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How to extend the Extended Producer Responsibility along the value chain of plastic packaging waste

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Introduction

The Extended Producer Responsibility (EPR) “is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products” (OECD, 2018). For packaging, the importers/producers pay a certain environmental contribution in order to reach a certain recycling target independently from the market demand. Due to the importance of EPR, the European Commission is working on harmonising its application and the way the contributions are calculated (European Commission, 2018). This work focuses on plastic packaging due to the recent importance of this waste fraction.

The specific objectives of this work are: to demonstrate that the reported quantity of recycled plastic are not actually recycled; to quantify which costs are covered by the environmental contribution and to propose an “extension” of the EPR for plastic packaging. This work will contribute to the discussion on how to implement effectively EPR in Europe.

Material and Methods

The EPR strategies for plastic packaging waste in Europe are analysed with the use of the Material Flow Analysis (MFA), system and market analyses with a special focus on export of waste. Lastly, we worked on modelling how the environmental contribution could be quantified in order to reach the recycling targets.

Results and Conclusions

The data on material officially recycled in European countries usually report only the quantity of material that is sold in the market as waste bales after sorting and not the material that will actually become a new product that is not tracked.

Furthermore, the environmental contributions generally do not account for the design of the products a part for rare shy attempts to do so (e.g. France and Italy) even if the design can highly impact the market price of the waste bales (e.g. PET clear versus PET mixed) and of the applications of the secondary polymers.

The conclusion of this study is that the current EPR is not leading to the wanted recycling targets. The environmental contributions paid by companies should be modelled based on the real recycling path and on the design of the packaging. Finally, EU should work on a better understanding of the fate of the plastic collected.

References

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