POSITION PAPER ON THE INTERFACE BETWEEN CHEMICALS, PRODUCTS AND WASTE

Brussels, October 2018

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Background

In reaction to the Commission “Communication on the implementation of the circular economy package: options to address the interface between chemical, product and waste legislation” (“The Communication”), the undersigning organisations intend to provide feedback on the discussions initiated by the Commission and propose further measures in order to achieve a clean circular economy.

The legislative framework of chemicals, products and waste are currently dissociated. But to achieve a clean and safe circular economy and contribute to a non-toxic environment as referred to in the 7th EAP and to the 2030 Agenda for Sustainable Development Goals (SDGs), it is necessary to build bridges between the different instruments of the chemicals, products and waste legislations.

In line with the Circular economy strategy objectives, the undersigning organisations aim to achieve both goals of resource efficiency and detoxification of materials. The Commission’s initiative is a key opportunity to settle a framework that mutually reinforces the objectives of the chemicals, products and waste policies.

We welcome the Commission’s initiative and support the development of further actions to address the four challenges identified in the Commission’s Communication to approach the interface between chemicals, products and waste. The Staff Working Document (SWD) accompanying the Commission’s Communication further details these issues in 8 sets of options. In relation with the issues raised by the Commission in these two documents, this paper develops our main demands to address the interface between chemicals, products and waste, and includes issues that go beyond those exposed by the Commission. The undersigning organisations stand for:

1. The avoidance of chemicals of concern in products throughout their life cycle; including regulatory and non-regulatory measures at EU-level to support substitution and the development of sustainable chemical and non-chemical substitutes;
2. A comprehensive definition of substances of concern;
3. The setting of equal standards for virgin and recycled materials as a principle;

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2 General Assembly of the United Nations, Resolution, Transforming our World: The 2030 Agenda for Sustainable Development, A/RES/70/1

4. Legally binding harmonised information system on substances of concern by 2020 as well as voluntary harmonised information systems on all chemicals by 2020 for products/articles placed on the EU market; this voluntary scheme would then be transformed into a mandatory full traceability of all chemicals as of 2025;
5. Harmonised classification and labelling schemes for substances and waste, in line with the CLP Regulation;
6. Harmonised end-of-waste criteria across the EU;

We also consider the Council Conclusions of 25 June 2018 – Delivering on the EU Action Plan for the Circular Economy⁴ and the European Parliament resolution of 13 September 2018 on implementation of the circular economy package: options to address the interface between chemical, product and waste legislation (2018/2589(RSP))⁵ as solid basis for the Commission’s work. The above-mentioned Council Conclusion of the 25th of June 2018 have notably “strongly highlight[ed] the importance for establishing non-toxic material cycles”. The Parliament resolution previously mentioned has “[r]eiterate[d] that in accordance with the waste hierarchy, prevention takes priority over recycling and that, accordingly, recycling should not justify the perpetuation of the use of hazardous legacy substances”.

While developing coherence amongst the chemicals, products and waste frameworks, it is important that decision makers also acknowledge the need for enforcement measures for all three legislations.

**NGOs’ position for a non-toxic circular economy**

I. The design stage: prioritise prevention

A. The need for cleaning the material cycles at source: avoiding end-of life options and legacy chemicals

According to The Commission’s Interface Staff Working Document “[m]ore than 80% of the environmental impact of a product is determined at the design stage”⁶, it is at that stage that the contribution of a material or product to a non-toxic circular economy is decided as regards its avoidance of substances of concern, the use of secondary material, its durability and end of life options.

**Policymakers at the EU and the national level must actively involve and take actions to avoid hazardous chemicals from entering the economy in the first place and ensuring a non-toxic environment from**

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**The design stage.** As detailed in the Study for the Strategy for a non-toxic environment of the 7th Environment Action Program⁷, it mostly implies: harmonised classification and labelling (CLP) processes; accelerating the identification and regulation of substances of concern with REACH restriction and authorisation processes, including the inclusion of substances in the Restriction or Authorisation Lists, not granting authorisations to use SVHC when their risks are not controlled or when alternatives exist; truly stimulating substitution of substances of concern while avoiding regrettable substitutions; promoting green chemistry and non-chemical solutions; improving the flow of information on substances of concern; applying the prevention and the precautionary principles to regulate chemicals and addressing emerging issues.

This would better protect human health and the environment, but also facilitate the future (re)cycling of materials and use of recovered materials from waste. This goes in line with promoting a safe and clean circular economy, encouraging longer product lifetimes and reuse. Economic incentives to support toxic-free materials should also be explored, such as modulated fees in Extended Producer Responsibility (EPR) schemes; substances of concern taxation schemes; consideration for hazardous substances in Green Public Procurement criteria; economic support to green practices or other financial instruments.

When discussing interface issues, end-of-life options must only be considered as last resort remedies since *prevention and substitution must remain key objectives of the scheme*. As reflected in the SWD⁸, the waste hierarchy objectives⁹ and the chemicals regulation objectives both aim at prevention; the product policies require chemical safety to ensure durability, general safety, reparability and (re)cyclability.

### B. The need for a comprehensive definition of substances of concern

The definition of substances of concern will have a decisive impact on the policy options aiming to overcome the challenges of the interface between chemicals, products and waste.

A comprehensive definition of substances of concern is already necessary, although it might reveal challenging for further implementation in some areas, notably in terms of operating requirements or traceability. However, the undersigning organisations believe that a comprehensive definition is most appropriate to achieve a safer use of chemicals in circular materials, guarantee appropriate information and transparency throughout the supply chain, help to prevent the legacy chemicals

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⁸ European Commission, Communication on the implementation of the circular economy package: options to address the interface between chemical, product and waste legislation, 16 January 2018, COM(2018) 32 final, P.4

problem, help companies to comply with current and future regulatory requirements, avoid regrettable substitutions – such as substituting POPs by CMRs for instance –, and eventually ease and enhance the enforcement of the current legislations. It simultaneously ensures that relevant substances are identified and regulated to the benefit of workers, consumers and end-of-life operators, while not necessarily triggering restrictive measures.

In our view, the two options (1A and 1B) proposed by the SWD are too narrow and neglect a number of substances of concern with other specific properties as well as contaminants and degradation products from waste handling. We believe that the two policy options proposed by the Commission in the SWD should at least be merged in order to create a definition a minima. This is the only way to avoid critical properties and chemicals of concern being excluded by one or the other option. However, the current public consultation does not allow to choose both options at a time or to suggest other substances to be apprehended by the definition. Basically, we believe that the definition of substance of concern should cover "any substance that give rise to a concern". Precisely, similarly with the definition proposed in the European Parliament Resolution on options to address the interface\textsuperscript{10}, the definition should cover:

- All substances meeting the properties referred to in Article 57 of REACH Regulation (EC) No 1907/2006; this would consequently cover substances identified as category 1A and 1B carcinogenic, mutagenic, toxic for reproduction – referred as "CMRs"\textsuperscript{11}, very persistent and very bioaccumulative substances, persistent bioaccumulative and toxic substances, endocrine disruptors, neurotoxins and sensitisers. As an example of good practice, the EU Ecolabel scheme has adopted cut-off criteria, prohibiting the use of substances meeting the properties of Article 57 in Ecolabelled products\textsuperscript{12}.
- substances listed in Annex VI of the CLP Regulation for classification of a chronic effect as referred into the Commission’s proposal, but also substances of concern for the environment;
- substances regulated under the Stockholm Convention (POPs);
- specific restricted substances listed in Annex XVII to REACH;
- specific substances regulated under specific sectorial/product legislation such as the mercury regulation, the toys regulation, the restriction of hazardous substances in electrical and electronic equipment regulation, etc.…


\textsuperscript{11} It must be highlighted that the 2018 REACH REFIT evaluation recognised that the regulation still fails to properly apprehend and regulate CMRs category 1A and 1B manufactured or imported in quantities lower than 10 tonnes per year, implying that more regulatory actions are required to properly regulate these substances; having these substances identified as substances of concern could be a way to bypass this shortcoming;

We highlight that neither the Candidate List, nor the Restriction list of REACH or the CLP were designed to be used for taking decisions on recycling issues. It is therefore important to broaden the scope of the proposed options to adapt the definition of substances of concern to the challenges of the non-toxic circular economy and make the definition fit for purpose. The SIN List\(^\text{13}\) proposes a list of hazardous substances to avoid, in both virgin and recycled material. The grouping of chemicals with similar properties (such as bisphenols, phthalates, dioxins, and perfluorinated substances) would identify and capture more efficiently substances of concern.

C. Design for safe circularity: considering safe use and re-use from the start

As indicated in the New Approach to enforcement of EU law, “Poor implementation of Union legislation means that the full intended benefits are not realised in practice. As an example, full implementation of EU environment legislation could save the EU economy EUR 50 billion every year in health costs and direct costs to the environment\(^\text{14}\).” Taking into consideration these findings, the Commission should focus on accelerating the regulatory identification and control of substances of concern as well as enforcing existing obligations to prevent and substitute the production and use of substances of concern to prevent hazardous substances from entering the material cycle. The priority of an economy destined to circularity of the materials shall be to avoid the use of chemicals of concern at the design stage of all products. To contribute to that overarching objective, safety of the materials and products must be enhanced. To do so:

- Disclosure and tracking of data on chemicals in materials must be enhanced.
- Grouping chemicals when proceeding to their regulatory identification and control in order to avoid lengthy substance-by-substance processes and regrettable substitution must be considered,
- SVHC identification must be made more efficient thanks to the use of grouping or read-across methods for instance, the use of REACH Article 59(3) enabling to submit proposals for identification of SVHC with a harmonised classification to be fast-tracked onto the Candidate List with an abbreviated dossier (involving over 1,000 CMRs category 1), similarly, Article 68.2 of REACH laying down the provisions of the simplified restriction procedure for consumer articles shall be better used to that end;
- Regrettable substitutions must be tackled by accounting non-chemical alternatives and functionality of the substances in order to avoid replacing harmful substances of concern by equally harmful substances;
- Recycling toxic materials for the sake of circularity should not be by default considered as the best environmental solution. Instead, impacts on health and the environment must be thoroughly assessed before allowing recycling of a stream, those assessments must also consider that some

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\(^\text{13}\) The SIN List can be accessed via [https://chemsec.org/sin-list/](https://chemsec.org/sin-list/)

\(^\text{14}\) European Commission, Communication to the European Parliament, the Council, the European Economic and Social Committee of the Regions Completing the Better Regulation Agenda: Better solutions for better results, COM(2017) 651 final, 24 October 2017, Strasbourg
(contaminated) streams can only be recycled a limited number of times, therefore recycling is not the best option to handle them;

The REACH REFIT evaluation SWD constitutes a solid basis for further improvement of actions\textsuperscript{15}. The chemicals and waste regulations should be regarded as one of the main tools to promote prevention, phase out and substitution of substances of concern in products and consequently in waste, namely via information and regulatory measures.

D. A sustainable products policy

At the same time, to ensure a safe circularity of materials, \textit{product design legislations should aim at avoiding further environmental damage as well as guaranteeing safety during the use\textsuperscript{16}, re-use, recycling phases, and eventually the disposal of the material}. As stressed in the European Parliament Resolution on options to address the interface, “in a truly circular economy products must be designed for upgradeability, durability, reparability, reusability and recyclability, and with minimal use of substances of concern”\textsuperscript{17}. Already existing sectoral legislations on toys, cosmetics, restricted hazardous substances in electrical and electronic equipment must be adapted to better reflect considerations to address the interface between chemicals, products and waste options for these targeted sectors. In parallel, the \textit{General Product Safety Directive (GSPD) should be adapted to make it a General Product Sustainability and Safety Directive (GPSSD)} to ensure safety, circularity and sustainability considerations from the design stage and include a systematic life-cycle approach. Additionally, the \textit{Ecodesign Directive\textsuperscript{18}} must include considerations on chemicals of concern and promote the use of non-toxic reusable and recyclable materials.

Extended producer responsibility (EPR) schemes should be used more systematically to address the use of chemicals of concern in products. It must encourage substitution of substances of concern in products from the production – and not solely at the waste management phase –, while penalising the use of substances of concern. Consideration for chemicals should play a central role in broadening of the scope of eco-design requirements beyond energy consumption to incorporate resources – promoting the

\textsuperscript{15} EEB, Appraisal of the REACH REFIT evaluation: The precautionary principle flawed in fact  \url{http://eeb.org/wp-admin/admin-ajax.php?juwpfsadmin=false&action=wpfd&amp;task=file.download&amp;wpfd_category_id=59&amp;wpfd_file_id=92509&amp;token=88a1d9efdc3c62070ae5792693e54756&amp;preview=1}

\textsuperscript{16} European Commission, Press release – Chemicals have been found to be the second highest risk of products \url{http://europa.eu/rapid/press-release_IP-18-1721_en.htm}

\textsuperscript{17} European Parliament, Resolution on the implementation of the circular economy package: options to address the interface between chemical, product and waste legislation (2018/2589(RSP), 13 September 2018, point 3 \url{http://www.europarl.europa.eu/sides/getDoc.do?type=TA&amp;language=EN&amp;reference=P8-TA-2018-0353}

\textsuperscript{18} Directive establishing a framework for the setting of ecodesign requirements for energy-related products, No 2009/125/EC 21 October 2009
principle of benign by design\textsuperscript{19}. In a safe circular economy, it is equally important to complement EPR schemes with appropriate information to enable reparability and reuse and efficient sorting systems\textsuperscript{20}.

The Commission should also investigate how to better account for and address the footprints of products with significant life cycle impacts. In some cases, existing applications of life cycle assessment (LCA) methodologies poorly account for chemical risks and toxicity impacts in relation to products (e.g. see discussion on LCA for food contact materials\textsuperscript{21}). This could be done in the context of the ongoing work performed for a more coherent policy framework: textiles, construction and building materials are good examples of those complementary materials to investigate.

II. Traceability of chemicals: voluntary full disclosure and binding tracking systems for chemicals of concern

A. A harmonised legally binding tracking system for Chemicals of concern

The comprehensive definition of a substance of concern will impact the scope of the substance tracking system and could increase the magnitude of information to be traced. However, we believe that the recognised “need”\textsuperscript{22} for a horizontal mandatory tracking system for substances of concern will trigger innovative practices that will help ensure that all chemicals of concern are tracked by a set date. However, practical aspects must be further studied to facilitate the implementation of a tracking system: we therefore welcome the Commission’s initiative to launch a feasibility study on the use of different information systems.

Tracking substances of concern is needed to ensure their identification and safe-use throughout the articles’ life-cycle, while this is currently made solely on a voluntary basis by very few sectors, in a non-harmonised hence not most effective way. A legally binding instrument is a fundamental tool to prevent the presence of...
highly toxic chemicals in consumer products, namely in toys, textiles, food packaging, furniture, etc. ... By 2025 a harmonised legally binding requirement for transparency on substances of concern in products should be established. A system based on a ‘right to know’ for supply chain operators, authorities and consumers should be the basis for a broad disclosure scope, making “any supplier” responsible for sharing data “with sufficient information to allow safe use” of the chemicals contained in the product. The information communicated should comprise, at least: the name, composition, concentration of the substances contained in the article but also risk management measures and the localisation of the substance.

Moreover, as suggested by the European Economic and Social Committee (EESC), competent authorities should be conducting more enforcement measures regarding the exposure scenarios included in registration dossiers and Safety Data Sheets and that cover the waste stage; the enforcement of the obligation of information of SVHC in waste. The undersigning organisations agree with EESC to also advise to require further detailed information such as “the description of different end-of-life scenarios for recycling, preparation for reuse or disposal” in used23.

The objectives of such a system should remain to allow safe use of material containing substances of concern and encourage actors to substitute. The system must be designed in a way that guarantees its usefulness.

The Article 9 of the Waste Framework Directive No 2018/851 should be used in this regard and might eventually be adapted to this general traceability objective, being used from the production of the substance to its end-of-life and/or recovery, if legal frameworks enable to extend the scope of substances included in the database this tool.

A fundamental principle in a circular economy should be to not make new products from recycled materials if sufficient information to ensure safety is missing. This is also the principle enshrined in REACH for recycled substances and mixtures where safety data sheets must be based on the same quality information as is available to the registrants24. Thus, the basic “No data, no market” principle of REACH is theoretically applying to recycled substances and mixtures. However, this information requirement is not in place if the recycling process leads directly to an article, as for an article, only Article 33 of REACH information is required – although in some cases Article 7.2 of REACH applies. The transition to the circular economy actually further highlights the need for transparency and information on the chemical content of articles, not solely on substances and mixtures.

The tracking system should be harmonised among different EU regulations to guarantee more efficiency, reduce administrative costs due to duplicating schemes and/or obligations, permit the application of the “report once, use several times” principle.


24 Article 2.7, under point d) of REACH
Short term prioritisation for specific sectors such as toys, textiles, food contact material, furniture, building materials

A stepwise approach prioritising specific sensitive sectors could be adopted for toys, textiles, food contact material, furniture and building material. However, this should not hinder the development of innovative solutions to allow the tracking of chemicals of concern by 2020. This is particularly important as continuous promotion for sectoral solutions without aiming at a broader scope will lower down the ambitions towards all-chemicals tracking.

B. Setting the framework to allow full disclosure of chemical composition

As the properties of all chemicals are not known, substances previously thought to be benign might be revealed later as of concern. The problem is that the precise location and use of those substances newly recognised as of concern are not known. Identification of and communication on the full chemical composition is therefore a requirement to effectively preventing the impact of substances of concern as soon as they are identified; it also enables adoption of risk management measures by companies and informed decisions of consumers.

We support a temporary voluntary harmonised traceability system for all chemicals, based initially on voluntary commitments from frontrunners and full materials declarations for individual articles. This scheme should build the basis for a future mandatory full disclosure system of chemical composition where frontrunners would benefit from having already set such a system.

Discussions at the international level have already identified the need for mandatory tracking of all chemicals in products and companies have already started disclosing substances in some consumer products: in fact, innovative practices “beyond compliance” should rapidly be triggered thanks to frontrunner businesses,

25 Such tools are already existing for the electrotechnical industry: the BOMcheck database for instance: https://www.bomcheck.net

26 South Korea has proposed a mandatory system to track all chemicals, including imported chemicals. To protect trade or commercial secrets, the text proposes to create public authorities responsible for the handling of this data. Chemical Watch, SAICM, Open-ended Working Group of the International Conference on Chemicals Management, Emerging policy issues and other issues of concern: report on progress on emerging policy issues: hazardous substances within the life-cycle of electrical and electronic products, Geneva, 15–17 December 2014

SAICM, Second meeting of the intersessional process considering the Strategic Approach and the sound management of chemicals and waste beyond 2020, Examples of possibilities for developing measurable and time-bound objectives and milestones for sound management of chemicals and waste – Objective 5, p. 41


OECD Environment Directorate, Assessing the chemical information systems and their potential to improve the recycling rates of plastics, ENV/JM/RD(2018)4, paragraph 106 and 109, p. 28


SC Johnson discloses ingredients contained in SC Johnson specific products depending on the region, including EU countries: https://www.whatsinside SC johnson.com/
market opportunities and support for the development of technical solutions to trace substances of concern. Traceability of all chemicals eases compliance with regulatory requirements as well as with regulatory updates on substances’ status, thus ultimately reducing costs and saving time throughout the supply chain.

Risks caused by chemical transformation and contamination will be better managed when all chemicals content in products and waste can be traced and risk mitigation measures can be taken accordingly. The issue of non-intentionally added substances (NIAS) could also be mitigated where traceability of all chemicals is made possible28. A voluntary full disclosure extension will also contribute to the enforcement of separate collection requirements for waste containing hazardous substances, help prevent dilution of hazardous substances into clean streams as well as lighten the burden placed on end-of-life operators that bear the economic costs of analysis, decontaminating29 and handle potentially hazardous waste streams30.

Eventually, tracking substances contributes to improve the communication throughout the supply chain which, according to the 2018 REACH REFIT evaluation SWD, is necessary “for economic operators to implement appropriate risk management measures and to make informed purchasing decisions as well as for the ability of suppliers to respond to consumer requests31”; the SWD also recognises that recycling would be facilitated, and the uptake of secondary material would improve32. We therefore believe that the flow of information should include the full composition of products.

By 2025 this transitory voluntary scheme should become a mandatory requirement to declare all chemicals into products or articles placed on the market.

Summing up: our demands for tracking substances of concern and all other chemicals

28 Where leakage is due to degradation or impurities the source of the NIAS is traced more easily if the chemicals included in the article can be identified: Groh, J., K, Backhaus, T. et Al. Chemtrust, Chemicals associated with plastic packaging: Inventory and hazards, Version not yet peer reviewed, line July 13, 2018

29 Clientearth, EEB, Keeping it clean: How to protect the circular economy from hazardous substances, February 2017, http://eeb.org/task=file.download&wpfd_category_id

30 As an example of bad waste management practices, hotspots with tonnes of lindane have been reported to await remediation activities, European Parliament, Study for the PETI Committee, Lindane (persistent organic pollutant) in the EU, 2016, PE 571.398, available at: http://www.europarl.europa.eu/RegData/etudes/STUD/2016/571398/IPOL_STU(2016)571398_EN.pdf

31 European Commission, Staff Working Document accompanying the Communication from the Commission on the operation of REACH and review of certain elements (hereafter, the “REACH REFIT”), SWD(2018) 58 final, 5 March 2018, p.30

32 Ibid. p.30
We therefore ask for:

- A mandatory information tracking system for substances of concern in materials, articles and products being properly passed along the material cycles – that is from the chemical to the article, the product, the recycled material, until the waste phase. **By 2025**, the EU must set legally binding harmonised requirements for transparency, together with provisions for (digital) information sharing between all stakeholders along supply chains, including consumers and competent authorities;

- A (temporary) possibility, enabled as soon as possible, to add on a voluntary basis to the tracking system additional information on all chemicals being used along the material cycles for supply chain actors, competent authorities and consumers who aim at full transparency on the chemical contents in all constituent of their products. This transitory measure would enable the frontrunners to be ahead of regulatory measures;

- **By 2030**, a harmonised legally binding requirement for full transparency on the chemical contents in materials articles and products should be established. This legally binding requirement would replace the temporary and voluntary option to disclose all chemical content, used by frontrunners before 2030. The system should be harmonised with the database for SVHC in waste streams and the notification system of SVHC in articles under REACH article 733.

**Recalling the objective: Transparency before confidentiality**

One of the main obstacles to a mandatory tracking of all substances could be information claimed as confidential, such as commercially sensitive data. It is worth highlighting that EU law, in application of the Aarhus Convention requires the full disclosure of information related to “emissions in the environment”, even when this information is commercially sensitive34. Information (held by ECHA) on substances35 can actually be claimed confidential only under “strict” conditions36 according to the Court of Justice of the EU; the provisions37 of the Stockholm Convention also regard information on health and safety of humans and the environment as non-confidential. Mandatory tracking of substances of concern facilitates the communication of information throughout the supply chain, thus ensuring the effectiveness of the right to know and the right to a healthy environment38.

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33 REACH Article 7 on Registration and Notification of substances in articles


35 Information on substances is considered as environmental information for which a right to access is granted in the Aarhus Convention and in Regulation No 1367/2006

36 Court of Justice of the EU, Kingdom of Sweden and Maurizio Turco v Council of the European Union, Case C-39/05 P, EU:C:2008:374, 1 July 2008 paragraph 36

37 Article 9.5 of the Stockholm Convention on Persistent Organic Pollutants, 2001

Traceability also contributes to the implementation of the existing regulations in making it easier for companies, authorities and the citizens to have access to key information and then fulfil their duties, comply with their obligations and/or exercise their rights, all being necessary to protect health and the environment. These include for instance:

- the citizen’s Right to know;
- authorities’ obligations relating to market surveillance and enforcement of policies, adoption of informed decisions and policies, prioritised regulation of hazardous substances;
- companies’ compliance with existing and newly adopted regulatory requirements, chemicals management measures.

III. The material recovery issue: focus on prevention

Here again, tackling this issue requires a holistic approach in order to not threaten the circular economy loop: preventing the use of substances of concern is key.

A. Level playing field between secondary and primary material

The ultimate aspirational goal identified by the Commission in the SWD is to level secondary and primary material to increase the uptake of secondary material. Most importantly, two angles should simultaneously be considered by the Commission when addressing this issue: a non-toxic approach would demand materials free from hazardous substances throughout their life cycle, while a resource efficiency approach would demand that materials are kept in the loop as long as possible.

In this regard, international companies and organisations operating in the EU already have expressed their support to a non-toxic circular economy, free of “hazardous substances” and pledged to “design materials that are safe for human and environmental health” notably by creating a demand signal for safer material.

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39 European Commission, Staff working document accompanying the Communication on the implementation of the circular economy package: options to address the interface between chemical, product and waste legislation, SWD(2018) 20 final, 16 January 2018, p. 10


innovation in order to unlock the circular economy\textsuperscript{42}; technologies are being developed\textsuperscript{43} to answer this worldwide growing market demand. At the global scale, in order to achieve the sustainable development goal 12 (SDG 12) on sustainable consumption and production, chemical industry companies have “(...) committed to advancing sustainable management of materials in all its phases, and achieving greater transparency in environmental, health, and safety performance”\textsuperscript{44}.

As recognised in the SWD (p. 10), we acknowledge that the economic feasibility of removing substances of concern depends of their very specific applications. This potential bottleneck reinforces our claim for a holistic approach considering design solutions, chemicals regulation and prevention practices to avoid the use of substances of concern. Financial instruments such as taxation, fees, economic support or extended producer responsibility schemes must also be considered in order to create incentive against the use of chemicals of concern, contribute to financing research and development for safer alternatives and removal of substances of concern in the circular economy loops.

**Conditions**

The undersigning organisations would accept that in some well-justified circumstances, articles containing certain (threshold) substances of concern in articles or recycled streams could be allowed to be reused and recycled, under closely monitored and strict conditions (detailed below, see conditions 1-7) only as specific derogations to the principle requiring non-toxic materials. The European Commission and the European legislators must consider the need to adopt rules specifically designed to do a case-by-case assessment of the different end-of-life options of articles containing legacy substances. We doubt that allowing legacy substances in recycled or re-used materials can ever be the best option (compared to removal and destruction, landfilling, incineration, etc.) but, if the answer is yes, in certain cases, it is of high importance to set strict conditions. The reflection the EU Commission launched on an EU product policy could be a good platform to reflect on what would be the most adapted framework and end the default approach of continued recycling of toxic substances. In the meantime, existing legislations must be used only if and to the extent they set decision-making processes able to deliver decisions on the complex issue of legacy substances in recycled products. That is, if the process is tailored to address the challenges of the “contaminated material hierarchy” developed in page 15 of this document.

The EU Regulation REACH was often used inappropriately in the last years to handle the issue (which NGOs have criticised already). If we agree that the restriction process may be adapted in certain circumstances to address that issue – even though the way it is applied to contaminated recycled material needs to be reviewed - the authorisation process should not be used to endorse the presence of legacy chemicals in recycled

\textsuperscript{42} Ibid. p.6


\textsuperscript{44} World Business Council for Sustainable Development, Chemical Sector SDG Roadmap, 17 July 2018, https://www.wbcsd.org/Programs/People/Sustainable-Development-Goals/Resources/Chemical-Sector-SDG-Roadmap
materials. Substances of very high concern are subject to the ban resulting from their placement on the authorisation list, wherever they can be found – virgin or recycled material. It is only by exception that the use of SVHC should be authorised, and this is why REACH sets precise and strict conditions that needs to be met to obtain an authorisation. The conditions set by the authorisation chapter were however designed to address the situation of companies who need to use a SVHC, not of recyclers facing the presence of legacy chemicals. Using the authorisation process to allow legacy chemicals in recycling materials places both companies and public authorities in an extremely challenging position as they are employing a tool destined to be used in an entirely different context and an entirely different purpose. The result is that the questions which should be asked (Is there a better end of life solution? How to guarantee a closed loop?) How to guarantee full traceability of the substance in its second/third/etc. life-cycle? and the limits which should be set (full traceability of material and product, labelling, non-threshold substances not allowed in recycled products) cannot be properly discussed in a context where other questions are asked (what is the use of/need for the substance? Are there alternative technology or substance available to perform the function of the SVHC?) and limits of another nature are set (worker protection, etc.). Finally, it is important to note that authorisations are not limited in time (even if they are re-assessed at set deadlines), which is also a problem for derogations which should always remain temporary.

Recovery of contaminated material or material containing legacy chemicals in closed-loops must be considered as an exception to the general principle requiring same standards for primary and secondary streams: this should take place within strict closed-loop systems, while ensuring protection of human health and the environment and safe working conditions. Closed-loops would correspond to systemic cycling of material under controlled and equivalent uses. It should be tolerated only under the following conditions:

1. For obvious safety reasons, such recovery must be excluded for certain sectors, at least for consumer products, including packaging, toys, textiles, furniture and food contact materials;
2. Some substances should never be present in recycled material. The recycling of material containing substances for which safe exposure thresholds cannot be established along the whole life cycle such as persistent organic pollutants (POPs), PBTs and vPvBs, endocrine disruptors cannot be allowed. Carcinogenic, mutagenic and reprotoxic substances (CMRs) cannot be allowed either. Contamination perpetuates the health and environmental problem for decades or more, thus no derogation should be granted to these materials that should be collected and disposed of;
3. The EU must start developing an appropriate framework to specifically assess the different end-of-life options, including whether to recycle materials containing legacy substances is the best option or not, on a case-by-case basis, taking into account all possible different options and with adapted health and environmental safety and health conditions. Those specifically designed impact assessments should ensure protection of health, the environment and the uptake of the resulting secondary material. They should notably, but not exclusively consider:

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45 A non-threshold substance is a chemical for which a safe exposure level cannot be established with sufficient certainty since any exposure level can harm or can be of concern (eg persistence, bioaccumulation)
- whether the decontamination of the material, considering health and environmental impacts is a preferred option compared to the recovery of the contaminated material;
- the life duration of the material;
- the possibility to control the fate of the article and guarantee that it does not end up in a consumer product at the end of its subsequent life cycles;
- the life-cycle impacts of the presence of hazardous chemicals including exposure of workers (including waste and recycling facilities), looking at all the potential subsequent life cycles, the migration potential of the products as well as at the environmental and health impact of the final disposal solutions when the material cannot be recycled anymore;
- resulting quality of the material (in terms of functionality and safety);
- the best option as regards health and environmental impacts of end-of-life scenarios: all possible end of life options should be considered, including elimination/destruction, landfilling, incineration, etc. Toxic recycling must not be identified by default as the best solution in terms of health and environmental protection based on the sole argument of materials’ circularity; it must instead be highlighted that some (contaminated) streams can only undergo a limited number of recoveries due to some of their properties. Also long term scenarios should be taken into account. The best option should be set for the current and future generations to come;

4. **The Authorisation procedure under REACH should not be used to allow legacy chemicals in recycled materials.**

5. The use of recycled material containing legacy chemicals must be allowed only in **closed and controlled loops**;

6. **Full traceability** of chemical content and of the material must be guaranteed throughout the life cycle of the recycled material;

7. **Appropriate labelling** schemes must indicate that the recycled material contains a substance of concern via a reference to a determined identification tool (barcode, QR code, number or any other reference). This reference would communicate the substance of concern’s name, location, quantity and specific safety information to handle safely the material in the closed-loop;

Unfortunately, the current practice is very different and a paradigm change is urgently needed to protect human health and the environment and also to convince all players in the supply chain as well as society that recycled products are not toxic. Otherwise, the reputation of recycling faces a major credibility loss which would endanger the aim of a circular economy.

A consensus opinion of the POPs Review Committee of the Stockholm Convention has clearly warned against the practice of recycling materials containing brominated POPs: “The objective is to eliminate brominated diphenyl ethers from the recycling streams as swiftly as possible. To meet this objective, the principal recommendation is to separate articles containing brominated diphenyl ethers before recycling as soon as possible. Failure to do so will inevitably result in wider human and environmental contamination and the dispersal of brominated diphenyl ethers into matrices from which recovery is not technically or economically
feasible and in the loss of the long-term credibility of recycling\textsuperscript{46}. As a party to the Stockholm Convention, the EU should follow this recommendation, which it already agreed to, and apply it broadly to all substances of concern. In principle, the Stockholm Convention does not permit the recycling of products containing POPs\textsuperscript{47}.

The European Parliament Resolution also recalls that “Article 7(3) of Regulation (EC) No 850/2004 stipulates that disposal or recovery operations that may lead to recovery, recycling, reclamation or reuse of the substances listed in Annex IV (persistent organic pollutants (POPs)) must be prohibited”\textsuperscript{48}.

Where decontamination of material and destruction of substances of concern is required, non-combustion methods should be privileged as presenting less risks for the environment, such as Gas Phase Chemical Reduction (GPCR), Base Catalysed Decomposition (BCD), Alkali Metal Reduction, and Supercritical Water Oxidation (SCWO) and where appropriate\textsuperscript{49}. These non-combustion methods do not lead to unintentionally produced POPs such as dioxins and furans, if run properly contrary to combustion methods (such as waste incineration, pyrolysis, gasification, thermal metallurgy or cement kilns)\textsuperscript{50}.

**Recycling targets and the circular economy agenda should not be used as an inappropriate excuse to dilute chemicals legislation and requirements for non-toxic articles, as this will only create a longer lasting chemical legacy problem.** Circularity of the material must not justify toxic recycling, in fact end-of-life solutions must consider whether recycling will perpetuate the presence of legacy chemicals while other end-of-life solutions such as chemical treatment of waste (with aim to destroy persistent chemicals into more simple ones), destructive chemical recycling or final disposal might be more protective of health and the environment both in the short, medium and long term. Allowing harmful chemicals in recyclates will lead to lengthening the time period of risks of exposure to humans and the environment, and hence risks of health

\textsuperscript{46} Stockholm Convention POPs Review Committee (2010) Recommendations on the elimination of brominated diphenyl ethers from the waste stream and on risk reduction for perfluorooctane sulfonic acid (PFOS) and perfluorooctanesulfonyl fluoride (PFOSF), UNEP/POPS/COP.5/15

\textsuperscript{47} Article 6.1 (d), under point (iii) of the Stockholm Convention


impacts from skin irritants, to reprotoxic effects, to cancer. More also needs to be done upstream – at the eco-design stage – to ensure that harmful chemicals are not used in the first place, by using non-toxic substitutes and for producers to provide greater information on the chemicals used down the supply chain. This is part of a wider needs for greater transparency of information to give recyclers needed data to avoid accidentally extending the risks to health by keeping harmful chemicals in products on the market. Additional information is also needed for inspectorates to fulfil their functions and ensure that harmful chemical-laden waste is not used as an inappropriate secondary raw material. Only this combined scenario – of destroying harmful chemicals that shouldn’t be recycled, of designing non-toxic products, and ensure information for responsible recycling and regulatory oversight - will encourage the effective substitution of substances of concern: permitting the recycling of material containing substances of concern will undermine the incentives for substitution in the first place. Inaction will lead lengthening the long-term legacy of harmful chemicals and undermine the objectives of the circular economy and the acceptability of this otherwise positive policy initiative.

Moreover, it is necessary to produce and gather accurate data on contamination of streams – including reuse and recycling streams – to quantify the problem and guarantee an informed decision-making on the amount of contaminated waste to be re-injected in the circular economy, or to be discarded from it. Although overall quantification is still lacking, evidence is already accumulating that toxic recycling is contaminating children’s products51, food contact materials52, other consumer products like hair accessories or office supplies, and food contact materials53.


This challenge must be particularly considered for plastics, as the Commission has committed to make all plastics recyclable by 2030.\(^5^4\)

**Short term prioritisation:**

Identification and sorting of contaminated streams for a controlled treatment, eventually, disposal. Material containing substances of concern should be labelled and specific risk management measures must be adopted to ensure safe use, such as obligations to use them in closed and controlled loops only, and interdictions to use them for consumer applications.

**Medium-Long term prioritisation:**

Decontamination and equal requirements for primary and secondary materials.

B. Halting EU’s promotion of double standards on exported and imported substances of concern and articles

**Enforcement of existing obligations as regards the presence of substances of concern in imported articles as well as reinforcement of compliance checks on safety data sheets, and control of imports in Member States are necessary.** More importantly, as authorisation procedures in the European Economic Area (EEA) do not apply to imported articles, substances and mixtures subject to authorisation procedures under REACH must be temporarily regulated under the restriction procedure on imported articles, wherever possible. This temporary use of the restriction procedure should then be replaced by a proper tailored legal framework to address imported articles containing substances subject to authorisation within the EU.

This would ensure a higher protection of health and the environment as well as re-balance the “competitive disadvantage”\(^5^5\) invoked by EU downstream users that do not use SVHC substances in consumer articles, compared to non-EU companies. This further ensures a level playing field benefitting to the EU industry and is also likely to trigger snowball effects to trade partners of the EU.

The EU should also halt contributing to double standards consisting in allowing the production of substances of concern restricted or subject to authorisation in the EEA market, as it actually enables unethical export of these harmful substances to third countries in which risk management measures are often not as advanced as those in the EU, placing health and the environment at risk in these countries. On the contrary, EU pushes for policies within international agreements (e.g. Basel Convention e-waste

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guidelines) that tolerate or even promote hazardous chemicals containing export to countries that lack regulatory infrastructure and technical and economic capacities for hazardous waste management.\(^{56}\)

The EU should further support those ideas in international forums such as before UN agencies discussions, OECD or similar bodies to harmonise technical instruments and support more ambitious regulations for chemical safety in products at the global level.

IV. Closing the non-toxic loop

A. Improving certainty in the implementation of end-of-waste provisions

The criteria qualifying end-of-waste should be defined and harmonised at the EU level in order to guarantee consistent rules for the uptake and shipment of high-quality secondary materials on the single market.

The current patchwork-like scheme, open by the possibility for national authorities (and even companies) to define their own end of life criteria for materials not addressed at EU level is incentivising waste shipments in countries that have more lenient technical end-of-waste definition.

The recycling workshops are often placed in developing countries which lack of capacity to identify and analyse products containing POPs and do not operate with appropriate technologies for POPs destruction. Waste that is classified as hazardous in the EU should not be exported to countries outside the EU with lower standards – the risk is too high for both the workers in third countries and the EU consumers once the recycled materials come back to the EU in the form of consumer product (see Arnika studies previously mentionned).

It also creates more uncertainties with regards the properties of the materials placed on the market and thus undermine the confidence in using secondary materials.

Our priorities are that:

- **the criteria shall ensure a high level of health and environmental protection**: end-of-waste criteria should not permit the presence of substances not allowed in virgin materials and not allow more lenient thresholds than for virgin materials;

the development of the criteria should guarantee the highest quality for the reused or recycled material benefitting the circular economy.

The EU should prioritise the development of end-of-waste criteria for streams that are quantitatively important, or that may pose high health and environmental risks if not well defined and harmonised. For instance, end-of-waste criteria for plastics should be prioritised and should contain strict requirements as regards the presence of substances of concern in order to protect human health and the environment.

B. Demanding harmonised classification of chemicals and waste

We support the approximation of the chemicals and waste provisions, with the CLP Regulation taken as a reference and most suitable framework to manage the hazards of chemicals at the end-of-life stage.

Whereas the SWD discourages to opt for the full alignment of the Waste Framework Directive and CLP provisions as it “may prove really challenging”, the problem must not be underestimated by decision makers. Specifically, impact assessments on waste classification are very often not accurate nor protective because they mostly focus on potential impediments to recycling, omitting environmental or public health (including for workers) factors that would weigh in favour of the classification of the concerned waste as hazardous. Furthermore, classification of waste as hazardous according to chemical regulations also protects workers handling hazardous waste by enabling the implementation of appropriate risk management measures that take into account the chemical properties or characteristics of the substances.

For practicality reasons, classification could be harmonised on the basis of some sort of prioritisation of either substances of concern, or likelihood of waste streams to contain substances of concern. The “by-default” classification should adopt a precautionary approach and go first for “hazardous” entry, and only if proven unsuitable and with support of clear and publicly available evidences, a “non-hazardous” entry should be made possible.

The developments envisioned for this issue should take into account the discussions at the international level57, particularly with regards to hazardous waste shipments outside of the EU.

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The EEB, on behalf of:

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CHEM Trust
Clientearth
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EBM
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ECOCITY
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