



Position Paper – WWF Network

Extended Producer Responsibility (EPR) For Plastic Packaging

Plastics pollution has been recognized as a global crisis. This cross-cutting issue touches on several of WWF’s conservation priorities, including Oceans, Freshwater, Wildlife and more. To address this crisis, the WWF network has set a goal of “No Plastic in Nature by 2030” which aims to stop the flow of plastics into nature by eliminating unnecessary plastic items; doubling reuse, recycling, and recovery; and ensuring the remaining plastic is sourced responsibly. WWF has identified Extended Producer Responsibility (EPR) as a critical policy tool with a track record to hold manufactures accountable for their plastic products and packaging’s end-of-life impacts, as well as to encourage holistic eco-design in the business sector. Thus, the WWF Network EPR project, by facilitating partnerships among various stakeholders and sharing best practices globally, hopes to promote and enhance the adoption of EPR schemes and reduce plastic leakage to nature.

1. Introduction

The plastic pollution of oceans has become a critical issue having reached gigantic dimensions globally and severely threatening marine life. Approximately 4.8 - 12.7 million tons of plastics are entering the ocean yearly¹. Plastic waste production is expected to quadruple until 2050 which will lead to more plastic than fish in the oceans by then². Plastic waste is associated with severe impacts on wildlife, affecting over 700 marine species alone³. It has also shown serious effects on human livelihoods, damaging economic sectors, such as fishing and tourism⁴. Finally, plastic production and incineration causes 860 million tons of CO₂e annually which makes it a key contributor to global heating⁵.

The packaging of consumer goods and single-use plastics plays an important role in generating plastic waste leakage into the environment. On a global scale, 32 % of packaging waste is escapes into the environment.⁶ The collection of packaging waste is essential in building up reuse and recycling systems. These are major steps towards the transition to a circular economy which is needed to stop plastic pollution effectively.

The main reason of plastic waste leakage into the environment is the lack of sound collection and treatment systems in many low- and middle-income countries.⁷ The collection rate in developing countries is often below 50%, and in low-income countries, 93% of the waste is dumped somewhere in the environment. In industrialized countries this

¹ Jamberk & Geyre et al., 2015, ‘Plastic waste inputs from land into the ocean’.

² World Economic Forum, 2017, ‘The New Plastics Economy’

³ Gall & Thompson, 2015, ‘The impact of debris on marine life’.

⁴ APEC Marine Resources Conservation Working Group, 2009, ‘Understanding the Economic Benefits and Costs of Controlling Marine Debris in the APEC Region’

⁵ Center for International Environmental Law. 2019. Plastic & Climate. The Hidden Cost of a Plastic Planet.

⁶ EMF

⁷ See overview in: UNEP (2016): Marine Litter, Vital Graphics, p. 10

rate lies at only 4%.⁸ Open cast dumping of waste leads not only to severe environmental and hygienic hazards but is also one of the root causes for leakage of plastic waste into the oceans, especially when dumpsites are located near shorelines, rivers or in periodically flooded areas.

In low-income countries, the costs for waste management comprises, on average, 19% of the municipal budget, compared to only 4% in high-income countries. This causes low- and middle-income countries to often face budget shortfalls for waste management.⁹

It must be considered that the main share of plastic waste has a low value and in many developing countries these materials are not collected and treated properly. This shows revenues generated by recycling of valuable materials from the waste fraction particularly some specific plastic materials are generally too low for waste management companies to compete freely.

Inefficient public waste management services throughout urban areas often present a source of employment and livelihoods for informal waste pickers, who play a key role in collecting and extracting value from waste. For example, in Thailand, more than 70% of recyclable materials are collected informally¹⁰. However, the considerable reliance on insufficient and uncontrolled street collection model may expose a vulnerability to the recycling value chain in these places. Informal collection leads to insufficient treatment of materials which do not have value to the collector and lack monitoring, environmental and social standards.

Summarizing different calculations for waste management costs in developing countries and revenues from composting, recycling or energy use from waste treatment, generally only 5 to 20% of total waste management costs can be covered by these revenues.¹¹ Adding to this, the willingness/capability of inhabitants to pay for waste collection in developing countries is low, due to several reasons.¹²

2. Systems of Corporate Responsibility and its application

Commonly, producers are responsible for their production process and their products' safety when in use (Global Producer Responsibility). Extended Producer Responsibility is then defined as the additional shift of responsibility for the end-of-life management of

⁸ Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata, and Frank Van Woerden. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development Series. Washington, DC: World Bank

⁹ Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata, and Frank Van Woerden. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development Series. Washington, DC: World Bank

¹⁰ Thailand Environment Monitor (2003). A joint publication of the Pollution Control Department (PCD) of Thailand's Ministry of Natural Resources and Environment (MoNRE), the World Bank, the United States-Asia Environmental Partnership (USAEP), and Japan Bank for International cooperation (JBIC). Retrieved March 7, 2019 from <http://documents.worldbank.org/curated/en/588891468118471987/pdf/339510rev.pdf>

¹¹ Pfaff-Simoneit (2012): Entwicklung eines sektoralen Ansatzes zum Aufbau von nachhaltigen Abfallwirtschaftssystemen in Entwicklungsländern vor dem Hintergrund von Klimawandel und Ressourcenverknappung. Dissertation Universität Rostock, p. 118

¹² Pfaff-Simoneit (2012): Entwicklung eines sektoralen Ansatzes zum Aufbau von nachhaltigen Abfallwirtschaftssystemen in Entwicklungsländern vor dem Hintergrund von Klimawandel und Ressourcenverknappung. Dissertation Universität Rostock, p. 17

products and materials to the producers.¹³ There are two main intentions behind the establishment of these kinds of systems:

- To share the physical, organizational and/or financial responsibility for waste management between producers and government, thus reducing the burden on municipalities. This creates more resourceful and effective schemes increasing the end-of-life collection, environmentally sound treatment of collected products and waste reuse and recycling;
- To providing incentives for manufacturers to design resource efficient and low impact products.¹⁴

As a result, EPR schemes have positive effects up and down the value chain, making them an ideal tool to push the economy towards circularity. To close the loop towards plastic circularity it is necessary to both end the disposal of end-of-life plastics and stop the use of virgin feedstocks by reducing plastic production and using secondary raw materials.

These systems have been implemented in packaging since the late 1980s, but a significant increase in adoption can be seen in the last decade. Nearly 400 different systems, currently adopted in several countries or states, exist around the globe.¹⁵ The introduction of EPR has shown pronounced increases in collection and recycling rates, can reduce the need for virgin feedstocks and lower costs for secondary raw materials. For example, Italian recycling rates for plastic packaging have increased from 9.6% in 1997 to 38% in 2014, and for all packaging from 3% to 65.4% over the same time period¹⁶.

The approaches for EPR schemes regarding several aspects:

- Materials and products included in the scheme
- Producers subject to EPR regulation
- Obligations companies must comply with
- Organisation of the EPR scheme¹⁷
- Setting of collection, reduction, and recycling targets
- Establishment of a fee system and for factors as product recyclability, proportion of recycled material in products

For a detailed description of different schemes see Watkins et al (2017).¹⁸

The coverage of costs for collection, sorting, and recycling has been identified as one of the major strengths of responsibility systems because they can ease the burden on public

¹³ Lifset, R. et al. (2013) Extended Producer Responsibility. National, International and Practical Perspectives

¹⁴ E. Watkins, S. Gionfra, J-P. Schweitzer, M. Pantzar, C. Janssens and P. ten Brink (2017) EPR in the EU Plastics Strategy and the Circular Economy: A focus on plastic packaging

¹⁵ Daniel Kaffine and Patrick O'Reilly (2015): What have we learned about Extended Producer Responsibility in the past decade? A survey of the recent EPR economic literature

¹⁶ Eurostat (2017)

¹⁷ This may be based on individual or collective producer responsibility. In the case of collective schemes Producer Responsibility Organizations (PRO) may hold a monopoly or compete with other PROs

¹⁸ E. Watkins, S. Gionfra, J-P. Schweitzer, M. Pantzar, C. Janssens and P. ten Brink (2017) EPR in the EU Plastics Strategy and the Circular Economy: A focus on plastic packaging

budgets, reducing the financial costs of waste management.¹⁹ For example, in Belgium, annually around 134 Mio € and in Germany around 1 billion € are generated from fees out of established systems which are addressing the responsibility for the corporate sector²⁰. In addition, producers are encouraged to optimize the cost efficiency for waste management and recycling.²¹

Nevertheless, EPR cannot be considered a silver bullet but has proven to be most effective in combination with different policy tools, such as disposal regulation and taxes. There are several factors which can hinder the effective roll-out of EPR schemes. These include lack of alignment between stakeholders, lacking enforcement, missing social safeguards, inadequate target setting, as well as social and cultural factors.

In conclusion, the establishment of systems of the extended producer responsibility (EPR) has contributed to the introduction of efficient separate collection schemes for specific waste streams including plastic packaging. EPR shifts the investment and operational costs for waste management of used packaging at least partly to the industry. Potentially, this is a huge advantage for developing countries where the establishment of a proper waste management system is hampered by the inability of governmental or communal institutions to cover the whole cost for waste collection, sorting, and recycling.

However, the introduction of EPR schemes to other countries should be carefully adapted to fit the local particularities. The design of an EPR scheme must be based on the specific waste management, political, and social context of the country. Only in this way, can it truly serve to promote progress on prevention and reduction of waste leakage in these countries.

3. WWF Position

The above-mentioned activities have often been summarized under the term “Extended Producer Responsibility (EPR).” Because the approaches for taking over responsibility for end-of-life of plastics products or packaging are so very different, the concrete meaning of EPR is not always clear. For WWF, the clear definition for EPR is:

“Companies, which are selling products and using packaging, shall be fully responsible for the end-of-life of products and packaging. This responsibility includes the organizational and/or financial responsibility for the collection, sorting and recycling of products in a similar quantity to those sold or used. These systems should further be designed to incentivise the prevention or minimization of plastic usage for packaging and products at the design stage. These systems, including the mode of organization of the re-

¹⁹ E. Watkins, S. Gionfra, J-P. Schweitzer, M. Pantzar, C. Janssens and P. ten Brink (2017) EPR in the EU Plastics Strategy and the Circular Economy: A focus on plastic packaging, p. 18

²⁰ Cyclos GmbH (2018): Extended Producer Responsibility. Presentation Working Group, p.23

²¹ Post plus 2014

sponsibility for end-of-life of products and packaging, should be adapted to the existing regional or national environment.”

When using the term “Extended Producer Responsibility,” there should always be a reference to this definition.

Several consumer good companies have already made commitments regarding the design of packaging, recycling, and support of packaging waste collection. But these commitments do need structures for collection, sorting, and treatment of packaging waste, which can only be developed on a regional or national level through collective industry and governmental efforts. The informal sector and other regional characteristics need to be integrated, as the imposition of systems from foreign countries have the potential for failure. Only those EPR schemes developed as an inclusive governance model associating all stakeholders can play an important role to help the infrastructure build up.

To guarantee success, mandatory systems are necessary which are based on a legal framework. Only through such a framework can a level playing field for all companies be created. Legislation should clearly define the group of actors that have to adhere to the EPR requirements given in law and penalize the breaking of the rules. This can ensure the set-up and financing of coherent collection and recycling systems. Good EPR systems should further set ambitious targets considering technological and economic feasibility, provide public information and transparency, integration of the informal sector, and clear responsibilities and alignment between the actors. It should also specifically target eco-design.

Voluntary EPR systems based on agreements between some market actors, the government or other stakeholders or established by market actors alone are not capable of creating a solid waste management system. Nevertheless, the WWF urges companies to make commitments on the reduction of packaging, support of recycling and reuse schemes, as well as the implementation of pilot EPR schemes. Though these pioneers will carry the burden initially, the roll-out of pre-organisations is an important step towards mandatory EPR schemes and can become a competitive advantage for participating companies in the long run.

Experiences from European countries show EPR is an effective policy tool to improve waste management. However, if designed without taking the above-mentioned factors into consideration, it is hard for companies to truly take responsibility for the whole value chain. Therefore, the main focuses of the WWF EPR programme lie on:

- 1) Initiate or facilitate pre-organization in preparation of the founding of a system operator by engaging companies, governments and relevant stakeholders
- 2) Develop science-based study and analysis with recommendations for governments and companies related to waste management, EPR legal framework, plastic market etc.

- 3) The facilitation of exchange and sharing of experience and best practice amongst value chain players, as well as between different countries. This may also include building up capacities and awareness to tackle the problem.

Neglecting the responsibility for packaging waste and simply trying to address the responsibility for waste management by governments will not bring the issue forward. Undoubtedly, EPR schemes cannot exist in isolation. It constitutes a full spectrum of packaging waste management instruments which need to be combined with many other policy instruments. Each of these critical policy tools complements the other, encouraging a change in the behaviour of all actions involved in the product/packaging value chain and eventually reducing plastic waste leakage to the nature.

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