

HWE’s answer to the consultation on the interface between chemicals, products and waste legislation and identification of policy options

“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 materials¹”. HWE fully shares this point of view. We are deeply convinced that circular economy would never be sustainable without high quality recycling. Quantitative targets may be a regulatory incentive to recycle more, but a focus on quantity disconnected from quality will never ensure a safe and trust circular economy.

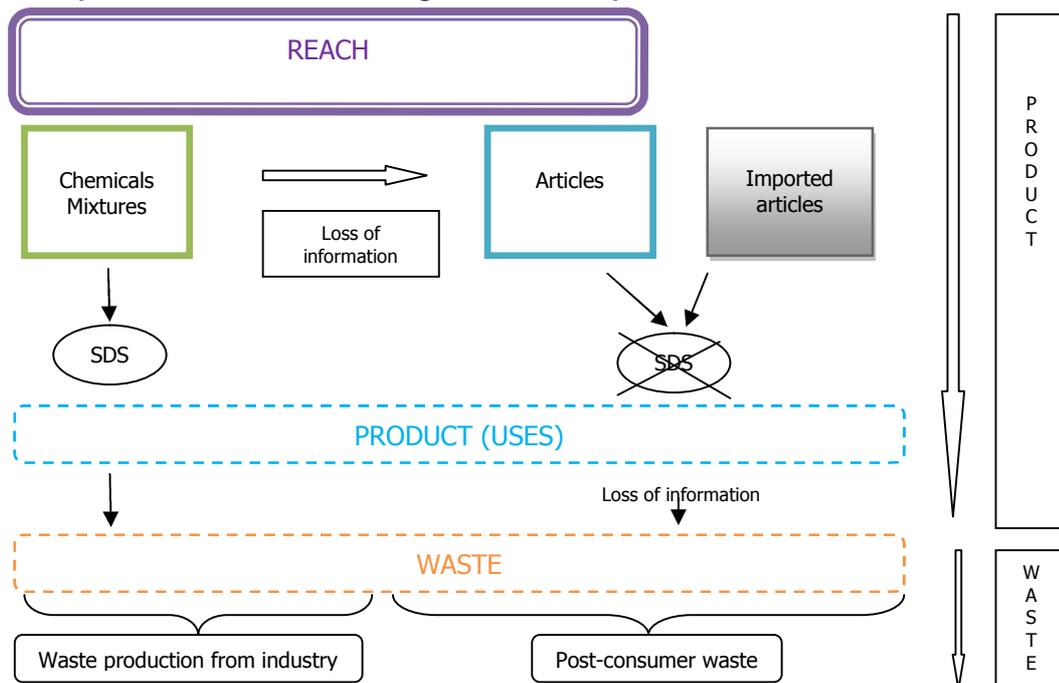
Circular economy makes interweave some different pieces of legislation between waste, products and chemicals that could benefit from better interaction. We have to ensure their consistency and avoid loopholes. This initiative is the opportunity to point out existing gaps and bring solutions that should be taken into consideration in the framework of the on-going review of the circular economy package.

The circular economy can only grow if there is an absolute trust between producers of materials coming from waste and the users of these materials to produce consumer goods. If consumers trust is lost, especially because of contaminated goods, circular economy may easily slow down or even come to a blockage, as consumers are not obliged to buy “recycled” and may decide to turn back to virgin products

1) Insufficient information about substances of concern in products and waste

The interface between product, chemical and waste legislation is often seen as a barrier to the Circular Economy. Yet, if the difficulties can increase from product to waste status, they can also be found from the start in the regulation themselves. The knowledge of the composition, characteristics and properties of the products (chemicals, mixtures, articles) and waste is crucial to guarantee that they will be used or handled in the most appropriate way. Sharing the information all along the chain will contribute to a proper treatment of the waste. Yet, despite the provisions of the regulation, there is still a problem of transfer of information at different levels of the process that may have consequences on the identification and traceability of substances of concerns in recycled products.

- The current provisions of the REACH regulation could provoke some loss of information



¹ Action Plan for the Circular Economy

In the REACH regulation, the Safety Data Sheet (SDS) aims to inform the downstream user about the characteristics of the substance and mixture. Unfortunately the information does not completely follow when mixtures and substances are incorporated into articles. It is all the more true when the articles are imported from countries out of the EU, as the requirements of REACH are less stringent in that case (notably regarding substances of concerns that would not be SVHC). This loss of data will undermine the principals of REACH and could ultimately be detrimental to the circular economy. Keeping records of the information all along the chain – from the mixture and chemicals until the articles – is key for the management of substances of concerns in materials but also to limit workers exposure and ensure safe working conditions.

• **The REACH and waste legislations follow different purposes**

All the information provided by REACH may not be relevant for the treatment, which could explain why they are not forwarded. REACH (through the SDS) aims to provide exhaustive information about properties of a substance and the measures to be taken towards the health and the environment for the downstream users. The waste legislation focuses on 2 main concerns:

- Is the waste hazardous or not, because requirements for the management of hazardous waste are much more stringent than for non-hazardous waste (traceability, mixing rules, permit obligations, ...),
- Is the treatment appropriate for a safe management of the waste (protection of health and environment, chemical safety including compatibility, ...).

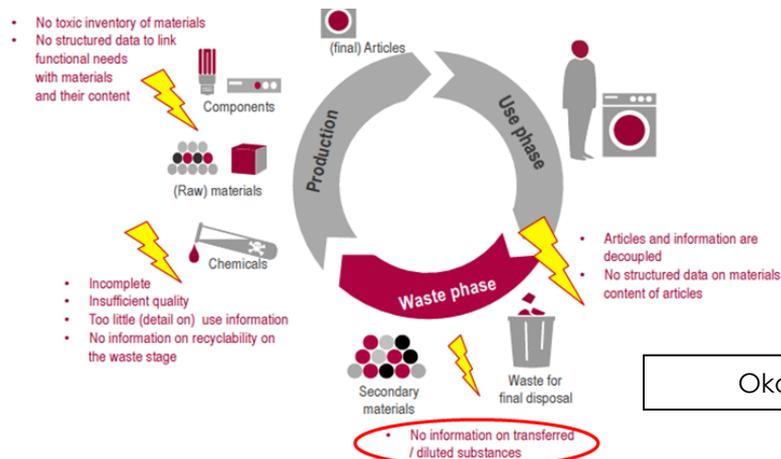
In case of hazardous waste the answers are given through an “identification sheet” whose content is determined by the treatment route.

Finally, to conclude on this first question, the lack of information is:

- Intrinsic to the legislation at the product stage because the information about the substances of concern does not follow the virgin material when it turns to article (consumer goods),
- Due to the purposes and the uses of the information at the waste stage.

This is quite well identified on the following scheme (Okopol, 2017).

The main impact concerns the post-consumer waste because of the huge lack of information about substances of concern driven by the loopholes in REACH (the level of information for substances and mixture is very high but the transfer of information to the article stage is weak). Most of the problems raised up in the circular economy the EU promotes come from this part of the waste streams (post-consumer waste). It must be clear that the solutions that would be found out thanks to this consultation should not lead either to different approaches for waste from industry and post-consumer waste or to a “simplified” approach which would fit for post-consumer waste but would have detrimental impact on health and environment on the long term. These two “non-options” would increase confusion at the waste stage by blurring the border between hazardous and non-hazardous waste. For HWE, the final solution(s) must fit for all cases and this is probably why it is so complex to reach an agreement between the different stakeholders.



Okopol study, 2017

The better knowledge of the composition of a waste and the better transfer of information from substances/mixtures to articles and then from products to waste will avoid dilution of contaminated waste flows (contaminated by substances of concerns above the regulation-based thresholds) in non-contaminated waste streams intended to be recycled. The direct consequence will be the increase of the quality of all materials containing recyclates, improving health and environment protection.

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

- **We should pave the way towards a non-toxic environment by promoting non-toxic materials cycles**

Everything that could be toxic in the material cycle should not come back in recycling. The insurance that substances of concern are effectively extracted from the valuable material will enable downstream industrial users to trust recycled material that can compete with virgin materials. It will also enhance quality of secondary raw materials and contribute to protect the health and the environment. It seems obvious to say that, but unfortunately today it is not the case and we could quote many examples where unwanted toxic substances that are not extracted from the material cycle have leaked into the environment or are still present in recycled products: brominated flame retardants found in kitchen utensils made with recycled plastics², charcoal made from un-decontaminated railway sleepers, children's toys contaminated with toxic flame retardants or BPA still present in the paper cycle despite the substance is phased out, etc.

The concept of decontamination that has been introduced in the EU workshops dealing with the forthcoming non-toxic strategy is also fundamental for us. Decontamination should be a prerequisite prior to any recovery/recycling operations in order to ensure that no substances of concerns will re-enter the loop. The waste should be treated in the appropriate installations. **The objective is not reaching zero contaminant but to comply with the existing rules for all the regulated substances of concern (POP, REACH, ROHS, etc.) and ensure that the concentrations of the regulated substances are below the thresholds.**

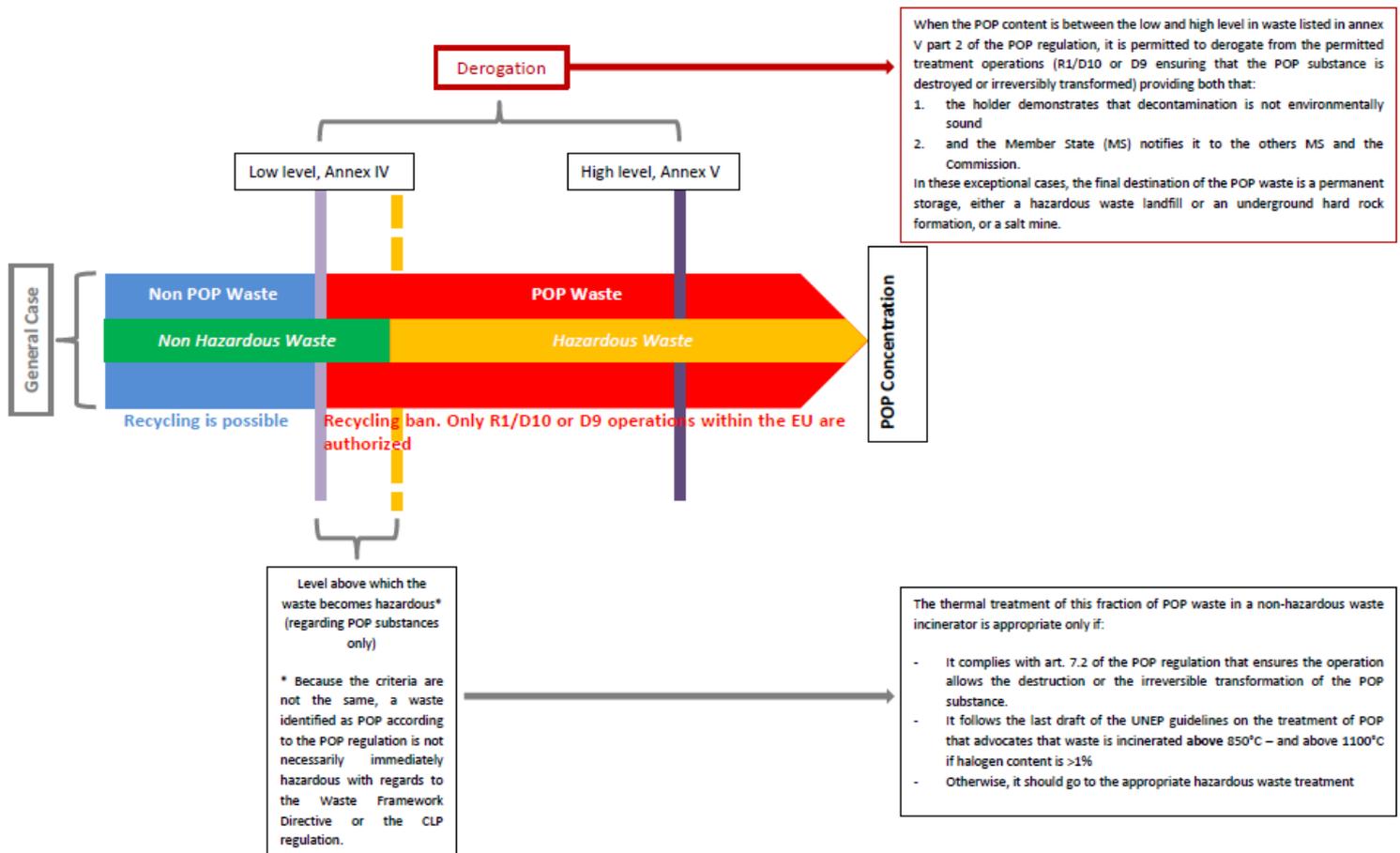
- **It is due to the REACH regulation**

As already expressed in our answer to the first question, it is a problem of the current REACH regulation to be less strict for imported products regarding the SVHC contained in articles. Because of that there is a loss of information when the articles become waste. Raising the level of SHVC provisions on imported articles to the level of EU articles could lead to difficulties in implementation and for custom controls. Nevertheless, if nothing is done on imported articles it could ruin the EU improvements towards substances of concerns. A consumer good entering the EU market should comply with the EU rules regarding products.

- **A restricted substance remains hazardous whether it comes from virgin or recycled materials**

The example of PVC is particularly intense as recycled PVC is submitted to fewer restrictions than virgin materials. But on which rationale could we have differential treatment regarding the same restricted substances between virgin materials and recovered materials? How the cadmium contained in the recovered PVC could be less hazardous and less bioavailable than virgin PVC?

On this topic, the POP legislation is clear regarding the future of the substances of concern whose concentrations above the thresholds ban recycling. REACH should apply the same principle: once a threshold has been set up, the rules should be identical for virgin and raw materials. There should not be specific derogation regarding restrictions for recycled materials.



Scheme provided by HWE in view of explaining the POP regulation requirements

- **Short term market rather than health and sustainable market?**

Once restricted substances have been identified, the objective is not to keep them anymore in the loop beyond a specific threshold because of their negative impacts on health and environment. If REACH proposes some specific exemptions, these legacy substances will remain longer in the cycle whereas the goal is to eradicate them. It will be very detrimental to the health, as some of the consequences are already known, and it will entail significant costs in the long term. If the risk exists for the virgin materials, the substances of concern will not be less hazardous within the same materials recycled from waste.

The key question is to determine where the cursor should be put: should we favor a recycling market at any costs, or are we first driven by health protection? Some could be less cautious, but we definitively know that a restricted substance will not be less hazardous if it is contained in a recycled material. We should set the right provisions to ensure that recycling should not become a pretext to reincorporate substances of concern within the recycling chain. Looking for quantitative targets and leaving aside quality could entail big scandals in the forthcoming years. We know right in advance what will happen to which SVHC thanks to the sunset dates thus we, as recyclers or gatekeepers for recycling can take the right measures and good decisions. Some voices claim that mandatory decontamination prior to recycling

would kill recycling. The truth is exactly the opposite. Today, mass recycling is encouraged in low cost channels that result of contaminated streams (thresholds for recycled materials are above the thresholds for virgin materials, case of the BFR WEEE plastics all over the EU for example!). By pulling the market up with the setting of identical rules, it could first slow down the recycling on the very short term but it will also boost innovation, new high value businesses and employment for high skilled people in the EU, it will make materials from waste better compete with virgin materials and promote the non-toxic environment by implementing the decontamination principle.

This does not mean that hazardous waste could not be recycled. The hazardous nature of the waste does not prevent it from being recycled - provided that it takes place with the specific requirements related to the management of hazardous waste. It is possible to recycle hazardous substances or mixtures or articles containing hazardous substances, but we should not recycle substances, mixtures or articles that contain substances of concern above the regulation-based thresholds. For example, the same plastic waste may be used in the field of construction while it would be totally forbidden for the manufacture of toys because of the content of substances of concern. If we can guaranty that this waste plastic is only recycled for the right and permitted uses through traceability scheme, then the problem is solved. Today, it is not the case.

3) Uncertainties about how materials can cease to be waste

The article 6 (End-of- waste status) of the Waste Framework Directive (2008/98) gives the four specific criteria to be met (including limit values for pollutants) for a waste to cease to be waste once it has undergone a recovery operation. From the moment where it is not waste anymore, it should fall under the scope of the product legislation (REACH, CLP). On another hand, in the case of tacit end of waste, the REACH and CLP requirements will apply on the output – but not on the input. Indeed, it is waste that will enter the production process. So any limit on a substance for raw materials will not apply on the waste, but it will be necessary to ensure that the end-product will be compliant with REACH. The producers that incorporate waste through tacit EoW are aware of the potential risks; this is the reason why they generally ask the relevant information to the recycling operators to ensure they will meet the REACH requirements. To avoid any loopholes, it should be clarified that, even in case of tacit EoW, the waste provider has to inform the downstream user about the presence of substances of concern.

The real difference between tacit EoW and art 6-EoW is about the waste producer responsibility. In case of an art 6-EoW, the waste ceases to be a waste before entering the downstream user process; thus the initial producer of the waste is completely disengages from any liability. In case of tacit EoW, the waste producer can be seen as partially responsible because the material entering the downstream user's process is still a waste.

Nevertheless, regarding our concern, it must be clear that the waste intended to be reprocessed directly complies with REACH, POP, ROHS, ...

4) Difficulties in the application of EU waste classification methodologies and impacts on the recyclability of materials

Proper classification of the waste is key to identify unwanted substances that should be removed before the waste is reintroduced in the chain, but also to ensure proper treatment of the waste. Although the list of waste has recently been amended in relevance with the changes in the EU chemicals legislation, it is still not fully aligned with CLP regulation which causes problem of harmonization (guiding principles are missing, update of LoW is difficult). Because of misclassification, substances which shouldn't be recycled or should only be recycled in certain applications are being recycled together with other materials.

- **Risk-based versus hazard-based approach**

A product is designed to answer specific uses; it will therefore be possible to check its "fate" through a risk-based approach that will validate that there will be no adverse risks for this use. But, for waste we ignore what would be its further fate (recycling, recovery (material or energy), disposal). It is not possible to ensure that 100% of a waste stream will be oriented towards the appropriate route and that the totality of the waste stream will be recycled. A key principle should be to decouple the waste stage and the product stage on the consideration of hazardousness. For instance, the totality of the PVC will not be oriented towards recycling installations: only 25% of PVCs are effectively recycled³, and for this part, we can assume that a risk-based approach using bioavailability is correct because we can assess the different scenarios of use. But for the remaining 75% non-recycled PVCs it is not possible and hazardous substances will become bioavailable during the disposal operations (landfill and incineration). In this regard, if a risk-based approach is used, there is a high risk that it will not be oriented towards the most appropriate treatment and that hazardous substances will become available through leachate, flue gas.

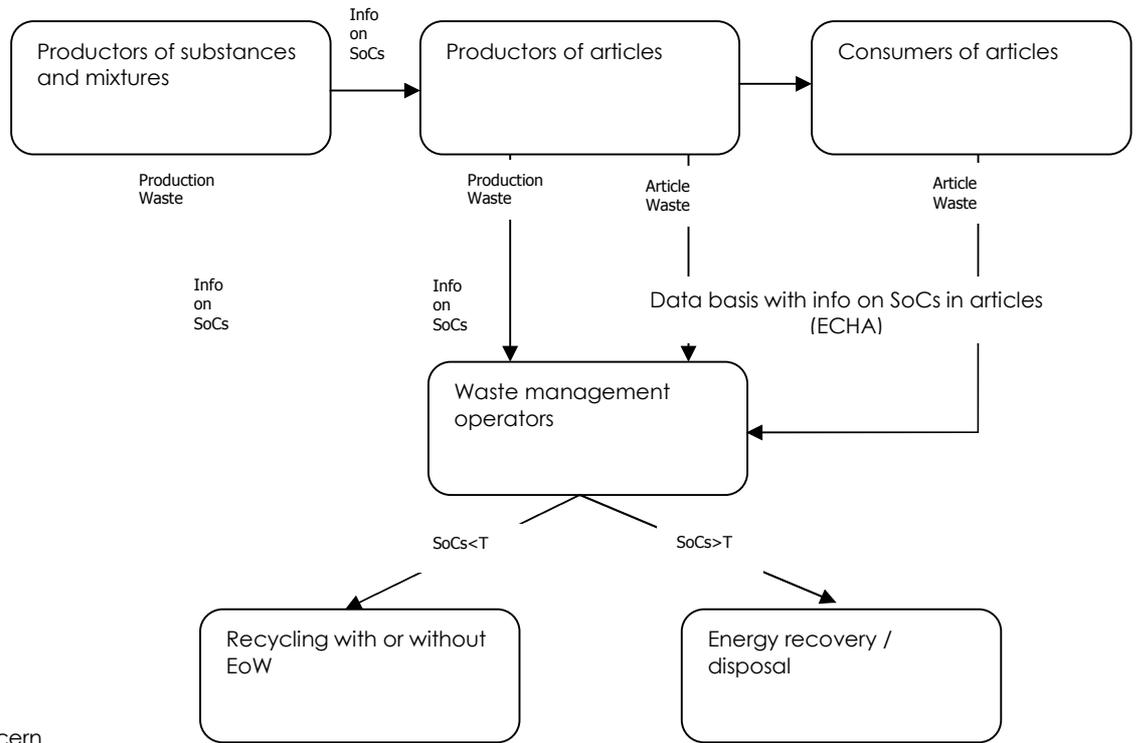
The solution could be either to implement closed loops that will enable to know from the start the further use of the recycled materials, or to look at the intrinsic properties (hazard-based approach). The risk based approach should only be applicable at the recycling step, meaning the exact point where the waste is introduced/reprocessed in the industrial process. It should be decoupled from the reclassification of waste. And when the risk based approach is used, traceability will ensure that there is no risk to find contaminants in non-authorized uses (in case of restriction). The hazard-based approach involves that whatever is the waste (hazardous or non-hazardous) and whatever is the final destination (recycling, recovery-material or energy, disposal) the waste will end-up in the appropriate installation and will be handled, treated, reprocessed in a safe manner. If the waste is hazardous (including when the hazardousness is due to substances of concern), the traceability is ensured and risks for health and environment are limited. If this hazardous waste enters a recycling loop, of course the level of requirements will be higher than the ones for non-hazardous waste, but still totally manageable, it will completely secure the waste management phase and it will ensure that no waste containing substances of concern above the regulation-based thresholds will be inappropriately recycled. Waste management operators, industrial operators who reprocess waste or reincorporate material coming from waste are responsible persons and companies, the Society would not understand that, in the name of merely recycling for recycling, its health and the environment could be endangered.

As for today, we do regret the absence of clear legal framework that would enshrine these key principles in the EU legislation, and we even more regret that these discussions seem disconnected from the review of the waste framework directive. We already pointed out in our answers to previous consultations the interaction between the waste and products legislations and we hope that all the concerned departments of the EU Commission are coordinated on this topic to ensure consistency and alignment between the texts.

Drawing up a scheme/decision tree on how to decide if a waste can be recycled and under which conditions regarding "product" legislation would be the best solution. As the area where the lack of information regarding substances of concern is the most important and the most difficult to solve directly with enforcement of traceability concern articles. In this case, there is probably a need for a dedicated platform where the information can be made

³ Study to assess the possibility of granting a derogation given specific types of plastics and rubber waste in the EU waste list, BIPRO, 09/04/2015

available anonymously article by article. ECHA could probably fulfill this role. Taking into account this issue, HWE proposes the following decision tree:



-SoC : substance of Concern
 -T : Regulation-based thresholds