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Lisboa, 12 de dezembro de 2022

Subject: Response by Plastic Soup Foundation to the LCA on shopping bags

Dear Elles Tukker

The study was developed using internationally recognized scientific methodology of life cycle assessment and most updated information available on all life cycle stages, from cradle to grave, including production, distribution, use and end-of-life. Its development also included a peer review performed by Professor Roland Clift, a reference specialist in this matter, which concluded the appropriateness and reliability of the methodology, results and conclusions.

The issue of microplastics can occur from plastic products discarded directly in the environment and can have negative impacts on the environment and contaminate the food chain. The criticism is based on the fact that we did not consider the "leakage to the environment", which, in our opinion, is not that simple. The "leakage to the environment" will only occur due to the unavailability of end-of-life management systems or with inadequate behavior by consumers.

First it is very important to highlight that the study was developed for the specific system boundaries of the four European countries, which have in place systems that ensure the collection and management of products when they reach the end-of-life. This fact means that plastic bags and all other bags are covered by systems that ensure their collection and management when they become waste. One of the most important conclusions drawn in

the study was that is key that countries have implemented end-of-life management systems to ensure that products are recovered and recycled, and are not discarded directly to the environment, in which case negative impacts can occur.

Because of these systems being available in the four countries, the likelihood of shopping carriers being disposed by consumers directly in the environment becomes very low. Even we were to consider this minimal possibility, there is currently no data available to account the amount of shopping carriers that could be leaked directly to the environment in Portugal, Spain, Italy and Belgium. Most likely because this is not a significant phenomenon in these countries and they have no relevant contribution to the worldwide problem of microplastics.

If in any case we were to estimate the minimal amounts of shopping carriers, including plastic bags, that could be discarded directly to the environment in Portugal, Spain, Italy and Belgium, this would add uncertainty to all results of the study, without any expected added value to the understanding of the environmental performance within the scope of the study. In that sense, the issue of microplastics was specifically addressed in the study and the importance of avoiding was emphasized with the discussion of two aspects:

- (1) the highest priority should be to prevent leakage by ensuring that all plastic materials remain within the economy which can be achieved through efficient waste systems to avoid that plastic ends up in the environment through reliable collection and recycling of plastic bags, and
- (2) the methodologies for analyzing the environmental impacts of plastics need to be improved and standardized, as more information is progressively made available, for example, regarding the phenomena of plastics degradation in the environment and its consequences.

There is currently no LCA calculation method that quantifies the environmental impacts of the release of microplastics, which is why it is a limitation to our study and other on the subject. This limitation works both ways, as it does not allow to conclude that

environmental impact of microplastics would change or it would not change the final outcome of the analysis.

Despite the limitations, LCA is the most comprehensive and recognized scientific methodology to determine the environmental impacts of a product's life cycle. And so LCA was appropriately developed in the study to assess the environmental impacts of different shopping carriers, including bags made of LDPE, polyester, polypropylene, paper, jute, cotton, and other. The results and conclusions are specific for the context of the four European countries and any inferences for the general context should not be made.

Finally, Euroconsumers remain open to improve the LCA methodology used for quantification of the environmental impacts, in particular to consider new scientific knowledge and information that can be made available regarding plastics or any other materials that may be applied to shopping carriers.

Best regards,



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