to sustainable use of FCM and also affect the functioning of FCM legislation:

- **An absence of specific EU harmonised rules for FCMs other than plastics**, which is considered by several stakeholders as negatively impacting the correct functioning of the internal market and moreover the possible safety of FCMs;
- The approach of regulating and controlling safety of FCMs by authorising starting substances and lack of focus on the safety of the final FCM article;
- A lack of prioritisation of the most hazardous substances;
- A lack of understanding and complete information for consumers (whereas the current Regulation requires that information on FCMs does not mislead consumers);
- Legislative burdens and difficulties in FCM legislation compliance, especially for SMEs, and lack of enforcement on the national level, causing poor coordination and potentially raising fines, penalties and increased risks in protecting consumer's health.

Many legacy materials and substances have been authorised based on a less stringent risk assessment, whilst new materials and substances are subject to a steadily increasing level of scrutiny, where clarity on how to risk assess and manage potentially sustainable alternatives is lacking. This may de-incentivise innovation. Furthermore, recyclability of all materials and new technologies such as chemical recycling must also be addressed in order for the EU to reach its ambitious objectives for a Circular Economy.

To address these fundamental issues, a [revision of the EU FCM legislation](#) was announced in May 2020 in the [Farm to Fork Strategy \(F2F\)](#). Specifically, the Commission has committed under the F2F Strategy to revise FCM legislation to “improve food safety, ensure citizens’ health and reduce the environmental footprint of the sector” and “support the use of innovative and sustainable packaging solutions using environmentally-friendly, re-usable and recyclable materials”.

Therefore, the overall aim of revising the FCM regulation is to build a comprehensive, future-proof and enforceable regulatory system for FCMs at EU level that fully ensures food safety and public health, guarantees effective functioning of the internal market and supports sustainability.

The ongoing revision process is organised around six ‘pillars’, labelled pillar A to F and presented below:

# Revision of EU FCM rules: Main policy themes and pillars

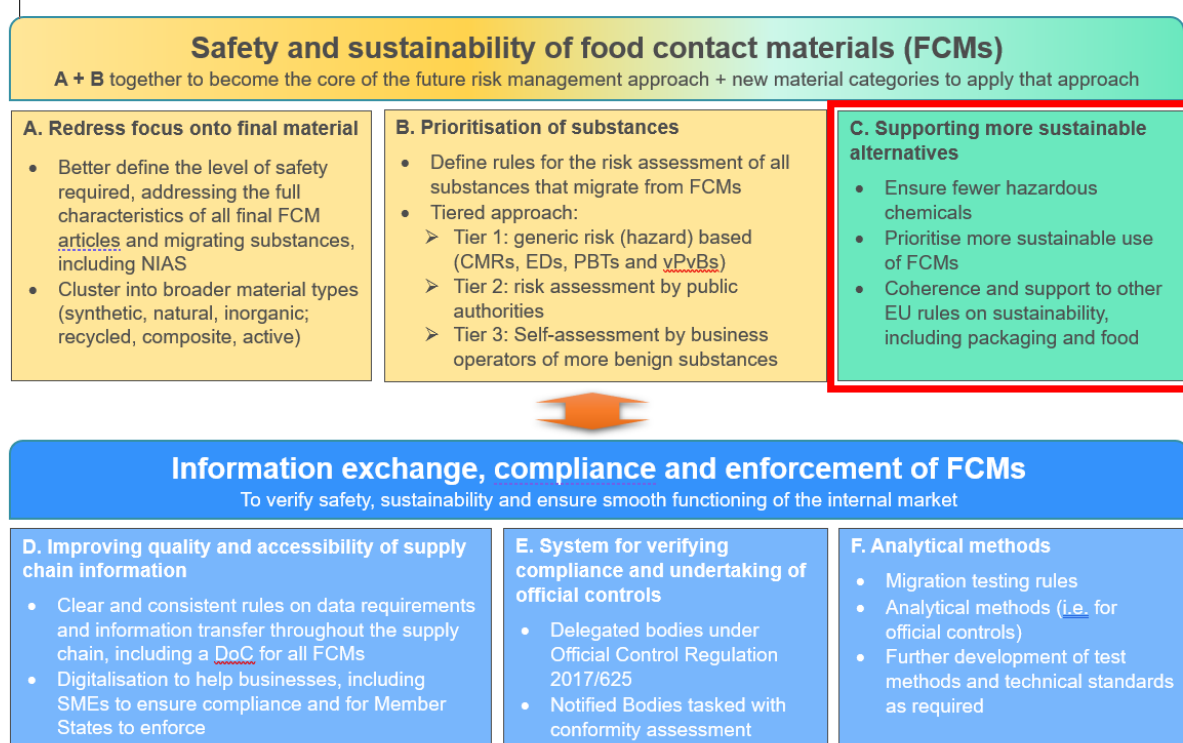


Figure 1: Revision of EU FCM rules: Main policy themes and pillars

Pillars A to C are the main pillars, directly addressing the objective of the revision.

Sustainability is defined as one of these main pillars (Pillar C). Shifting the focus onto the final material (Pillar A) and better prioritisation of substances (Pillar B) are the core pillars supporting the review of the present scope of the Regulation by addressing its current core objectives (safety and market); sustainability is a new objective which thus results in an extension of the scope but is also relevant to both safety and the internal market. Pillars D, E and F support these main policy elements.

Pillar C strives to increase the sustainability of the manufacture and use of FCMs and food products, including its re-use and recycling, further referred to as ‘sustainable FCM’. It should be noted that this phrase defines the scope of the objectives of pillar C but does not define ‘sustainability’ itself in this context.

## 2.2. Sustainability in the framework of the revision and future EU FCM rules

Present FCM legislation only addresses the chemical safety of food packaging without compromising the common market, as described above. Henceforth, apart from supporting safe recycling of plastic for FCM, it does not address the sustainable use of FCMs.

This aspect – as far as relevant in the scope of FCM legislation, i.e. legislation applicable to food packaging, kitchenware, and food processing equipment – thus needs to be newly developed in coherence with the other aspects of the regulation.

Specifically, to achieve ‘sustainable FCM’ the Commission strives to:

1. understand in general sustainability in the context of FCMs and how it can be effectively addressed in FCM legislation;
2. achieve – without compromising food safety – the following goals:
  - a. the sustainable *manufacture* of FCM;
    - (FCM rules, including where relevant those concerning safety, should prioritise sustainably manufactured FCMs; the risk assessment and management approach may need adaptation to the specificities of sustainably manufactured FCM, with the aim of supporting a harmonised market)
  - b. the sustainable use, reuse, recycling and disposal of FCMs;
    - (For example, this could include good hygiene practices for reuse systems, and provide necessary labelling information to ensure the reuse under safe conditions)
  - c. the use of FCMs to contribute to the sustainable production, distribution and consumption of *food*;
    - (For example, setting rules or policies affecting FCM that may contribute to reducing food waste or packaging)
3. identify and characterise regulatory and non-regulatory policy measures that can achieve these objectives without causing burden or overlap with existing or developing EU legislation and policies in other sectors.
4. understand what the scope would be of each policy measure in view of the overall FCM market.

### **2.3. Other European Commission initiatives relevant to the sustainable manufacture and use of FCMs**

The Commission is currently working on the implementation of different initiatives aimed at achieving a more circular economy, reducing food waste and developing sustainable food systems. It is important to take account of those initiatives in the study. In particular, the proposed packaging and packaging waste Regulation (PPWR) and the new Eco-design Regulation for Sustainable Products (ERSP) will play a key role in improving circularity and in supporting sustainable options of products that are commonly subject also to FCM legislation.

The European Green Deal<sup>2</sup> sets several strategies, which includes the F2F strategy, which address the different sustainability challenges in terms of climate change, material and food consumption, health and environmental pollution including from chemicals.

The EU’s Circular Economy Action Plan (CEAP), also part of the Green Deal, sets to improve the circularity of materials and goods, making production and consumption of goods more

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<sup>2</sup> [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

sustainable, and reducing environmental and social pressures, while retaining the value of resources. Consumer waste and particular plastic waste has gained high visibility due to its ubiquity and relevance to citizens and civil society. This has translated into a number of policy initiatives aimed at (1) curbing consumer waste, including plastic and packaging waste, (2) reducing the environmental footprint of consumer products and (3) improving their recycling and long-term use (reuse).

Some of these will affect directly or indirectly the way FCM are produced, used and disposed of.

Regarding food packaging, two initiatives to directly address consumer waste have been launched: the proposal for a Directive on Single Use Plastics (SUPD) and the PPWR proposal.

The SUPD introduced measures to reduce in particular littering. Certain single-use plastic products can no longer be placed on the EU market<sup>3</sup> if sustainable alternatives are easily available and affordable. For other SUPs, the aim is to reduce consumption through awareness-raising, design requirements, labelling requirements on the plastic content of products, disposal options to avoid the environmental impact of littering, waste management and clean-up obligations for producers, including Extended Producer Responsibility (EPR) schemes. Specific targets include a 77% separate collection target for plastic bottles by 2025 and 90% by 2029, and 25% of recycled plastic in PET beverage bottles from 2025, and 30% in all plastic beverage bottles from 2030.

The PPWR proposal, is to significantly reduce packaging, including food packaging, and would introduce targets aiming to increase recycled content and reuse, as well as further requirements on the recyclability of packaging and packaging reuse systems. This will affect many types of food packaging from coffee cups to takeaway boxes to disposable cutlery and their use. Whereas recycled content targets would only cover plastic, other measures set out in the PPWR proposal cover all materials.

In its current form, the PPWR proposal would also ban certain types of lightweight plastic food packaging such as fruit bags and individual condiment sachets. The proposal does not consider the specificities of food and the requirements food puts on packaging regarding safety and hygiene, processing, transport and distribution and the subsequent impacts on the price and types of food made available to consumers.

A substantial part of consumer packaging, single use products and, by definition, beverage bottles are FCM and must meet safety requirements under FCM legislation. The PPWR proposal may set out measures on re-use that could affect consumer information, traceability and hygiene. Minimizing packaging should not jeopardize food safety<sup>4</sup> or increase food waste, as the security of the food along the food supply chain must be preserved. Moreover, EU high hygiene standards must be guaranteed, together with traceability

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<sup>3</sup> This includes sticks, cutlery, plates, straws, and stirrers. It will also apply to cups, food and beverage containers made of expanded polystyrene, and on all products made of oxo-degradable plastic.

<sup>4</sup> There is evidence that may indicate the SUPD resulted in a reduction of safety because of the introduction of new materials;: <https://www.tandfonline.com/doi/full/10.1080/19440049.2023.2240908>



mechanisms. In this sense, it is necessary to ensure consistency between the PPWR proposal and a new FCM initiative.

Currently there are no specific EU rules on the long-term safety of reusable FCM. Regulation (EC) 852/2004 on the hygiene of foodstuffs sets broad requirements on food packaging and basic hygiene requirements targeted at food businesses. However, these requirements focus on preventing microbiological contamination of food from items including FCMs, rather than preventing the contamination of the FCM itself through its life cycle, including for further reuse or recycling, which would also include FCM manufacturers and suppliers. Questions also arise regarding tracing and liability.

For consumer products other than packaging, the proposed Eco-design for Sustainable Products Regulation<sup>5</sup> would act as a safety net for sustainability in the same way the General Product Safety Regulation does for safety. The scope will be extended from the current Eco-design Directive<sup>6</sup> which covers only electrical appliances to cover all types of products. However, food is explicitly excluded from its scope, and by extension, also food packaging. There is no intention at this stage to cover non-packaging FCM, other than electrical appliances (e.g. kitchenware such as food blenders) covered by the current Eco-design Directive.

- Finally, in response to pressure on food security and supply such as COVID-19 and the economic downturn, the Commission adopted the F2F strategy to make the entire EU food system sustainable and resilient. A framework for sustainable food systems is to set the governance and minimum requirements on sustainability for all food system actors. Specific measures include targets to reduce food waste, improve consumer information (date marking, nutrition, front-of-pack labelling), reduce pesticide use, or promote sustainable farming practices and food standards among others<sup>7</sup>. A study on drivers behind food security<sup>8</sup> highlighted the impact of large-sized packaging and food waste, and the role of packaging in the quality of nutrition. Citizens recommended to support sustainable packaging solutions and reduce packaging when safe and possible, during the Citizen Panels on Food Waste<sup>9</sup>. Reducing the impact of packaging waste should not be at the expense of food safety or increase food waste. This element was also highlighted in a qualitative study commissioned by the Commission and carried out with Kantar Public<sup>10</sup>. This study was part of the consultation activities within the possible revision of FCM rules. The purpose of the study was to better understand the current knowledge and understanding of selected participants as regards food contact materials and the potential risks the use of FCM could represent. The participants demonstrated limited knowledge and understanding of the risks involved in (re-)using different types of FCMs and they also had mixed levels of understanding as regards which FCMs are sustainable and how to dispose of them.

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<sup>5</sup> [https://environment.ec.europa.eu/publications/proposal-ecodesign-sustainable-products-regulation\\_en](https://environment.ec.europa.eu/publications/proposal-ecodesign-sustainable-products-regulation_en)

<sup>6</sup> <https://eur-lex.europa.eu/eli/dir/2009/125/2012-12-04>

<sup>7</sup> [https://food.ec.europa.eu/document/download/401d3cc0-b4f5-4f14-9f57-6e9edb16a874\\_en](https://food.ec.europa.eu/document/download/401d3cc0-b4f5-4f14-9f57-6e9edb16a874_en)

<sup>8</sup> [SWD\(2023\) 4 final](#).

<sup>9</sup> [https://commission.europa.eu/document/4107f205-ca9e-435f-8060-24505bbe599e\\_en](https://commission.europa.eu/document/4107f205-ca9e-435f-8060-24505bbe599e_en)

<sup>10</sup> [https://food.ec.europa.eu/safety/chemical-safety/food-contact-materials/fcm-document-library\\_en](https://food.ec.europa.eu/safety/chemical-safety/food-contact-materials/fcm-document-library_en)


On the one hand, citizens feel concerned about the sustainable use of FCM. On the other hand, some consumers advocate new norms of hygiene and consciously avoid adjusting their habits to more sustainable options, if it would compromise the safety of FCM.

Regarding the manufacture of materials, the chemical strategy for Sustainability outlines over 80 actions and promotes the transition to safe and sustainable by design chemicals and materials. The ‘safe and sustainable by design’ framework encourages innovation to replace the most harmful substances in products and processes and aims to develop new chemicals and materials, optimise or redesign production processes and the use of substances currently on the market to improve their safety and sustainability.

Finally, it is also important to consider the [ongoing climate initiatives](#) for a climate neutrality as of 2050 with a gas emission development strategies that may impact directly or indirectly the FCM materials choices when considering the manufacture of products.

**Figure 2:** Relevant EU Green Deal initiatives

### Initiatives under the Green Deal relevant to the revision of FCM legislation

 <p>Regulation on packaging and packaging waste</p> <p>Plastics strategy: Recommendation on bioplastics and micro plastics, Single-use Plastics Directive, Circular Plastics Alliance</p> <p>Regulation on eco-design for sustainable products</p> <p>Green claims directive and proposal on empowering consumers</p>	 <p>FCM revision is part of Farm to Fork strategy</p> <p>Food waste reduction targets</p> <p>Framework for sustainable food systems</p> <p>Food labelling including sustainability, review of date markings)</p>	 <p>Essential use of chemicals</p> <p>Recommendation on safe and sustainable by design of chemicals</p> <p>One substance one assessment and generic risk assessment</p> <p>REACH and CLP revision</p>
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### 3. SCOPE, OBJECTIVES AND STUDY QUESTIONS

#### 3.1. Scope of the study

The present study will support the work on the revision of the FCM legislation by identifying and assessing policy measures aimed at supporting sustainability of FCMs. **The study is to be considered as a preparatory study to support the development of the full policy options for the revision of the FCM legislation and the subsequent impact assessment.** The required study is not a fully-fledged impact assessment. It will not be possible to assess the full impact of identified measures until safety related objectives of the revision are sufficiently developed. This study is thus not to be approached as a study supporting a final impact assessment but will contribute to it by collecting sustainability-related facts and figures that will ultimately feed into it.

The requested study **shall not address the other objectives of the revision** (see figure 1 above) on safety (yellow pillars), information exchange (but information requirements related to specific policy measures identified for addressing sustainability should be assessed), and compliance (blue pillars).

Consequently, **the requested study shall only cover the sustainability aspect of the FCMs (Pillar C of the FCM revision).** This requires defining sustainability when applied to FCMs, analysing the current FCM market by providing a mapping of the products currently available in the market, determining the regulatory gaps existing between the current regulations in order to characterise policy measures that would help placing sustainable FCMs on the market.

#### 3.2. Objectives of the study and study questions

**There are six objectives (parts) of the study described in below paragraphs as A-F to which all respective deliverables relate.**

##### **A. To define the understanding of sustainability when applied to food contact materials**

Sustainability applied in the context of sustainable FCM is presently not well-defined. The study shall therefore clearly establish and define a working understanding of sustainability in the context of the Commissions objectives on achieving ‘sustainable FCM’ and refine it as relevant for the production and use of FCMs.

The starting point of the work shall be an interpretation of the United Nation *Sustainable Development Goals* (UN SDGs)<sup>11</sup> as well as take account of sustainability applied in existing and proposed Union policy (see the description below). In doing so, it is to assume that sustainability would be taken on in future FCM legislation as a third objective, i.e. in addition to the present objectives of the legislation, safety and internal market.

Even though the obtained understanding of sustainability should be specific to application in the FCM domain, it should principally not create inconsistencies with regard to that

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<sup>11</sup> <https://sdgs.un.org/fr/goals>

already applied in other Union policy domains in a way that could lead to incoherence in approaches across Union policies. Therefore, a coherence in the use of sustainability as a concept and as a means for defining policy should be maintained, to the extent possible, with the following existing and developing EU policies:

- a. The Framework for sustainable food systems, the Farm to Fork strategy, food labelling including sustainability;
- b. the EU's Circular Economy Action Plan, the Directive on Single Use Plastics (SUPD), and the proposed Packaging and packaging waste Regulation (PPWR);
- c. and, to the extent relevant, the Framework on safe and sustainable by design, the Chemical strategy for Sustainability, the Green claims Directive, the Eco-design for Sustainable Products Regulation, as well as the ongoing revisions under REACH and CLP regulations.

In case it would be identified that the UN SDGs could be approached in the FCM domain more effectively if accepting some loss of coherence vis-a-vis above policies, the more effective approach should be prioritised as far as the loss of coherence can be justified. Such cases could arise in order to comprehensively address relevant SDGs taking account of specificities of FCMs, or to apply learnings from the implementation of those policies,

On this basis, the requested study shall articulate aspects of sustainable development applicable and made specific to FCMs which could provide the basis for identifying possible policy measures.

Typical aspects which should be analysed and considered could for instance include environmental impact, durability, reparability or recyclability of the FCM product, and may vary depending on the type of materials concerned, the use of the final product (e.g. packaging or kitchenware), its production process, its life cycle, its contribution to achieving goals of other policies (e.g. to limit food waste or to facilitate the reuse of food packaging), and its recyclability.

This analysis shall be carried out considering different stages of the manufacturing chain of FCMs and the role of the stakeholders therein.

In order to properly tackle the objective A, this analysis should be carried in order to address the following question and sub-questions:

**1) How can sustainability in the context of FCM be defined and articulated?**

- a. How could sustainability in the FCM context be approached and defined? What could be covered by 'sustainable FCMs'?
- b. Which UN SDG's could be relevant to address, how can these be related to the production and use of FCMs?
- c. What are the appropriate aspects to be considered for the sustainability and sustainable use of food contact materials, including safe recycling and reuse? What elements are necessary for assessing the impacts, costs, and benefits?
- d. How is sustainability approached in other EU policies?

- e. How should sustainability be interpreted from the perspective and scope of the FCM legislation?
- f. Which indicators could measure the degree of sustainability, for instance taking account of the UN global indicator framework for the Sustainable Development Goals?
- g. How do different interest groups (Member States, FCM and food producers, NGOs, and consumers) view/approach sustainable FCMs?

**B. To identify gaps and opportunities for increasing sustainable development.**

The study shall then identify gaps in EU policies as well as opportunities that are either independent of existing EU policies or that these policies enable, and that offer prospect to increase sustainable development as a part of FCM policy.

Sustainability of FCMs cannot not be addressed in isolation as to a large extent it may already be achieved under the policies described in the background documents provided in Annex B of this document. The study shall identify gaps in existing and proposed EU policies which would either not address or hinder the sustainable production and use of the materials and articles falling within in the scope of FCM legislation. It shall subsequently identify opportunities to address those gaps and mechanisms that can complement the existing safety rules (see point E below).

Thus far the Commission services identified two kinds of gaps: a gap where no other EU policy addresses an aspect of sustainable FCM, but where addressing it could increase the sustainable use of FCM; or where other EU policy should be facilitated by rules under FCM legislation, such as ensuring a high level of food safety in the reuse of food packaging.

Specifically the study shall assess whether and to what extent other food safety, consumer or environmental initiatives already address or affect sustainable production and safe use of FCM (including recycling and reuse), as well as information to end-users and whether there would be regulatory gaps, such as environmental and sustainability objectives set under the CEAP and F2F strategies, and targets set under the relevant initiatives implementing those strategies that affect FCM – namely the PPWR, FSFS and Eco-design for Sustainable Products Regulation, or whether measures under FCM legislation could support the implementation of those other initiatives.

In doing so, it should determine on the basis of the concept of ‘sustainable FCMs’, **2) what is the relation between related (EU) policies covering sustainability and a potential new policy on FCMs?**

- a. What aspects of ‘sustainable FCM’ have already been achieved (or to be achieved) under existing and developing EU initiatives that affect sustainability?
- b. What regulatory gaps as regards sustainability can be identified? Where could FCM legislation consequently contribute?

- c. What needs are created by measures intended to increase sustainable use under those other policies which would impede the objectives of those measures, and which could be addressed under FCM legislation?

**Serving as an example** of such a measure which has already been achieved is Regulation (EU) 2022/1616 on recycled plastic FCMs. It enables the use of recycled content targets for plastic food packaging that are part of the proposed PPWR. While similar rules for the recycling of paper and board could be an option, reuse targets could be another. Reuse of packaging has the potential to adversely affect food hygiene. At EU level there are presently no specific rules preventing this kind of reduction of food safety.

Focusing on the EU Green Deal and the F2F, the study is to identify the elements that are not already covered by other initiatives, establishing which sustainable aspects would be better addressed under FCM policy, rather than under other environmental policies.

Importantly, the study is not to be limited to what could strictly be considered as a gap in existing EU policies. Independent of those existing EU policies the articulation of sustainable development under objective A could provide for perspectives that allow to define policy under FCM legislation. Existing EU policies may also enable approaches under FCM policy that would address sustainable development by building on those policies, rather than by closing any gaps.

### **C. To analyse the current and future market of FCMs (taking into account expected developments within the next 20 years)**

The study shall map and quantify material streams of FCMs and (packed) food products, with a view to establish in which material stream the potential addition of sustainable measures could be implemented and would have a notable impact in the market. It is not necessarily a particular kind of FCM itself, or a specific packaged food product that should be looked at, but these should be placed in the context of their supply chain, use and disposal, as well as looked at from a longer-term perspective of the sustainable supply of such products. An important aspect of this mapping shall be the foreseen development of these streams within the next 20 years, for which expected future impact of the policies referred to in chapter 1 shall be considered.

The quantification of these streams shall be at the minimum sufficiently precise to allow determining whether one stream on the market is 10 times bigger than another stream. The level of aggregation of such streams should be determined in function of this study – the highest level of aggregation into packaging, kitchenware and food processing equipment being considered as insufficient. Nevertheless, streams should be sufficiently big to obtain sufficient data and to be singled out at the policy level for implementation.

Finally, an appropriate quantification unit should be applied, it may be the economic size of the market related to different FCMs, or other units such as tonnage if these are more relevant given the over goal.

Determining streams and quantifying them using an appropriate unit and level of aggregation are explicit objectives of this study.

This mapping is to be carried out because it is expected that some measures may be very effective in achieving sustainable FCM within a small product group, only affecting a small portion of the whole FCM and (packed) food products market. Therefore, without sufficient knowledge of the relative market size of that, it could be perceived as interesting to implement, even though its overall effect on the sustainability of FCM would be negligible. Such a measure would nevertheless be effective in achieving sustainable FCM overall, and not warrant any investment on the side of the Commission or affected business operators.

This effort shall take account of FCM and food product streams at the level of food retailers, and earlier supply chain stages of the manufacture of FCMs. Where needed the study shall address also FCMs used at other places, such as in HORECA, appliances, and food processing equipment.

In order to address this objective, the following question and sub-questions shall be answered:

**3) How can the FCM domain be mapped in specific FCMs/quantified product streams that can help to identify on which part of the FCM domain measures concerning achieving sustainability would be most effective?**

- a. What are the major streams and products on the FCM market?
- b. What are the advantages/disadvantages in focussing on FCMs as such, or on a product streams, which comprehensively approaches the FCM and food value chains, life-cycle, and long term supply of a kind of product? For which FCM would a product approach and for which a product stream approach be more suitable? Why?
- c. How such mapping can be approached in terms of a unit of quantification (economic, mass, some indicator), and the level of aggregation?
- d. What data are necessary for a quantitative mapping, how and to which extent can they be obtained?

**D. To identify the sustainable products already on the market or under development and whether trends on specific products, newly developed production techniques or practices that contribute to sustainability can be highlighted.**

Over the last decades several producers introduced new materials and packaging systems, asserting for instance through labelling that those would provide more sustainable FCMs or product streams. In order to better understand the existing market and the development pipeline as regards sustainability, an analysis should be carried out of the extent to which products or product streams already present on the market or being developed would fit the definition of sustainable FCM derived under objective A, explaining why, or why not, this would be the case. This analysis should contribute to determine which policy measure should be prioritised, as well as draw lessons over their potential for an improved sustainability.

The analysis shall answer the following study question and sub-questions:

#### **4) Which sustainable FCMs/product streams are already in the market?**

- a. What newly developed production techniques or practices contribute to a sustainable FCM?
- b. Which products currently in the market can be categorized as sustainable?
- c. How can these products/techniques be mapped and approached in terms of a unit of quantification (economic, mass, some indicator), and the level of aggregation?

#### **E. To identify policy measures that have the potential to increase the sustainability of FCM**

Based on the previous work, i.e. objective A-D, the study shall identify policy measures that may offer potential to increase the sustainability of the production and use of FCM, i.e. achieve ‘sustainable FCM’. It shall therefore address the following question and sub-questions:

#### **5) What are relevant policy measures that could result in the most added value to facilitate ‘sustainable FCM’ under FCM legislation?**

- a. What measures could in principle offer potential to increase the sustainability of FCMs within the scope of FCM legislation?
- b. On what FCMs or product streams does each measure act?
- c. What would be the benefits of each of these measures in view of achieving sustainable FCMs? To what extent can those benefits be measured, and where are the quantitative data to be found? What are their main disadvantages?

This includes a basic description of the measure, its function, and its benefits towards achieving sustainable FCM and any quantifiable data that will help ranking the measures taking into account their estimated overall potential to contribute to sustainability of FCMs.

#### **F. To characterise policy measures that may increase the sustainability of FCM**

The study is to characterise the measures with the most potential by describing which FCMs and stream(s) the measure affects and in which way, including how it affects the production and use of those FCMs, and if relevant, related food products, and how it contributes to sustainable FCMs. In addition, it needs to be elaborated how the measure could be expected to be implemented (e.g. identification of the requirements to implement such measures – dedicated IT systems, administrative or economic needs, expected time, etc) and whenever possible related quantifiable data. The study is to elaborate also on practical aspects for establishing the measure, and at the very least qualify relevant effects on the production and use of a related sustainable FCM or product stream including possible negative effects (for example administrative burden, costs, food safety).

Each measure shall be characterised with qualitative and quantitative data in a format and granularity that can be used in a subsequent impact assessment.



**For example**, a measure taken under FCM legislation may require manufacturers to pass on data concerning sustainability at each stage of the value chain, so that the final producer can state the exact combined level. Costs should be characterised for such a measure, which could subsequently be integrated in the impact assessment to which this study will input, with costs from other information requirements stemming from other measures in the other pillars of the possible revision of the FCM rules.

The study shall use an appropriate tool to carry out the above analysis, such as a SWOT analysis in order to determine the Strengths, Weaknesses, Opportunities, and Threats, related to each measure.

The study is also to analyse whether such measures would be best approached by regulatory interventions, or by softer measures such as guidance or funding mechanisms. In case of regulatory interventions, it is to analyse whether it would be most appropriate to introduce these interventions under EU FCM legislation or whether these should be left to other EU or national legislation.

In line with the objective F, the analysis shall answer the following study questions and sub-questions:

**6) How do the measures with the most potential function?**

- a. How can each measure be described in detail, which regulatory mechanism(s) does it incorporate?
- b. On which FCM product streams does each measure act?
- c. What is the effect of each measure on production and the supply chain? What does each measure require for its effective functioning?

**7) What is the view of policy makers (EU and Member States) and stakeholders (operators in the FCM supply chain and food producers, NGO's, consumers) on 'sustainable FCM' and the identified and characterised measures?**

- a. Do they consider the articulation of 'sustainable FCMs' relevant and correct?
- b. How do they view the potential of individual measures in addressing sustainability?
- c. How do they consider the practical aspects of implementing those measures?

#### **4. ANNEXES**

- Annex A: Indicative List of Relevant Material gathered by the Commission
- Annex B: Relevant background documents

##### **4.1. ANNEX A**

###### Indicative List of Relevant Material gathered by the Commission

- BEUC survey on ‘What consumers say about safe and sustainable food packaging’
- Final report of the Commission study on ‘citizen engagement’
- Commission proposal for a Regulation on Packaging and Packaging Waste
- Commission proposal for a Regulation on Eco-design for Sustainable Products
- Commission proposal for a Directive on Green Claims
- Commission proposed amendment to the Waste Framework Directive
- Replies to the public consultation

## 4.2. ANNEX B

### Relevant background documents

1. [Staff Working Document on the evaluation of FCM legislation, - executive summary](#)
2. [Inception Impact Assessment \(roadmap\) of the revision of EU FCM legislation](#)
3. [Factual summary report of the public consultation on the revision of EU FCM rules](#)

### Background documents concerning policies relevant to the sustainability of FCM:

- A. Farm to Fork Strategy, including [Legislative framework for sustainable food systems](#)
- B. [Communication on a Farm to Fork Strategy](#)
- C. [EU proposals on the Regulation of sustainable products including a Digital Product Passport](#)
- D. [EU Proposal for a Regulation on Packaging and Packaging Waste](#)
- E. [Policy on single use plastics](#)
- F. [Chemicals Strategy for Sustainability](#) (including Safe and Sustainable by Design)
- G. [European Policy Centre \(EPC\) report on information transfer in supply chains for circular economy](#)
- H. [Circular economy infrastructure: Why we need track and trace for reusable packaging](#)
- I. [Directive on corporate sustainability reporting \(CSRD\)](#)
- J. [Pack benefit - Sustainable Food Packaging \(EDP\)](#)
- K. [Directive on Green Claims](#)