

Extended Producer Responsibility and Plastic Credits

The issue of plastic waste is startling. Estimates show that plastic produced is roughly 380 million tons, and that is every year¹. Plastic causes multiple types of risks to human health through various means, one being microplastics. Estimates show that we are consuming up to a credit card worth of plastic each week². Another threat is the harmful chemicals that exist in plastic that have been connected to reproduction risks, diabetes, effects on the thyroid and countless other harms³. BPAs (bisphenol A) specifically used in food and drink containers have been found to leach into the items within the container showing effects on health of all ages, including at the fetus stage⁴. The incredibly frightening amount of plastic and the risks associated highlights the importance of introducing strategies to reduce both plastic production and waste. Although consumers play a part in plastic waste, we must address the issue in the production and remanufacturing stages.

Extended Producer Responsibility (EPR) holds plastic producers responsible for the externalities of their products⁵. The policy shifts the burden of plastic management from

¹“Plastic Pollution Facts,” Plastic Oceans International, July 21, 2021, <https://plasticoceans.org/the-facts/#:~:text=We%20are%20producing%20over%20380.at%20least%20several%20hundred%20years>, n.p.

² World Wide Fund For Nature, “Plastic Ingestion by Humans Could Equate to Eating a Credit Card a Week,” WWF, June 12, 2019, https://wwf.panda.org/wwf_news/?348375%2FPlastic-ingestion-by-humans-could-equate-to-eating-a-credit-card-a-week, n.p.

³ Ben Adler, “Plastics and Human Health: Plastics and the Environment Series,” Geneva Environment Network, March 27, 2023, <https://www.genevaenvironmentnetwork.org/resources/updates/plastics-and-health/>, n.p.

⁴ Brent A. M.D. Bauer, “What Is BPA, and What Are the Concerns about BPA?,” Mayo Clinic (Mayo Foundation for Medical Education and Research, March 24, 2023), <https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/expert-answers/bpa/faq-20058331>, n.p.

⁵ Government of Alberta, “Extended Producer Responsibility Engagement,” Alberta.ca, February 23, 2023, <https://www.alberta.ca/circular-plastics-economy-engagement.aspx>, n.p.

consumers and institutions like governments and municipalities towards companies that produce and use plastic products⁶. There are different ways of using EPR, such as voluntary and mandatory models that address the processing of plastic waste, like recycling⁷. EPR is applied in countries around the world. For example, in Germany, producers must deal with the waste of their products (packaging) or pay for the recycling of materials, the cost ranges depending on the materials and the ease of recycling them⁸. In Slovakia, consumers pay a deposit for beverage packaging that is returned once the companies of the materials receive the packaging and in response, there have been changes to the products used to prevent costs for producers, including reducing the amount of plastic used overall⁹. In Alberta, policy proposals demonstrate different methods that examine effective recycling programs, such as Producer Responsibility Organizations (PROs)¹⁰ categories for different materials post-consumer use like agricultural plastics and beverage containers¹¹, and handling of specific hazardous materials and products¹².

⁶ Government of Canada, "Introduction to Extended Producer Responsibility," Canada.ca (/ Gouvernement du Canada, August 11, 2017), <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/overview-extended-producer-responsibility/introduction.html>, n.p.

⁷ Yamini Gupt and Samraj Sahay, "Review of Extended Producer Responsibility: A Case Study Approach," *Waste Management & Research: The Journal for a Sustainable Circular Economy* 33, no. 7 (2015): pp. 595-611, <https://doi.org/10.1177/0734242x15592275>, 596.

⁸ Yamini Gupt and Samraj Sahay, "Review of Extended Producer Responsibility: A Case Study Approach," *Waste Management & Research: The Journal for a Sustainable Circular Economy* 33, no. 7 (2015): pp. 595-611, <https://doi.org/10.1177/0734242x15592275>, 598.

⁹ Yamini Gupt and Samraj Sahay, "Review of Extended Producer Responsibility: A Case Study Approach," *Waste Management & Research: The Journal for a Sustainable Circular Economy* 33, no. 7 (2015): pp. 595-611, <https://doi.org/10.1177/0734242x15592275>, 604.

¹⁰ Government of Alberta, "What We Heard : Extended Producer Responsibility (EPR) for Single-Use Plastics, Packaging, Paper Products, and Hazardous and Special Products," - Open Government, November 2021, <https://open.alberta.ca/dataset/what-we-heard-extended-producer-responsibility/resource/71089246-bab0-42a3-9ba2-fa697e470566>, 8.

¹¹ Government of Alberta, "What We Heard : Extended Producer Responsibility (EPR) for Single-Use Plastics, Packaging, Paper Products, and Hazardous and Special Products," - Open Government, November 2021, <https://open.alberta.ca/dataset/what-we-heard-extended-producer-responsibility/resource/71089246-bab0-42a3-9ba2-fa697e470566>, 6.

¹² Government of Alberta, "What We Heard : Extended Producer Responsibility (EPR) for Single-Use Plastics, Packaging, Paper Products, and Hazardous and Special Products," - Open Government, November 2021,

Plastic credits are another option to reduce plastic production and waste by generating profits from remanufacturing plastic for future use and ultimately diverting and removing plastic from the environment¹³. An important element of plastic credits is the incentive for businesses to remove enough plastic that they are net zero in plastic waste, resulting in a “Plastic Neutral Certification”¹⁴. Plastic removal results in either recycling the products or providing routes that manage the waste in methods that minimize the environmental risk¹⁵. An example of a management method similar to the plastic credit model is the “UK Packaging Waste Programme”¹⁶. The strategy distributes responsibility among those who participate in the plastic production process and earn credits when the products are recycled, which increases the amount of plastic kept out of landfills and incentivizes circulation of the same plastic products rather than new ones¹⁷.

EPR and plastic credits are two approaches defined in a particular way but are applicable in various forms depending on the place and the industries they work to shift. Integrating policies and programs that effectively reduce plastic production and waste are vital for protecting the well-being of the natural environment and human population.

<https://open.alberta.ca/dataset/what-we-heard-extended-producer-responsibility/resource/71089246-bab0-42a3-9ba2-fa697e470566>, 9.

¹³ Geoff King, “What Are Plastic Credits? an Introduction - Purpose Rising Blog,” rePurpose Global (rePurpose Global, May 26, 2022), <https://repurpose.global/blog/post/what-are-plastic-credits>, n.p.

¹⁴ Geoff King, “What Are Plastic Credits? an Introduction - Purpose Rising Blog,” rePurpose Global (rePurpose Global, May 26, 2022), <https://repurpose.global/blog/post/what-are-plastic-credits>, n.p.

¹⁵ Geoff King, “What Are Plastic Credits? an Introduction - Purpose Rising Blog,” rePurpose Global (rePurpose Global, May 26, 2022), <https://repurpose.global/blog/post/what-are-plastic-credits>, n.p.

¹⁶ Yamini Gupt and Samraj Sahay, “Review of Extended Producer Responsibility: A Case Study Approach,” *Waste Management & Research: The Journal for a Sustainable Circular Economy* 33, no. 7 (2015): pp. 595-611, <https://doi.org/10.1177/0734242x15592275>, 598.

¹⁷ Yamini Gupt and Samraj Sahay, “Review of Extended Producer Responsibility: A Case Study Approach,” *Waste Management & Research: The Journal for a Sustainable Circular Economy* 33, no. 7 (2015): pp. 595-611, <https://doi.org/10.1177/0734242x15592275>, 598.

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