



## EUROPEAN COMMISSION

Internal Market, Industry, Entrepreneurship and SMEs Directorate-General  
Consumer, Environmental and Health Technologies  
Unit D.1: REACH

Environment Directorate –General  
Circular Economy and Green Grow  
Unit B.2: Sustainable Chemicals

### **STAKEHOLDER CONSULTATION PAPER**

### **CHEMICAL, PRODUCT, WASTE INTERFACE**

#### **INSTRUCTIONS FOR THE CONSULTATION**

The present document should be read together with the Roadmap on "Analysis of the interface between chemicals, products and waste legislation and identification of policy options" which was published on 27 January 2017 at the following website:

[http://ec.europa.eu/smart-regulation/roadmaps/docs/plan\\_2016\\_116\\_cpw\\_en.pdf](http://ec.europa.eu/smart-regulation/roadmaps/docs/plan_2016_116_cpw_en.pdf)

The objective of the document is to provide further insight into the preliminary assessment made in the Roadmap by the Commission services on the main issues identified to date which constitute a legal, technical or practical problem at the interface of chemical, product and waste legislation.

Interested stakeholders are encouraged to provide the views of their organisation on the four issues outlined in the roadmap and described in more detail in this document, as well as on any other aspects which their organisation considers relevant for the interface, including, where possible, concrete examples and figures.

Feedback should be submitted to the following email address:

[EC-CPW-INTERFACE-FEEDBACK@ec.europa.eu](mailto:EC-CPW-INTERFACE-FEEDBACK@ec.europa.eu)

The consultation will be open until the 7 July 2017.

## CONTEXT

**Circular Economy Action Plan:** *"The promotion of non-toxic material cycles and better tracking of chemicals of concern in products will facilitate recycling and improve the uptake of secondary raw materials. The interaction of legislations on waste, products and chemicals must be assessed in the context of a circular economy in order to decide the right course of action at EU level to **address the presence of substances of concern, limit unnecessary burden for recyclers and facilitate the traceability and risk management of chemicals in the recycling process.** The Commission will therefore develop its analysis and propose options for action to overcome unnecessary barriers while preserving the high level of protection of human health and the environment. This work will feed into the future EU strategy for a non-toxic environment (Page 12)."*

As provided above, one of the actions that the Commission announced in its Communication, "Closing the loop - An EU action plan for the Circular Economy"<sup>1</sup>, was the intention to undertake an "Analysis and [prepare] policy options to address the interface between chemicals, products and waste legislation, including how to reduce the presence and improve the tracking of chemicals of concern in products".

The analysis will take into account a number of studies, including the Commission's 2014 scoping study to identify potential circular economy actions, priority sectors, material flows & value chains<sup>2</sup> and a recent study conducted by the Commission on "Regulatory barriers for the Circular Economy – Lessons from ten case studies"<sup>3</sup>. The outcome of the legislative procedure for the Commission's proposals covering multiple waste directives, including the Waste Framework Directive, currently being discussed in Council and Parliament<sup>4</sup>, will also be relevant.

The options that will be developed, based on the analysis of this interface between chemicals, products and waste legislation, may include considerations on how to overcome any legislative barriers and may also inform other relevant actions announced in the Circular Economy Action Plan, including the development of quality standards for secondary raw materials and the strategy on plastics in the circular economy. Work done on this interface will also feed into the future EU strategy for a non-toxic environment.

There are also two on-going evaluations which are relevant for this initiative. Results of both the REACH REFIT evaluation and the fitness check on chemicals legislation (excluding REACH)<sup>5</sup>, which encompasses a broader evaluation of the interface between chemicals legislation and related legislation, including waste and products legislation, are expected in 2017 and may provide information that will assist in the assessment of the options to be developed.

## OBJECTIVES

Consultation with stakeholders is expected to provide further insights regarding the problems outlined in this roadmap and how to address them. Other issues that have yet to be identified or fully developed may also come to light as part of the consultation.

The Commission intends to present the outcome in a Communication that will contain a detailed analysis of the legal, technical or practical problems at the interface of chemical, product and waste legislation that may be unnecessarily hindering the transition of recycled materials into fit-

<sup>1</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614>

<sup>2</sup> [http://www.ieep.eu/assets/1410/Circular\\_economy\\_scoping\\_study\\_-\\_Final\\_report.pdf](http://www.ieep.eu/assets/1410/Circular_economy_scoping_study_-_Final_report.pdf)

<sup>3</sup> <http://ec.europa.eu/DocsRoom/documents/19742>

<sup>4</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015PC0595>

<sup>5</sup> [http://ec.europa.eu/smart-regulation/roadmaps/docs/2015\\_grow\\_050\\_refit\\_chemicals\\_outside\\_reach\\_en.pdf](http://ec.europa.eu/smart-regulation/roadmaps/docs/2015_grow_050_refit_chemicals_outside_reach_en.pdf)

for-purpose products that can be reintroduced into the productive economy. The Communication will also identify options to facilitate recycling and improve the uptake of secondary raw materials through the promotion of non-toxic material cycles and better tracking of chemicals of concern in products.

At a later stage, following an analysis of the feedback received from stakeholders, the results of new studies and the on-going evaluations, the Commission will make proposals to address barriers or short-comings detected, while preserving the high level of protection of human health and the environment, in the rules and processes currently governing the flow of waste-derived materials back into the economy.

## **PROBLEMS THE INITIATIVE AIMS TO TACKLE**

The following four problems create obstacles for a smooth transition of recycled materials from waste to new products:

### **#1: Insufficient information about substances of concern in products and waste**

Whereas the flow of information about the presence of hazardous substances in mixtures is ensured and regulated by the CLP and REACH Regulations, this information flow is reduced when substances or mixtures are incorporated into articles and is even less available when articles become waste. REACH sets out certain limited obligations for article producers who may be obliged to submit a registration or notify ECHA of the presence of substances of very high concern (SVHCs) in articles or pass information on those SVHCs down the supply chain and, on request, to consumers, in accordance with Articles 7 and 33 of REACH.

However, since these REACH obligations only apply to a defined list of substances that meet strict criteria (SVHCs), users of articles, particularly consumers, have only limited information about the presence in articles of substances that do not meet the SVHC criteria but may still be of concern (including the presence of such substances in imported articles). This makes it difficult for them to make informed purchasing choices. Waste managers, particularly recyclers, will generally have only limited information about the presence of substances of concern in the input waste material they treat. The absence of this information may have negative impacts on ensuring (a) worker and environmental safety during waste management operations and (b) in determining the (relevant) composition of the recycled material.

Lack of knowledge of the (relevant) composition of the treated waste stream and of the recycled material may:

- hinder the transition of that recycled material from waste to product status, as this knowledge gap affects the checking of compliance of the recovered material (and articles produced therefrom) with relevant legislation (including REACH and CLP, but also product legislation such as RoHS, etc). Lack of information on the composition of recycled materials hinders the assessment that must be conducted under Article 6(1)(c) and (d) of the Waste Framework Directive (WFD), namely, whether these materials are safe and fit for purpose in relation to their envisaged uses. Inevitably, this also increases business risks for recyclers.

- hinder application of exemptions from REACH. Article 2(7)(d) of REACH allows recyclers to rely on an existing registration in REACH, exempting them from the obligation to register the same substance. This is subject to the condition that the recycler is able to demonstrate that his recovered substance and the registered substance are the same and that the recycler has the necessary safety information (corresponding to Article 31 or 32 of REACH) to provide to recipients of the substance along the supply chain. Some concerns have been raised regarding the identification by recovery operators of recycled substances as being the same as registered substances (thereby benefiting from the Article 2(7)(d) exemption) and the extent to which the identification of substance sameness are supervised by enforcement authorities. The same applies for the appropriateness of the safety information provided with the recovered substance. Both issues affect potentially all recyclers. Recovered substances not meeting the sameness requirements or not meeting the safety information requirements in Article 2(7)(d) would be illegally on the market without a REACH registration.

## **#2: Presence of substances of concern in recycled materials (and in articles made thereof, including imported articles)**

Substances of concern may be present as constituents or impurities in recovered substances, mixtures or articles made of recycled materials. The use of some of these substances of concern may now be banned or otherwise restricted even though they might be present in products already on the market or in waste streams as a consequence of their legitimate use in the past. Such substances of concern (known as 'legacy substances') may sometimes be very difficult or impossible to remove in a viable manner from the material being recycled. They may present certain hazards that could pose a risk, during recycling or in subsequent life stages. Examples include plasticisers such as DEHP, or stabilisers such as lead and cadmium in plastics or in other materials such as recycled aluminium or copper.

The presence of substances of concern in recycled materials may have consequences, once the materials have left waste status, under product legislation (in particular, REACH) for their placing on the market or use as substances, mixtures or in articles. Uncertainties about how to manage the presence of substances of concern affect recyclers, consumers, producers and importers of articles that may contain these substances.

Currently there is no general framework to deal with the presence of substances of concern in recycled materials and in articles made thereof and, in particular, no agreed methodology to determine the overall costs and benefits for society of the use of recycled materials containing such substances compared to disposal, including, inter alia, the potential of recovering energy from the waste and the impacts of production of virgin materials in case recycling is prevented. Specific solutions have been taken *ad-hoc* (e.g. in the case of some restrictions or authorisations under REACH or in the development of end-of-waste criteria), but overall, there is uncertainty for all stakeholders.

**Specific examples of how the presence of substances of concern introduces complexities are given below:**

### ***a) Substances subject to REACH restrictions that are present in recovered materials (substances, mixtures and articles)***

Restrictions in Annex XVII to REACH, imposed on uses of certain hazardous substances as a consequence of their risks to human health and the environment, apply equally to the use of a virgin (new) material and to recovered materials (e.g. restrictions for polycyclic aromatic hydrocarbons and for lead in articles for supply to the general public - entries 50 and 63, respectively, of Annex XVII).

Certain restrictions, however, foresee a differential treatment when the restricted substances are present in recovered materials. An example of this is a higher limit for the content of cadmium in recovered rigid PVC (0.1%) versus that for virgin PVC (0.01%), for use in certain applications and under specific conditions provided for in the cadmium restriction in entry 23 of Annex XVII to REACH. This specific solution is temporary and subject to a review by December 2017.

An in-depth discussion is warranted about whether this approach to REACH restrictions should be used generally or whether recovered materials should be subject to the same rules as virgin materials. This could lead to the adoption of a general approach on this matter in the development of future REACH restrictions, thereby bringing greater certainty to all operators.

### ***b) Authorisation obligations for recovered substances or mixtures***

There is no exemption from the authorisation obligations under REACH for recovered substances. Authorisation under REACH ultimately aims to encourage the substitution of substances of very high concern and, while use of those substances still continues, to ensure proper control of risks to workers and environment at the operating sites, as well as of risks derived from articles containing them, in all article life stages

The authorisation obligation affects potentially any recycled material containing substances listed in Annex XIV and thus could apply to the outputs from the recovery of diverse waste

streams such as plastics, metals or solvents. Recyclers or users of recycled materials containing SVHCs listed in Annex XIV to REACH (like other operators) consider the need to apply for authorisation as a burden due to the perceived complexity and the high cost of the process. In fact, applying for authorisation has significant costs for applicants (estimated average of €200,000 per applicant and use, although trends indicate that costs are declining) and is a complex process, especially for SMEs which constitute the majority of the recycling sector.

***c) Application of authorisation requirements to the presence of substances of concern in EU-produced articles but not to their presence in imported articles***

European producers of articles have to comply with authorisation requirements under REACH for those substances in Annex XIV that they cannot substitute, including for those contained in recovered materials. Producers in third countries are not subject to authorisation requirements and can export articles containing these substances into the EU, whether produced from virgin or recovered materials.

The authorisation process thus may lead, at least in the shorter term, to competitive disadvantage for EU producers with regards to their non-EU competitors, although it may yield longer term benefits in terms of increased competitiveness and innovation, by encouraging the introduction of innovative products and technologies in the EU. Some operators claim that the authorisation process will lead to delocalisation of manufacturing operations and maintenance services to countries where such substances can be used without the need for a specific authorisation. However, so far, there is no evidence that such long term benefits or delocalisation have actually materialised.

The above issue can be partially mitigated by imposing restrictions under REACH, as these apply equally to both domestically produced and imported articles. In fact, Article 69 (2) of REACH specifically foresees that the European Chemicals Agency (ECHA) must assess after the date when the use of a substance is subject to authorisation in the EU whether the presence of that substance in articles poses a risk to human health or the environment that is not adequately controlled and, if so, propose a restriction. However this is not always feasible (e.g.: further action by the Agency is only required if the presence of the substance, once in the article, poses a risk that is not adequately controlled) neither is the action always timely, potentially creating a competitive disadvantage for the European producer during the time window during which restrictions are not in place.

### **#3: Uncertainties about how materials can cease to be waste**

Article 6 of the Waste Framework Directive (WFD) sets out the general criteria according to which waste ceases to be waste and the methods by which this can be achieved. This transition has very important legal consequences for operators managing waste or using recovered materials as it defines whether they operate subject to the waste regime (either as hazardous or non-hazardous waste) or are governed by the applicable product legislation (including chemicals legislation such as REACH and CLP).

Article 6 of the WFD indicates that waste can only cease to be waste either by 1) fulfilling Union level end-of waste (EoW) criteria or, in the absence of these 2) fulfilling national end-of-waste criteria or 3) via case-by-case decisions by Member States. Hence, the Commission considers that some form of administrative decision on the basis of active monitoring or control by Member States is required to exit the waste stage and does not agree with the interpretation that "tacit" end-of-waste is possible, whereby operators would apply the general criteria in Article 6(1) of the WFD themselves without verification by the competent authorities. There is a lack of clarity about the extent to which Member States are allowing recyclers to place on the market recovered substances and mixtures as 'non-waste', without any administrative decision (whether an EU or a national decision) confirming their non-waste status. This situation may:

- generate legal uncertainty for operators and authorities;
- create difficulties, as outlined in **#1**, in establishing that all the conditions of Article 6(1) of the WFD are met for a waste material;
- create difficulties, as outlined in **#1**, in the application and enforcement of chemicals (including REACH) and product legislation, which requires, as a starting point, to know whether a given material is still waste or has ceased to be waste (in order to determine the applicability of the appropriate legislation).

In the absence of end of waste decisions, the transition of waste to product continues (albeit with questionable legality) without a real economic impact beyond that which may result from legal uncertainty.

Article 6 of the WFD is currently subject to review, following the Commission proposal to amend the WFD, and discussions on the amendments are now being held in Council and Parliament. As a result of these discussions, an amended Article 6, and any necessary guidance, may bring further clarity on the interpretation of the end-of-waste provisions.

#### **#4: Difficulties in the application of EU waste classification methodologies and impacts on the recyclability of materials**

Waste is classified as hazardous or non-hazardous on the basis of the corresponding entries in the European List of Waste (LoW), as defined by the recently amended Decision 2000/532/EC. For many waste streams, waste is also classified via the determination of the hazardous properties of the waste, according to the classification rules and substance concentration thresholds laid out in Annex III of the WFD, as amended through Commission Regulation (EU) 1357/2014<sup>6</sup>. The rules in this Annex are aligned to a large extent (but not fully) to the rules for the classification of substances and mixtures defined in the CLP Regulation. The classification of waste as hazardous or non-hazardous has important consequences for its subsequent management, be it recovery or final disposal, as it will determine amongst others the need to hold a hazardous waste management permit. It is worth noting that the recycling of certain types of hazardous waste (e.g. acids or oils used in technical applications) is possible and legal in the EU.

Due to the intrinsic properties of hazardous waste, the WFD set up the necessary risk management measures for the collection, transport, processing and final disposal of hazardous waste, which are more stringent than for non-hazardous waste. These risk management measures may result in collection, transport and management costs being higher for hazardous wastes than for non-hazardous waste.

There is a lack of consistency in terms of application and enforcement regarding the appropriate classification of certain waste streams, particularly for those containing substances of concern where these are contained in a complex matrix (material) such as minerals, plastics, glass, etc. Some important waste streams, which ought to be classified as hazardous waste based on the application of the substance-specific concentration thresholds defined in Annex III of the WFD, are in practice sometimes misclassified and managed as non-hazardous waste by the relevant actors involved. Attention to this lack of compliance issue has been drawn by the case of rigid and flexible PVC waste, but this is just an example among potentially other cases.

In practice, operators do not seem to consider some of these waste streams (e.g. PVC waste) as hazardous even though they meet the legislative criteria for classification as such. This seems to be based on their interpretation that the provisions in Article 12(b) (i.e. absence of biological availability) and Article 23(d) (derogation from labelling obligation) of the CLP Regulation, as applied to substances and mixtures, would also be applicable to waste classification. Essentially, operators assume that, in some cases, the substance of concern is contained in a matrix (e.g. plastic) which may reduce or eliminate its bioavailability. Consequently, it is assumed that the hazard and related risks of the substance in the material in the form it is managed as waste, or as later placed on the market, is lower.

To date it has not been possible to verify whether the assumptions by operators are based on adequate, reliable and conclusive scientific experimental data as required by Article 12(b) of the CLP Regulation. Legal clarification would be required about whether such derogations could indeed be applicable under the waste legislation, given that the waste legislation is not completely aligned with the CLP Regulation and currently does not specifically provide for such bioavailability-based derogations. Authorities in the Member States might not have sufficiently acted upon this lack of compliance until now, even though the legislation determining hazard classification has not been changed very substantially since 1991. The Commission has not taken action either.

There are different views about the nature of this problem and its consequences. According to one view, this problem is essentially an implementation and enforcement issue which should be resolved in order to guarantee effective protection of human health and of the environment. The cost to Industry operators of compliance with classification requirements is part of the considerations that were made when the waste legislation was enacted and appropriate methodologies should be used, both for waste and products, to determine their real hazards. If these methodologies are not available, they should be developed (as is currently happening for metals in work done in the context of technical development of the CLP Regulation) and applied in the respective legal frameworks. In another view, beyond acknowledging the existing non-compliance with classification requirements, an assessment should be done about 1) whether the current assessment framework for wastes (and to a certain extent for substances and

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<sup>6</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R1357&from=EN>

mixtures) is adequate to assess the real hazards of complex materials and 2) the impacts that enforcement of the current legal provisions would have on the viability of certain recycling activities (as compared to the current situation of misclassification and non-enforcement).

Lack of action will result in continued deficiencies in the implementation and enforcement of existing waste legislation and in uncertainty about the legality of waste management practices and recyclability of certain important waste streams containing hazardous substances (such as flexible and rigid PVC waste). This does not generate public confidence in the safety of the related waste management operations, nor in that of the recovered products that are reintroduced in the market, nor does it provide confidence to investors to engage in such recycling/recovery operations.

In the absence of enforcement, the consequences for operators are small and business would continue as usual (although with the uncertainties described above), but the impact on the environment and on health could be high.

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