

Plastic packaging waste – a plague or a resource?

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Our plastic packaging as waste; Materials Recycling World, 2018

Plastic packaging waste that is being produced all over the world is still finding its way into our environment, including our oceans transforming them into unsustainable homes to marine species. Most of that waste either ends up in the environment or it is sent to landfills or incineration plants. In 2016, the plastic packaging waste recycling rate in Portugal was 42% and in Sweden 50%. So, it is possible to imagine the destination of the remaining plastic packaging waste in both countries.

The recent master's thesis on plastic packaging recycling (Freitas, L. 2018) concluded that there are still many improvements to be done to better manage plastic packaging waste, mainly its recycling system. It was also shown that there is often a lack of transparency in the recycling system, since at times available information about how it works and how are the published statistics obtained are not clear enough. In addition, there are many issues related with the supply and demand of recycled plastics, also known as secondary raw materials. Besides, the recycling system involves many actors which makes it more complex to study and understand the system and to identify optimal solutions for managing plastic packaging waste.

Nevertheless, measures for improving the plastic packaging waste management were suggested, like landfill and incineration bans on recyclable waste. Likewise, improvements in the recycling system that result in recycled plastics with better quality and clear characteristics should be done, so that their demand and consequently their supply increases. The proposed solutions could help improve plastic packaging waste recycling rates, hence reducing plastic littering and instead transform this waste into a valuable resource. This could help shift the thought of plastic waste as

a plague and see it for its true potential, a resource that can be used again, by reintroducing this in a plastic product life cycle. Thus, promoting plastics in a circular economy. These findings could also raise awareness amongst the actors involved in the plastic packaging waste recycling system, perhaps influencing national measures, policies and targets.

Further studies could be carried out, such as determining and understanding the losses in the amounts of plastic packaging waste throughout its life cycle, specially between production, collection and sorting. In addition, one could try to understand if differences in how this type of waste is source sorted at households influence the recycling efficiency. Studies on each plastic type market could also help tackle some of the issues found. These are only some of the examples that are mentioned in the master's thesis.

These findings were obtained by comparing and analysing two different plastic packaging recycling systems, the Portuguese and the Swedish one. Furthermore, the study includes a brief comparison and analysis of the waste management systems and the recycled plastics market. Finally, most of the study was carried in the Environmental and Energy Systems division of Faculty of Engineering, LTH in Lund, Sweden. This was also done in cooperation with the University of Lisbon.

References:

Materials Recycling World (2018). Plastics Packaging Waste. Retrieved from https://www.mrw.co.uk/pictures/1240x826/8/1/5/3076815_Plastics-packaging-waste.jpg

Freitas, L. (2018). Comparative Analysis of Plastic Packaging Recycling in Portugal and Sweden. Faculty of Engineering LTH, Lund University