ClientEarth RETHINK PLASTIC #breakfreefromplastic

27 May 2021

60 Rue du Trône (3ème étage), Box 11, Ixelles,
1050 Bruxelles, Belgique

First Vice-President Frans Timmermans
Commissioner Virginijus Sinkevičius
Director-General Dr Florika Fink-Hooijer
Director Mr Kestutis Sadauskas
Av. de Beaulieu 5,
1160 Auderghem,
Belgium

Dear Mr. Timmermans, Dear Mr. Sinkevičius,
Dear Dr Fink-Hooijer, Dear Mr Sadauskas,

Risk of inconsistency - drafting of interpretative guidance under Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment

1. We are writing to express our concern about the way the term "plastic" has been defined in draft Commission guidance that, if published, will be inconsistent with the legislation in question.
2. ClientEarth is a non-profit environmental law organisation based in London, Brussels, Berlin, Warsaw, Madrid, Los Angeles and Beijing. We actively participated as members of the Rethink Plastic Alliance and the Break Free From Plastic coalition in the process that led to the adoption of the Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment ('the SUPD') and continue to be engaged in its implementation at EU and Member State level.
3. The SUPD requires the Commission to publish guidelines including examples of what is to be considered a single-use plastic product for the purposes of this Directive.
4. Our particular concern is about the interpretation of the definition of 'plastic' for the purposes of the SUPD chosen by the Commission in the latest draft of the guidelines (made available to the public via the Politico Pro newsletter in April 2021), as viscose and cellulosic film are excluded from the Commission's interpretation on the basis that cellulose in not chemically modified in the production processes of these polymers.
5. The Commission's decision to declare that viscose and cellulosic film are not 'plastic' for the purposes of the SUPD is contrary to the best available science, as the production of these substances require by necessity chemical reactions and result in a chemical structure with different properties and morphology as the initial polymer.

6. The Commission's interpretation also violates established rules and principles of EU law. Out of the possible interpretations that could be given to these simple words, in the draft guidelines the Commission chose the interpretation that is least protective to the environment and less conducive to the transition to the circular economy in line with the waste hierarchy. The explicit language and the purpose of the Directive and binding Treaty law demand a different approach. The Annex to this letter explains each breach in more detail.

7. The definition of plastic underpins the scope of the SUPD. The interpretation the Commission adopts will determine whether key provisions of the law are rendered ineffective. Single-use plastic items will be substituted by items that look and behave just like "conventional" plastic but are able to escape the bans, EPR obligations, marking requirements, etc. imposed on identical looking products – much to the confusion and frustration of consumers, waste management bodies and the authorities in charge of enforcing the SUPD. The possibility for products made of viscose or "cellulosic film" to be labelled "plastic-free" will increase further the confusion of consumers.

8. The guidelines are needed to ensure a common understanding for national and regional authorities and other stakeholders responsible for or involved in the implementation of the SUPD. The Commission must ensure the guidelines make the Directive effective at a practical level, while fully respecting the legal framework. The SUPD promised a transformation to our relation with plastics. A year from now, we want to ensure EU citizens are not scratching their heads trying to understand why everything is business as usual.

9. On behalf of ClientEarth, the Rethink Plastic alliance and the supporting organisations, we urge you to adjust the current guidelines, defining 'plastic' in a manner that is compatible with the purposes of the Directive, the precautionary and *effet utile* principles and the established jurisprudence of the CJEU. In particular, you must ensure that the guidance defines the term 'chemically modified' to mean what it says and thus include regenerated cellulose.

10. We therefore request an opportunity to discuss possible ways to address these issues, which we already outline for your consideration in the Annex to this letter.

11. We strongly hope that you will heed our calls, in line with President von der Leyen's commitment a year ago that her "Commission will listen to the people of Europe and be bold", and with the "check against delivery approach" promised to the European Parliament in connection with the Green Deal.

12. We remain at your disposal to organise a meeting at your earliest convenience.

Sincerely,

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Annex – Legal errors in the interpretation of the definition of 'Plastic' for the purposes of Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment

Under the SUPD, natural polymers that have not been chemically modified are not plastic for the purposes of the Directive.

Directive (EU) 2019/904

> *Article 3*
>
> **Definitions**
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> For the purposes of this Directive, the following definitions apply:
>
> 'plastic' means a material consisting of a polymer as defined in point 5 of Article 3 of Regulation (EC) No 1907/2006, to which additives or other substances may have been added, and which can function as a main structural component of final products, with the exception of natural polymers that have not been chemically modified

The definition of a substance 'not chemically modified' is established in Article 3(40) of Regulation (EC) No 1907/2006: "a substance whose **chemical structure remains unchanged**, even if it has undergone a chemical process or treatment, or a physical mineralogical transformation, for instance to remove impurities".

In the latest version of the draft guidelines, the Commission explains what the guidelines consider relevant when determining whether a substance has been chemically modified:

> "The terms have not been chemically modified in point (1) of Article 3 of the Directive, with regard to natural polymers, are to be interpreted as follows: the decision whether a polymer has been chemically modified in its production or not **should take into account only the difference between the ingoing and the resulting polymer**, disregarding any modifications which might have taken place during production processes, **as those are not relevant for the properties and the behaviour of the polymer used and eventually potentially released into the environment**.
> This means that, for example, regenerated cellulose, e.g. in form of viscose, lyocell and cellulosic film, is not considered to be chemically modified, as the resulting polymers are not chemically modified compared to the ingoing polymer. Cellulose acetate is considered to be chemically modified given that, compared to the ingoing natural polymer, the chemical modifications of cellulose during the production process remain present at the end of the production process."[1]

The draft guidelines do not interpret the meaning of 'not been chemically modified' correctly, for the reasons we explain below.

[1] European Commission (2021), *Commission guidelines on single-use plastic products in accordance with Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment*. P. 6.

1 Incomplete understanding of 'chemical structure'

Cellulose and regenerated cellulose (e.g., viscose) are polymers, which means they are macromolecules composed by repeating subunits called monomers. The chemical structure of polymers is defined by several characteristics, which include but go beyond the number of atoms of each chemical element in the monomer units:

a. The composition of the monomer units,

b. The order in which the monomer units combine,

c. The length of the chains of monomer units,

d. The morphology of the polymer – i.e., how it arranges in space.

One example of how crucial these characteristics are for determining the chemical structure of a polymer is elucidated by Eunomia: "For example, the composition of both candle wax and a polyethylene film is (C2H4)n", but the 'n' value of candle wax is 15-20, whereas the 'n' value of a polyethylene fibre or film is closer to 1,000".[2] ('n' is the denotation of the number of monomer units in a polymer).

In the production process of regenerated cellulose such as cellophane and viscose, cellulose is subjected to chemical reactions precisely *in order to* end up with a polymer that irreversibly has a different structure. It is the totality of these properties and not just the number of elements in each monomer unit what determines most of the physical properties or the polymers, such as elasticity, viscosity, conductivity, tensile strength, yield point, degree of swelling and moisture content.

When the Commission says in the draft guidelines that regenerated cellulose, e.g. in form of viscose, is not is not considered to be chemically modified, as the resulting polymers are not chemically modified compared to the ingoing polymer, the Commission is choosing an interpretation of 'chemical structure' that does not fully reflect the reality of the chemical structure of a polymer and is therefore incomplete. This incomplete interpretation constitutes a factually incorrect basis for the construction of the definition of 'plastic'.

2 The chemical reactions in the production process of regenerated cellulose are relevant for the properties and behaviour of the resulting polymer.

The Commission states in the draft guidelines that regenerated cellulose (such as viscose or cellulosic film) are not chemically modified following that any modifications which might have taken place during production processes "are not relevant for the properties and the behaviour of the polymer used and eventually potentially released into the environment."

[2] Eunomia (2020). What Is Plastic - A study exploring the potential for certain materials to be exempted from the Single-Use Plastics Directive, with particular focus on man-made cellulosic fibres. P. 10 https://www.eunomia.co.uk/wp-content/uploads/2020/01/What-is-Plastic-Main-Report_Final.pdf

The Commission is factually incorrect. The chemical reactions that take place during the production processes of regenerated cellulose such as viscose are relevant for the properties and behaviour of the resulting polymer and make the impact of such polymers in the environment different from the initial unmodified cellulose.

The purpose of the intentionally designed chemical reactions that take place in the production process of regenerated cellulose are to change the structure of the polymer – including its morphology – to obtain a resulting substance with different properties; for example, the structure of regenerated cellulose can make this polymer more thermodynamically stable than the cellulose found in nature:

"Cellulose II is the most thermodynamically stable form of cellulose because it can always be produced from cellulose I, but not vice versa. The stability may result from hydrogen bonds extending in the c direction, which normally has only van der Waals bonds. There is general agreement that cellulose II is antiparallel (see **Figure 3b**) with three to four anhydroglucose moieties required to make the bend."[3]

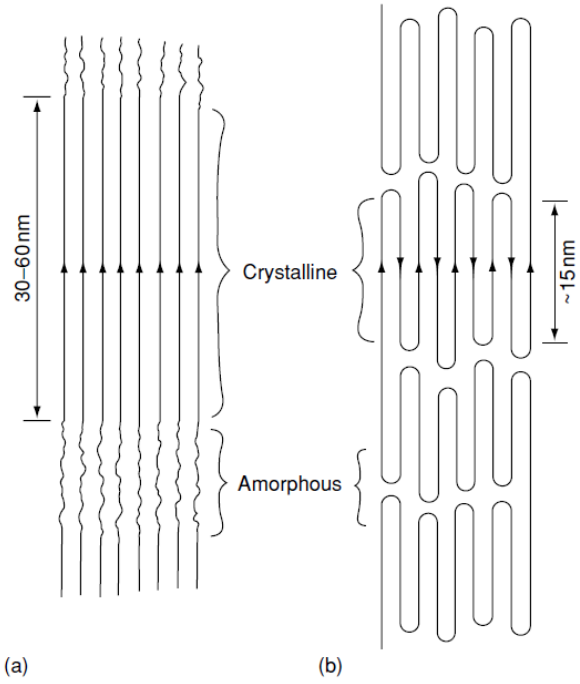

Figure 3b Cellulose I parallel and (b) cellulose II antiparallel structures.

Source: Holtzapple, M. T. (2003). CELLULOSE. In Encyclopedia of Food Sciences and Nutrition (pp. 998–1007). Elsevier.

3 The interpretation of 'plastic' chosen by the Commission makes the Directive less effective

Regenerated cellulose can be used in applications that look and behave in a very similar manner (and to non-experts, identical) to those plastic polymers that the Commission does

[3] Holtzapple, M. T. (2003). CELLULOSE. In Encyclopedia of Food Sciences and Nutrition (pp. 998–1007). Elsevier.

interpret as covered by the definition of ‘plastic’ under the SUPD. This presents practical problems for enforcement authorities, waste management bodies and consumers seeking to make sustainable choices. Those practical problems reduce the effectiveness of the Directive.

If deemed ‘not plastic’, regenerated cellulose in the form of cellophane can be readily used to substitute some of the plastic items covered by the SUPD. Even before the transposition deadline of the Directive, cellulosic films are already being marketed as “plastic free:

Consumers concerned about the effect of plastic in the environment and seeking to make sustainable choices will receive confusing and contradictory information see little or no perceptible change in the amount of ‘plastic’ surrounding them and will have no reliable and accessible way of confirming whether the disposable fork/cup/food wrapper/straw they were given is in fact “plastic-free”, particularly in the case of items such as straws which don’t normally have labelling in their body.

In addition, there is little certainty that the environmental impacts that concern consumers about plastic will not be caused too by the SUPD items if they are made out of regenerated cellulose. For anyone who owns a piece of clothing made out of viscose and washes it regularly, it is clear that viscose does not disintegrate at the speed that consumers will be led to believe by its characterisation as ‘plastic free’. Rayon fibers are consistently found in studies analysing

microplastic pollution in marine[4] [5] and fresh water environments[6]. The exclusion of these polymers from the definition of plastic for the purposes of the SUPD would not reduce the risks that the items made from regenerated cellulose pose to the marine and aquatic environment when they become litter[7], nor the risks to human health that the SUPD seeks to dispel[8].

Viscose wipes or viscose-strengthened wipes do not disintegrate in the waste water system in a similar way to paper. The reason for putting viscose in the wipes is precisely to make them able to resist moisture and friction to a reasonable degree to work as a wet wipe. Substitution with viscose will make no significant difference to flushability (viscose wipes can still cause 'fatbergs' if flushed) – but will allow producers to label viscose wipes as 'plastic free' when other wipes will have to be conspicuously labelled as containing plastic and highlighting the consequences of plastic pollution in the environment. There is reason to believe more consumers will flush wipes if they believe them to be plastic free.

The exclusion of regenerated cellulose from the scope of the Directive would also make the enforcement – notably of the bans – much more challenging, as it is difficult to tell apart a polypropylene straw from a cellophane straw for example (and the first one would be banned while the second authorised).

The calculation of the costs of clean-up of litter will also be made more difficult by the fact that it will be impossible to tell with the naked eye whether a piece of litter is made of what the Commission interprets to be 'plastic' for the effects of the SUPD and regenerated cellulose.

Lastly, the exclusion of these polymers could also create major challenges related to the waste management of the items covered by the Directive by, for example, contamination of waste streams when confused consumers dispose of so-called 'plastic-free' items or packaging into food waste or compost bins.

As a personal anecdote, some of my colleagues wrote to several waste management authorities in the UK and the EU asking which bin we should put the cellulosic film bag in the photo, explaining it was made of wood and the box said it was plastic free, and to date all the responses have been to put the bag in the general waste bin, explaining that putting it in the compost bin would create contamination or confuse the waste collectors into thinking the compost bin was contaminated. This can be surprising and puzzling to the public, who are likely to conclude that regenerated cellulose is inherently suitable for composting.

The difficulties of consumers of assessing whether they are actually being provided with a plastic free product, the difficulties for authorities of distinguishing between identical looking

[4] Qu, Xiaoyun, Su, Lei, Li, Hengxiang, Liang, Mingzhong, and Shi, Huahong. "Assessing the Relationship between the Abundance and Properties of Microplastics in Water and in Mussels." The Science of the Total Environment 621 (2018): 679-86. Web.
[5] Kanhai, La Daana K, Officer, Rick, Lyashevska, Olga, Thompson, Richard C, and O'Connor, Ian. "Microplastic Abundance, Distribution and Composition along a Latitudinal Gradient in the Atlantic Ocean." Marine Pollution Bulletin 115.1-2 (2017): 307-14. Web.
[6] Pegado, Tamyris De Souza E Silva, Schmid, Kurt, Winemiller, Kirk O, Chelazzi, David, Cincinelli, Alessandra, Dei, Luigi, and Giarrizzo, Tommaso. "First Evidence of Microplastic Ingestion by Fishes from the Amazon River Estuary." Marine Pollution Bulletin 133 (2018): 814-21. Web.
[7] Green, Dannielle Senga, Jefferson, Megan, Boots, Bas, and Stone, Leon. "All That Glitters Is Litter? Ecological Impacts of Conventional versus Biodegradable Glitter in a Freshwater Habitat." Journal of Hazardous Materials 402 (2021): Journal of Hazardous Materials, 2021-01-15, Vol.402. Web.
[8] Article 1 of Directive (EU) 2019/904: "The objectives of this Directive are to prevent and reduce the impact of certain plastic products on the environment, in particular the aquatic environment, and on human health, as well as to promote the transition to a circular economy with innovative and sustainable business models, products and materials, thus also contributing to the efficient functioning of the internal market."

items that could or could not be considered plastic and the contamination of waste and consequent problems for waste management will weaken the SUPD and reduce its effectiveness, which is contrary to established jurisprudence by CJEU:

"The Court has consistently held in regard to a situation of this kind that, where a provision of Community law is open to several interpretations, **preference must be given to that interpretation which ensures that the provision retains its effectiveness**"[9].

4 The interpretation of 'plastic chosen by the Commission is inconsistent with the EU Green Deal, the Circular Economy Action Plan and the Waste Hierarchy

According to Article 7 TFEU, the Union shall ensure **consistency between its policies and activities**, taking all of its objectives into account and in accordance with the principle of conferral of powers.

Out of the several plausible interpretations of 'not chemically modified' that the Commission could have chosen, the Draft Guidelines adopt that which causes confusion among consumers about the sustainability of the packaging and products they use and creates practical difficulties for the enforcement of the SUPD, while also increasing the technical challenges for waste managers and recycling processes.

In addition, instead of creating incentives for companies to close even further the circular economy loop and moving up in the waste hierarchy, the Commission's interpretation creates incentives for companies to escape the obligations of the SUPD by choose packaging made of materials that are not widely recycled and are not designed for reuse.

The EU Green Deal and the Circular Economy Action Plan promised to empower consumers so that they could make green decisions on the basis of clearer information. The interpretation of 'plastic' in the Commission's guidelines clearly does not contribute to this policy objective. Indeed, it confuses consumers in a way that appears to contradict Article 38 of the Charter of Fundamental Rights – which requires the Commission to ensure a high level of consumer protection.

The interpretation creates an incentive for producers to – instead of designing their products and delivery systems for reuse and recycling – switch to regenerated cellulose in order to escape the provisions in the SUPD and make investments that entrench a linear system. This too is inconsistent with the policy objectives of the CEAP.

In addition, excluding regenerated cellulose from the scope of the SUPD could create a driver for deforestation, which would be contrary to the EU Green Deal's promise to "take measures, both regulatory and otherwise, promote imported products and value chains that do not involve deforestation and forest degradation"[10].

[9] Case C-434/97, *Commission* v *France*, para. 21.
[10] European Commission (2019) Communication from the Commission to the European Parliament, the European Council, The Council, The European Economic And Social Committee And The Committee of the Regions. The European Green Deal, COM/2019/640 final.

Lastly, regenerated cellulose increases the barriers for the effective separate collection of waste and consequently to high quality recycling.

5 The interpretation of 'plastic' chosen by the Commission is widening an exception

An exception requires a strict interpretation

The definition of a substance 'not chemically modified' is established in Article 3(40) of Regulation (EC) No 1907/2006: "a substance whose chemical structure remains unchanged, even if it has undergone a chemical process or treatment, or a physical mineralogical transformation, for instance to remove impurities".

In a previous draft of the guidelines, dated March 2020, three possible interpretations of the term 'not chemically modified' were listed:

- "A strict interpretation where no modification is allowed even during the extraction process.
- An interpretation that refers to a process in which no intentional change occurs in any stage of the manufacturing process. The changes which occur due to the extraction process are not considered as intentional changes and therefore not to affect the status of the extracted substance as a 'natural polymer'.
- An interpretation that refers to the end stage of the manufacturing process. The changes occurring during the manufacturing process are not considered relevant, the end product of the manufacturing should be considered when determining the status of the polymer."[11]

However, in the latest version of the draft guidance, the Commission chose the least strict interpretation of the term,

Because this definition defines the scope of an exception, the general rule of construction of EU law mandating that exceptions are construed restrictively[12] should guide the interpretation of the term. The Commission, therefore, is breaching an established rule of construction of EU law.

[11] Ramboll et al (2020) Study to support the development of implementing acts and guidance under SUP Directive on the reduction of the impact of certain plastic products on the environment.
[12] Case C-287/98, *Grand Duchy of Luxemburg* v Berthe Linster, Aloyse Linster and Yvonne Linster, para. 49.