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Directorate-General for Environment
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Safe and Sustainable Chemicals

Directorate-General for Internal Market, Industry, Entrepreneurship and SME's
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Concerns: **Environmental footprint in REACH**

Agenda Point: **4.1**

Action Requested: **Competent Authorities and observers are invited to comment on the document and the discussion points put forward. Written comments should be sent by 25 April 2022 to:**
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INFORMATION REQUIREMENTS ON ENVIRONMENTAL FOOTPRINT IN REACH

1. INTRODUCTION

The Chemicals Strategy for Sustainability (CSS)¹ specified that the Commission will:

- assess how to best introduce information requirements under REACH on the overall **environmental footprint** of chemicals, including on emissions of greenhouse gases.

The present discussion document introduces the Commission's current thinking about options for requesting information on the environmental footprint of substances as part of the registration requirements under REACH. The Commission invites the CARACAL members to provide feedback and any alternative ideas, within or beyond REACH.

2. CONTEXT

The concerns about the environmental impact of human activities at a global scale were among the drivers for the Commission to develop the European Green Deal (EGD)² that sets the path towards a more sustainable society. The development of the CSS was one of the first achievements under the EGD.

One action listed in the CSS is the development of criteria for “Safe and Sustainable by Design” (SSbD) chemicals and materials. One of the first deliverables of this work is a “Review of safety and sustainability dimensions, indicators and tools” by the Joint Research Centre (JRC)³ in which existing frameworks for how to consider different dimensions of sustainability have been reviewed. Those include safety, environmental, social as well as economic dimensions.

Following up on this review, the JRC is developing a “Framework for the definition of safe and sustainable by design criteria for chemicals and materials” that is currently undergoing internal review in the Commission. In the draft report, JRC suggests a stepwise approach addressing chemical safety, direct toxicological/ecotoxicological impact, other aspects of environmental sustainability, social sustainability, circularity and regenerative economy. It is suggested that the three first steps would be essential for defining criteria for SSbD chemicals and materials and the first step could be based on the intrinsic hazards (based on the hazard classes in the CLP Regulation), the second could be based on risk considerations, and the environmental sustainability step could be based on the impact categories that are constituting the Product Environmental Footprint (see below and in the Annex). The framework will be further developed in the coming months (including through the stakeholders workshop on 22 March, as previously announced to CARACAL).

In December 2021, the Commission published its revised recommendations on the use of Environmental Footprint methods to measure and communicate the environmental performance of products and organisations, including annexes with descriptions of methods⁴. The Recommendation promotes the use of environmental footprint methods in relevant policies. This also includes the determination of life cycle environmental performance and the

¹ COM(2020) 667 final: https://ec.europa.eu/environment/strategy/chemicals-strategy_en

² COM(2019) 640 final: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

³ Not yet published

⁴ C(2021) 9332 final: [Recommendation on the use of Environmental Footprint methods \(europa.eu\)https://ec.europa.eu/environment/publications/recommendation-use-environmental-footprint-methods_en](https://ec.europa.eu/environment/publications/recommendation-use-environmental-footprint-methods_en)

establishment of databases with relevant high quality data. The JRC is providing technical and scientific support within the Commission activities on environmental footprint⁵. The Product Environmental Footprint (PEF) is consisting of 16 impact categories that could be clustered in four groups: toxicity, climate change, pollution and resources (see overview in the Annex).

The Commission plans to soon adopt its proposal for a Regulation on sustainable products (the Ecodesign for Sustainable Products Regulation), broadening the current Ecodesign Directive to cover non-energy related products. The proposal aims at increasing the sustainability of the products placed on the market by laying down a framework for establishing requirements on dimensions such as recyclability, durability and reparability. In addition, increased information requirements, for example on the presence of substances of concern in products and the overall environmental footprint, will be proposed to be part of the legal provisions under the new EU Digital Product Passport. However, more information on the sustainability of components, particularly chemicals and materials, will be necessary for determining and ensuring the sustainability of intermediate and final products under the Ecodesign Regulation.

EU law requires certain large companies to disclose information on the way they operate and manage social and environmental challenges. This helps investors, civil society organisations, consumers, policy makers and other stakeholders to evaluate the non-financial performance of large companies and encourages these companies to develop a responsible approach to business. Directive 2014/95/EU⁶ – also called the Non-Financial Reporting Directive (NFRD) – lays down the rules on disclosure of non-financial and diversity information by certain large companies. On 21 April 2021, the Commission adopted a proposal for a Corporate Sustainability Reporting Directive (CSRD)⁷, which would amend the existing reporting requirements of the NFRD. The proposal, *inter alia*, introduces a requirement to report according to mandatory EU sustainability reporting standards.

3. WHY DO WE NEED ENVIRONMENTAL FOOTPRINT INFORMATION IN REACH?

The implementation of the European Green Deal and the various initiatives under it, including the development and use of the Safe and Sustainable by Design criteria for chemicals and materials as well as regulatory initiatives, including the Ecodesign for Sustainable Products Regulation, the Corporate Sustainability Reporting Directive and recently the above mentioned Commission recommendation on the use of Environmental Footprint methods, all add to the increasing need for robust data on the environmental performance/aspects of chemical substances that can feed into assessments under the various initiatives (climate change, impact on biodiversity, ozone depletion etc.). Thus, it is anticipated that innovators and downstream users of substances (including formulators of mixtures and producers of articles) will increasingly need and request robust and high-quality information on substances registered under REACH for their future assessment of sustainability of their materials, products and services.

4. POSSIBLE POLICY OPTIONS

REACH is, until now, one of only a few pieces of legislation that sets minimum requirements on information of substances. Hence, including provisions for such additional information

⁵ JRC: <https://eplca.jrc.ec.europa.eu/EnvironmentalFootprint.html>

⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095>

⁷ https://ec.europa.eu/info/publications/210421-sustainable-finance-communication_en#csrd

requirements on the environmental footprint of substances into REACH may seem the obvious option.

The – equally obvious – disadvantage is that currently registrations are based on the substance itself (including the uses); registrations do not distinguish between the different processes that can be used to manufacture the same substance. (There is no registration for ‘green methanol’, only one for methanol, in line with the One Substance, One Registration principle.)

Along with other (non-REACH) options, the possible change to REACH will undergo an impact assessment in accordance with the guidance set out in the Better Regulation Toolbox⁸ and including the analysis of the baseline and various policy options and sub-options.

Baseline: The baseline should be defined as the ‘no policy change’ scenario, but should still be a ‘dynamic baseline’, i.e. one that evolves over time due to implementation of the chemicals policy, other related policies, in particular regarding sustainability aspects of production, or expected events.

High-level policy options: The Commission has identified the following high-level options to be analysed:

- **Option 1:** Development of harmonised templates and guidance documents that can be used by manufacturers and importers of substances for providing information on the environmental footprint of their substances as part of REACH registrations (to the extent that such information is requested by their customers).
- **Option 2:** Mandatory requirements for providing information on the environmental footprint of substances as part of REACH registrations (requires revision of the REACH enacting terms and the annexes).
- **Option 3:** A new piece of legislation requiring mandatory reporting of information on environmental footprint of substances.

Sub-options: A number of sub-options have been identified which could be considered and analysed:

- The information on environmental footprint could be provided either only for substances as manufactured or imported and placed on the market (i.e. the lifecycle stages covering raw material acquisition, pre-processing, manufacturing and distribution) or it could also cover downstream uses, recycling and disposal.
- Information could be provided on either all or only some of the 16 impact categories required for establishing the PEF (noting that a full Lifecycle Assessment would normally provide information on all impact categories).
- The requirement to provide the information could be linked to regular updates of registrations (with a final date for providing the information) or it could be staggered starting with the high tonnage substances ($\geq 1,000$ tonnes per year), followed by the medium tonnage substances (≥ 100 to $< 1,000$ tonnes per year) and finally the lower tonnage substances (< 100 tonnes per year).
- For joint registrations, the information could be submitted by either the lead registrant for all registrants or subsequent registrants could opt out in cases where the environmental footprint of their substances differ from the lead registrant’s allowing differentiation of the environmental footprint caused by differences in feedstock,

⁸ https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

production processes, transport modes etc., providing competitive advantages or disadvantages.

- The information provided could be subject to independent verification or certification before submission.

Impacts: The cost estimates should also consider the work required by ECHA for developing harmonised IUCLID formats and, in case the information requirements become mandatory, checking the completeness or compliance, including the resources required. No direct benefits on health and environment under REACH are foreseen, but indirect benefits could be foreseen for developers of materials, products and services for determining the corresponding environmental footprints and sustainability profiles.

5. QUESTIONS

Questions to CARACAL:

- *Do you consider that it is appropriate to use REACH as a regulatory tool for providing information on environmental footprint of substances in a harmonised IUCLID format?*
- *If yes, should it be voluntary or mandatory for registrants to provide such information?*
- *If no, what would be other possible legislative or non-legislative tools to gather information on the environmental footprint of substances?*
- *Should the information on environmental footprint be provided only for substances as manufactured and placed on the market (i.e. driven by the lifecycle stages raw material acquisition and pre-processing, manufacturing and distribution) or should also information relating to the use and/or the end-of-life stages be provided?*
- *Should the information on environmental footprint be verified or certified by an independent body before submission?*
- *Should information be provided on all or some of the 16 impact categories used to establish the Product Environmental Footprint or should a full Lifecycle Assessment be required?*
- *Should the information be publicly available or remain confidential business information?*
- *How should or could REACH registrants (if included in REACH) communicate information on environmental footprint to customers?*

ANNEX. PRODUCT ENVIRONMENTAL FOOTPRINT IMPACT CATEGORIES

Cluster	Impact Category
Toxicity	Human toxicity, cancer
	Human toxicity, non-cancer
	Ecotoxicity, freshwater
Climate Change	Climate change, total
	Ozone depletion
Pollution	Particulate matter
	Ionising radiation, human health
	Photochemical ozone formation, human health
	Acidification
	Eutrophication, terrestrial
	Eutrophication, freshwater
	Eutrophication, marine
Resources	Land use
	Water use
	Resource use, minerals and metals
	Resource use, fossils