



## **Plastic REvolution Foundation**

Developing extended producer responsibility for packaging in Ghana: A brief introduction and status report

Report authored for and supported by the Norwegian Retailers' Environment Fund



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## 1. Introduction

The menace of plastic pollution is one of the pressing challenges of our time. It kills wildlife, it chokes sewages and drainage systems, and not least it leaks into the oceans and threatens marine life. While plastics have revolutionized production and consumption, making what we today consider modern life possible, its mismanagement has proven detrimental. Plastic is not the problem, plastic waste is. This is the view of the Plastic REVolution Foundation, and the background for our first project in Accra, Ghana.

The Plastic REVolution Foundation (PRF) is founded on a commitment to combat plastic pollution in an economically sustainable way, by the Norwegian industrialist Kjell Inge Røkke. It is one of his many initiatives to improve ocean health. The Foundation is led by Erik Solheim, former Norwegian Minister of Environment and Head of the United Nations Environment Program.

The Foundation aims to build projects that have self-sustained project economics and thus represent long-term sustainability and replicability prospects beyond one-off charitable grants. Furthermore, PRF aims to demonstrate a visible impact, and incorporate social objectives with environmental objectives. Part of this concerns engaging local communities and local authorities and aligning with government objectives on environmental safeguarding and economic development.

PRF's first project is set in Ghana, which is believed to be in a position to take the lead in creating global solutions to plastic pollution. West Africa has over the past years been home to far fewer international initiatives targeting plastic waste than e.g. South-East Asia, despite also struggling with pollution. Ghana is nonetheless making significant progress on sustainable development, and its governments have taken great steps in tackling plastic waste, becoming the second ever partner country of the Global Plastic Action Partnership (GPAP) of the World Economic Forum.

The vision of eliminating plastic waste in nature and cities, thus improving the environment as well as sanitary conditions, is supported and promoted at all levels, including the national government, MMDAs (Metropolitan, Municipal and District Assemblies) and general society. The government has launched the ambitious National Plastics Management Policy, and President Akufo-Addo has vowed to make Accra the cleanest city in Africa, continuing to build on the work of those before him. The local authorities in Accra have also been internationally praised for their efforts to improve waste management by supporting the informal sector. Building on the valuable relationship with Ghanaian authorities built by Kjell Inge Røkke through Aker's operative presence, this was a natural starting point for the PRF in exploring solutions to plastic waste.

The Foundation has identified a great opportunity to reduce plastic pollution and develop viable collection models, which can represent the first of its kind and form a model for future replication elsewhere. PRF wishes to contribute to achieving the vision of seeing Accra free of plastic waste, and the Foundation has consulted the national and local authorities towards the realization of this first project, which enjoys broad support. There is momentum to do something about the immense problem that is plastic pollution in Accra, and PRF believes that a Plastic-to-Liquid plant can be an important part of the solution. The ultimate



objective is to develop a model for self-financing collection through the transformation of used plastics into a product of value. If this concept is proven, not only can the plant in Accra be realized, but the concept will demonstrate a solution that can subsequently be brought to other parts of the world. Further background to the project and the work of PRF is provided in the End-of-Phase report<sup>1</sup> that was written in Q2 of 2020.

Concrete challenges however persist when it comes to reaching economic viability - particularly due to the cost of acquiring feedstock, including collection, transportation and pre-treatment. This must be solved either by lowering costs or by increasing revenues.

On the revenue side, liquid hydrocarbons (diesel, naphtha, gasoline) are highly commodified, and generally universal prices can be expected with differentiation only based on costs associated with geographic location and applicable legislation. Increasing revenues is most viable through legislation that sets requirements for recycled carbon fuels or recycled feedstock for new plastic production, thus creating a secondary market with higher prices than in the general commodity market. Another way in which the state can support the economic prospects of recycling beyond the market value of the materials, is by giving tax breaks or introducing other direct support schemes. Local offtake opportunities and prospects for increasing revenues are described in further detail in a separate report from a workstream targeting this topic directly (also financed by HMF).<sup>2</sup>

On the cost side, the topic of plastics quality and pre-treatment options is treated in a separate report from a workstream on the topic also financed by HMF.<sup>3</sup> However, there are limits to how much can be done in a purely cost-eliminating fashion. One of the key reasons that chemical recycling (and material recovery in general) is considered a much more solid business case in e.g. Western Europe, is not because the costs do not exist, but because they are to a large extent covered by the producers through extended producer responsibility schemes. (In parallel, evolving legislation may push for the creation of secondary – premium – markets, thus enhancing also the revenue aspect as mentioned above.)

Extended Producer Responsibility (EPR) is today a widely adopted policy tool for covering the cost of collection and recovery of various waste fractions. Following an increased consciousness around the challenges of marine plastics, EPR as a political tool has gained traction in a number of countries, and is increasingly being admitted to government strategies around waste management and combating marine pollution. Simultaneously, multinational producers have made voluntary initiatives to limit the negative effects of the plastic products they bring to the market.

Also in Ghana, efforts are currently taking place to implement an EPR scheme. Due to the potential effect of conducive policies that contribute towards covering the cost of collection and pre-treatment, and thus

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<sup>1</sup> Available at: <https://www.revocean.org/the-plastic-revolution-foundation-summarizes-learnings-in-comprehensive-end-of-phase-report/>

<sup>2</sup> Available at: <https://www.revocean.org/report-local-offtake-prospects-mapping-of-the-diesel-value-chain-and-pricing-structure-in-ghana/>

<sup>3</sup> Available at: <https://www.revocean.org/report-mapping-of-available-methods-for-plastic-feedstock-quality-improvement-for-pyrolysis-treatment-in-accra/>



the economic viability of a PtL plant, understanding the current process is of great interest to PRF. With the financial support of the Norwegian Retailers' Environment Fund, PRF and its partner consultancy Norwaste have assessed the ongoing process and outlook for EPR in Ghana, and the work is summarized in this report. The ambition is also that this report may provide an overview of EPR and the ongoing Ghanaian process for the use of PRF and of other actors.

The rest of the report is divided into two parts. Part 1 provides a general introduction to EPR, the process of implementing this as a policy tool, and experiences from other middle-income countries. Part 2 looks specifically at Ghana - providing a background to the context and actor gallery, describing the status of the process around implementing EPR, and some final considerations around the outlook going forward.

*The Plastic REVolution Foundation would like to thank the following for their insights and contributions to this report:*

- *Oliver Boachie - Special Advisor to the Ghana Minister of Environment, Science, Technology and Innovation*
- *Heather Troutman - Manager, Ghana National Plastic Action Partnership*
- *Hilde Opoku - Special Advisor on SDGs to the Ghana Minister of Finance*
- *Michael Funcke-Bartz, Johannes Paul and Ellen Gunsilius from GIZ, Germany*
- *Carlos de Silva and Gabriela G P Otero from ABRELPE, Brazil*
- *Priyen Tanna from KEPRO, Kenya*
- *Joachim Quoden, EXPRA, Belgium*

*As well as all stakeholders and actors that have been consulted throughout the duration of the project phase, also prior to the initiation of this dedicated workstream.*



# Part 1: Extended Producer Responsibility

## 2. Extended Producer Responsibility as a Waste Policy Tool

### What is Extended Producer Responsibility?

Extended Producer Responsibility is, according to OECD, an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.<sup>4</sup> In other words, the producers are required to bear a responsibility for the environmental impact of their products throughout their entire life cycle. This is closely in line with the "polluter pays" principle.<sup>5</sup> Accordingly, the EU waste framework directive defines Extended Producer Responsibility schemes as "a set of measures taken by Member States to ensure that producers of products bear financial responsibility or financial and organizational responsibility for the management of the waste stage of a product's life cycle".<sup>6</sup>

This responsibility can be exercised by providing the financial resources or by assuming the operational responsibility for the process (collection, pre-treatment, and recovery or disposal). It is considered a highly effective tool for achieving targets within waste management – the targets may depend on the product type, political ambitions and how the system is designed.

In practice, an EPR scheme on packaging will generally require each producer to pay a fee when introducing packaging to the market, that is proportional to the amount of packaging. This fee will cover all or part of the cost of collection, sorting and recycling/recovery/disposal of the packaging waste, and may be done by the companies themselves or delegated to another company or organization.

At its core, the *purpose* of an EPR scheme is shifting the financial burden of managing the relevant waste streams away from municipalities (and ultimately taxpayers) towards the producers, by providing a mechanism for securing financing for infrastructure investments and operational costs for necessary collection and treatment. Furthermore, introducing payment for the weight of material introduced on the market may incentivize reduction of packaging material used, potentially lowering the pressure on collection and disposal infrastructure. Through recycling targets, a system may improve resource recovery and duration of materials – the targets are normally set to be increased over time in order to allow for transition and encourage constant improvement. The scheme may also be designed in ways that encourage specific product designs (e.g. by introducing additional penalties for difficult-to-recycle plastics).

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<sup>4</sup> <http://www.oecd.org/environment/waste/extended-producer-responsibility.htm>

<sup>5</sup> This principle holds that the polluter should bear the "costs of pollution prevention and control measures" (OECD/GD (92) 81)

<sup>6</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02008L0098-20180705&qid=1578894559099&from=en#toclid6>



All these aspects of an EPR scheme contribute towards an overarching objective of combating environmental consequences of excessive use of packaging materials – including lowering pressure on resources used for their production and environmental pollution from disposal.

An EPR scheme may be developed for any type of packaging, such as glass, cardboard, metal and plastic, and may also be applied to other product types such as electronic devices and batteries, end-of-life vehicles, tires, furniture, textiles and hazardous waste.

### **Development of EPR**

EPR originates in the late 1980s, as the volume and complexity of waste streams increased and exceeded the management capacity of municipalities. “It was hoped that this would reduce the volume of waste going for final disposal, increase rates of recycling, and provide incentives for waste prevention and reduction at source.”<sup>7</sup> This type of scheme was first introduced in Germany, Norway and other western European countries, and has now become the norm, in one form or another, across OECD countries. Many low- and middle-income countries are now on the path to implementing their own EPR schemes, drafting and introducing legislation as a first step.

Since its origin, the EPR regulation has developed, lessons have been learned and loopholes have been closed. With the revision of the EU Waste Framework Directive in 2018, detailed minimum criteria were set out to ensure the effectiveness of the policy tool, recycling targets to be met and a level playing field for producers across Europe.<sup>8</sup> These minimum criteria are based on decades of European experience with regulating EPR.

### **Why introduce extended producer responsibility**

EPR has proven to be an effective tool to ensure that political targets are met in a cost-efficient way. This especially applies for waste streams where the value of the waste material does not cover the costs for collection, separation, and recycling. With EPR, the legislator can ensure that necessary measures are taken throughout the value chains to ensure that the targets are met. With the producers being responsible for the end-of-life value chains of the products, the conditions are in place for the most cost-efficient solutions to be found. Alternatively, when the waste owner and the local or central governments are responsible, these incentives are not necessarily given.

With EPR the regulator creates new markets on several levels, ranging from the level of producer responsibility organization (if competition is allowed) to collectors and recyclers. This brings responsibility and risks. Created markets need to be regulated and controlled. The existence of negative economies within parts of the waste management value chains makes it important to ensure both a level playing field of competition and avoid waste crime to happen. The issues related to market regulation and free riders

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<sup>7</sup> <https://www.oecd-ilibrary.org/sites/9789264256385-4-en/index.html?itemId=/content/component/9789264256385-4-en>

<sup>8</sup> [DIRECTIVE \(EU\) 2018/851 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL](#)



represent the most common challenges for EPR schemes to become successful, and are further commented below.

### **Key distinctions within EPR**

The Prevent Waste Alliance has developed a highly useful EPR toolbox, which breaks down certain key distinctions in developing an EPR scheme.<sup>9</sup> Below some of them are briefly addressed and commented.

#### *Voluntary vs. mandatory*

An EPR system may be voluntary, in which case none of the measures will be implemented as law but rather be initiated by the companies themselves with no legal requirement to do so. The system may also be regulated with agreements between the industry involved and the government. Normally mandatory schemes are considered more robust, as they give clear rules, predictability and enforcement procedures. Especially a regulatory and mandatory EPR scheme can set out clear procedures of how to ensure participation among the producers.

However, there are examples of successful EPR schemes without regulation or mandatory participation. In Norway EPR schemes for packaging, batteries, tires and electronic equipment were launched with voluntary agreements between the government and the industry in the 1990s (the EPR agreement for packaging was replaced by a regulation in 2017<sup>10</sup>). The benefits of launching EPR schemes with the use of agreements can be increased flexibility when the industry is made out of few and cooperative stakeholders, or when other instruments incentivize the stakeholders to take part. Another example from the Norwegian Industry is the NO<sub>x</sub>-fund<sup>11</sup>. Companies with NO<sub>x</sub>-emissions are obliged to either pay a polluter tax or participate in an industry-led fund that distributes the money back to NO<sub>x</sub>-reducing projects.<sup>12</sup> Between 2008 and the end of 2019, the fund had spent more than 4,4 billion NOK and supported over 1330 projects, resulting in more than 39 000 tons of NO<sub>x</sub> reduction.

Similarly, the benefit for the companies to engage in a voluntary EPR scheme can be of more legal character, like a permission to operate/business permits. This mechanism can also be used in combination with an early stage of implementing a regulated EPR scheme. As described in section 3 of this report, this had been done in both Kenya and the Brazilian state of São Paulo.

Packaging-based EPR schemes are normally collective based. This means the collective responsibility involves introducing an intermediary actor – a Producer Responsibility Organization (PRO), also called system operator – that assumes the responsibilities on behalf of the producers. As the waste can now be managed as a whole, rather than by individual brands, the logistical challenges and overall costs are generally much lower than for a system based on individual responsibility.

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<sup>9</sup> Available at: [https://prevent-waste.net/wp-content/uploads/2020/11/PREVENT-Toolbox-interactivePDF\\_2020lowres.pdf](https://prevent-waste.net/wp-content/uploads/2020/11/PREVENT-Toolbox-interactivePDF_2020lowres.pdf)

<sup>10</sup> <https://lovdata.no/dokument/SF/forskrift/2004-06-01-930>

<sup>11</sup> NO<sub>x</sub> = Nitric Oxide (NO) and Nitrogen Dioxide (NO<sub>2</sub>)

<sup>12</sup> <https://www.nho.no/samarbeid/nox-fondet/the-nox-fund/>





Most often, a PRO will assume the responsibility for setting up, developing and operating the system; for fulfilling the take-back obligations of the obliged companies; for providing the necessary documentation to the authorities; and for constantly improving the system and representing it (communication).

Some of the further distinctions concern the nature of the PRO, thus already assuming the system is a collective one.

*PRO: Industry-led or state-led*

Usually, a PRO is established by the industry, but it may sometimes be part of a public authority. In the case of state-led PROs, certain potential pitfalls exist. Among others, it must be ensured that the money for the EPR system is not channeled into other purposes or the general budget (as they are not taxes), that monitoring is exercised despite the lack of separation of tasks, and that mechanisms to avoid corruption are implemented especially in locations where this is considered a risk.

In the case of an industry-led PRO, the funds will be fully separated from public funds, and it can be monitored by an outside party (a state agency).

*PRO: non-profit or for-profit*

Depending on the way the EPR scheme is set up, there will be either one or multiple PROs for the same types of materials, where multiple PROs lead to competition. The opinions on the European EPR scene differ with regards to what is to be preferred on this matter. Where non-competitive PROs normally are non-profit organizations launched by broad industry organizations, PROs in competition can also be for-profit companies. Competition is normally associated with innovation and cost effectiveness. However, the experience from many European countries has been that regulating competition on the PRO-level is complicated. As an example, the German packaging law is the 7th generation of EPR regulation on packaging.

There are pros and cons with both systems, concerning transparency, free rider issues, monitoring efforts and whether there are competitive and price pressures.

*PRO: All packaging vs. specific packaging materials*

A PRO may be set up to handle solely one type of packaging or aim to operate for all types of packaging. In the case of covering all packaging, the costs must be split according to packaging type in order to determine the required fees for companies. While it may be simpler to set up a PRO for individual packaging streams, many producers (customers) will prefer a “single point of contact”-service.

**Defining the level of obligations**

An essential part of a regulated EPR scheme is establishing the procedures for how the obligations for each producer are to be defined. The obligations are normally calculated on the basis of market data, sometimes in combination with product data (e.g. material, weight). In some cases existing business or



custom registers can be used (in Norway the custom register forms the basis for the registration of the obligations on electronic equipment). In other cases, the obligations must be calculated with entry from the producers. As this represents the key to the economic obligations for the producers, it is important that the procedures for registration and control ensure fair competition between producers, as well as a high participation rate.

In a legal basis for a regulated EPR system, it is instrumental that responsibilities, who the EPR system applies to and at what stage are clearly defined. Ambiguity around this in the legal basis may soon lead to loopholes, free riders, and unequal level of competition across the entire system, thus weakening its implementation and effectiveness as a policy tool.

Below some of the important legal issues regarding roles and responsibilities are listed<sup>13</sup>:

- *Who* are the obliged companies (often both domestic producers and importers, i.e. anyone who introduces the products to the market).
- Definitions and requirements for included *packaging types* (incl. place of origin, any differentiation by material, other aspects of the material).
- Allowed forms of PROs and their functioning.
- Binding and verifiable targets for e.g. collection, sorting, recycling and recovery.
- Definition of roles of relevant stakeholders (PROs, municipality, collectors, recyclers). For instance, the municipal responsibility for household waste collection can be supplementary to the responsibility of the PROs to achieve collection and recycling/recovery targets.
- How the monitoring will take place.
- Reporting requirements.
- Penalties for not obliging.
- Establishing the incentives or the “rules of play” for any financial support to be agreed between stakeholders who contribute to the achievement of the targets.

### **Main challenges in creating and implementing an EPR system**

#### *Reduce free riders - product register*

A successful EPR scheme requires support and participation by a vast majority of the producers. If the participation drops below a certain level and the number of free riders increases, this can threaten the broad support in the scheme. The compliant members of a scheme will then pay participation fees that the free riders do not. In some cases, they may even pay for the responsibilities of the free riders. Additional problems may occur in defining the quantities that remain for the PROs when a major part of the industry is not taking part.

In order to define the obligations, an unbiased register of the amount of products and other key characteristics about the products needs to be in place. This register can either be at the hand of a PRO

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<sup>13</sup> Prevent Waste Alliance EPR Toolbox, available at: [https://prevent-waste.net/wp-content/uploads/2020/11/PREVENT-Toolbox-interactivePDF\\_2020lowres.pdf](https://prevent-waste.net/wp-content/uploads/2020/11/PREVENT-Toolbox-interactivePDF_2020lowres.pdf)



(no competition scenario) or within the control of authority (in the case of competition). Either way the authorities must have access to the register to be able to control the level of responsibilities.

### *Ensure fair competition*

For EPR schemes that allow multiple PROs for each waste stream, a major issue to solve is to ensure a fair level of competition. In many European schemes this has been the most critical issue for many years. Competition can occur at different levels in the value chain for EPR and the waste management. Below some relevant levels for competition are exemplified with potential competition challenges.

- Competition between manufacturers
  - Manufacturers who do not participate in a producer responsibility scheme (free riders) avoid an additional cost that participating producers must bear. This is covered above.
- Competition between PROs to attract producers.
  - The costs for the PROs are mainly related to the operational or financial fulfillment of their producer responsibility. If large producers receive better price offers than small players, this can distort competition.
- Competition between PROs about access to waste and recycled waste.
  - PROs can be excluded from attractive collection areas or recycled waste, making it difficult to fulfill their obligations.
  - Requirements for nationwide collection can make it difficult to establish oneself in the market.
- Competition between collectors and recyclers to provide services to PROs.
  - If a return company is given a dominant position, this position can be abused through agreements in the value chain that exclude competing players, for example at the treatment level.

In addition to the aforementioned challenges, competition on equal terms presupposes follow-up of breaches of the rules and adequate supervision of actors in the producer responsibility schemes. If some players do not follow the regulations without consequences, they may gain an unfair competitive advantage. This problem can occur in several levels in the value chain.



### 3. The process of establishing EPR

This section describes what the implementation of an EPR scheme typically entails, and highlights the experience of going through some or all of these steps as a middle-income country. Three cases where EPR has recently been implemented - fully or partly - are described.

#### Typical steps in establishing EPR schemes

Certain steps may be emphasized as natural to follow in the process of establishing a mandatory and regulated EPR scheme.<sup>14</sup> For setting up voluntary or semi-voluntary systems, as describes in the previous section similar steps may be relevant depending on the degree of involvement. Voluntary schemes can also serve as a first step into a mandatory and regulated scheme.

Firstly, initiating a dialogue among the relevant actors - both those directly affected (potentially obliged companies, local and national authorities) and those who are part of the ecosystem in which an EPR scheme would be implemented (for instance private waste management companies, recyclers and their branch organizations). For the industry/private sector to take an active position, thus signaling their willingness to implement a scheme and simultaneously developing an early proposal for design, they can establish a voluntary PRO. Although a voluntary scheme will be more limited in scope and lack the legal foundation for monitoring and enforcement, it can be of great help in preparing for the mechanisms that may later govern a mandatory system.

For the authorities, and assuming that embedding EPR in legislation is a chosen objective, the key priority should be to develop a legal basis for a mandatory EPR system. This should happen in parallel with shaping an understanding of industry characteristics and needs through extensive dialogue. If a voluntary PRO has already been established, their participation in this process is instrumental. As described in the previous section, it is of great importance that the legal basis for an EPR scheme is *precise* and *unambiguous* around a number of factors, including definitions, roles and responsibilities, requirements (both in terms of payment and in terms of reporting), types of packaging covered, reporting procedures, collection system, targets and so forth.

Once a legal foundation is in place, the EPR scheme is theoretically ready to be rolled out. It must however be highlighted that also complementary aspects of the legal framework should be ready for implementation, such as preparation of the institutions responsible for registering and monitoring the obliged companies. Here, governance must be clarified in advance and the costs associated with running these services should be agreed on - and who will pay for the various costs. Generally, the legal basis would specify a grace period for companies to get the time to register and prepare reporting setup - and, in the case of industry-led PROs, to set up one or multiple PRO (depending on the system) if this has not

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<sup>14</sup> Prevent Waste Alliance EPR Toolbox, available at: [https://prevent-waste.net/wp-content/uploads/2020/11/PREVENT-Toolbox-interactivePDF\\_2020lowres.pdf](https://prevent-waste.net/wp-content/uploads/2020/11/PREVENT-Toolbox-interactivePDF_2020lowres.pdf)



yet been done. To make sure there is enough time to test the reporting and data processing systems, the register should be operational well before the deadlines by which companies have to start meeting their responsibilities.

The rolling out will depend on the structure of the EPR, as well as the political, socio-economical and geographical context. The scheme may furthermore be implemented step-wise, for instance in a geographically limited area, or for a limited amount of packaging types (such as specific plastic fractions). As also described in section 2, and exemplified below, creative approaches to implementing successful EPR schemes without regulation may also be explored, and could be attractive in settings where the legal implementation process proves difficult and/or lengthy.

Once implemented, the EPR scheme must on a regular basis be reviewed and optimized, and adapt to changes in the market, technological progress, and other external factors.

## **Experiences from implementing extended producer responsibility in other middle-income countries**

Related to the typical steps of establishing EPR schemes in high-income countries there are some specific challenges in low- and middle-income countries that need to be addressed properly. As this report focuses on Ghana, the challenges and benefits described below are primarily targeting middle-income countries. For low-income countries additional challenges like weak institutions, instability and general poverty occur.

Many middle-income countries have experienced prosperous economic growth in the last decades. This has given way to increasing purchasing power and consumption in the population. With rapid growth, especially in the big cities, the demand for costly infrastructure escalates. Waste management facilities are often not given the highest priority.

In Western Europe clear municipal responsibility and full cost coverage regulation in combination with a reliable housing register form a basis for households to cover the costs for waste collection and handling. The full cost coverage system ensures that the development of the waste collection is fully financed by municipal waste taxes. This combination has together with national waste management policies made the development in western countries' household waste management infrastructure possible. In fast growing cities in middle-income countries this possibility often does not exist to a full extent. Hence the waste collection may need to find other ways to be financed.

An informal waste sector, supplementing incomplete formal waste collection, that gains its revenue from sorting and recycling of valuables, can make it more complicated to impose changes. The broadly distributed informal sector also represents a challenge for establishing proper waste statistics, an important prerequisite for well-functioning EPR schemes.



Similarly, on the side of the producers there can be challenges in establishing proper documentation about the producers, and their market shares. Custom and trade registers may be insufficiently developed. The required capacity for administering and monitoring the EPR scheme may exceed already stretched state capacity and resources, which increases with the complexity of the scheme.

Ultimately, as EPR is about financial transactions for responsibilities taken over by third parties, the schemes are not to be considered automatically safe against corruption. This needs also to be addressed when schemes are set up, through control mechanisms that need to accompany the systems.

On the positive side, establishing extended producer responsibility schemes represent certain additional benefits for middle-income countries. The most important benefit seems to be that EPR may provide a more viable way of financing important development steps of the waste management sector than any other alternatives. The prevalence of a large informal sector (by definition not regulated and taxed) will be closely related to difficulties in generating sufficient tax revenues. However, producers of packaging material like plastics are often multinational companies that have the financial power to ensure the financing of much-needed infrastructure. The bill for the extended costs will be paid by the consumers paying for the products.

As the availability of cases of implementation of extended producer responsibility is about to broaden from high-income countries to middle-income countries, some valuable early experiences are already emerging. It is the view of PRF that exchange of experience among the “early movers” is important to ensure successful setup and implementation. In this respect some experiences from a narrow selection of relevant middle-income countries have been collected and presented here.

### **South Africa**

South Africa has a well-established plastic collection and recycling industry. According to Plastics SA 352 500 tons of plastics were recycled in 2019, with a domestic recycling rate of 23,4 %.<sup>15</sup> As a front runner in EPR development in Africa, the South African history of extended producer responsibility started with the establishment of SATRPCo (recycling of tires) in 2002 and PETCO (PET bottles) in 2004.<sup>16</sup> In 2011 Polyco was established covering polyolefins like PP, HDPE, LDPE and LLDPE. Later industry led EPR initiatives also cover polystyrene, vinyl, glass, paper and metals. The Waste Act from 2008 formed the basis for EPR schemes under section 18. In November 2020, the government published a Governmental Notice on EPR for paper, packaging and some single used products, outlining new measures and targets for the EPR, implementing principles of circular economy.<sup>17</sup> Here, specific targets are laid down for collection, recycling and even for content of recycled materials to be met for a period of 5 years from the date of implementation (5/2021).

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<sup>15</sup> [South African Plastics Recycling Survey 2019](#)

<sup>16</sup> OECD 2014: [The State of Play on Extended Producer Responsibility \(EPR\): Opportunities and Challenges](#)

<sup>17</sup> Governmental Notice No 1887 (2020), [EXTENDED PRODUCER RESPONSIBILITY SCHEME FOR PAPER, PACKAGING AND SOME SINGLE USE PRODUCTS](#)



The Regulation contains the essential requirements for EPR regulations, with the following sections/paragraphs:

1. Definitions
2. Purpose of the Notice
3. Scope of the Notice
4. The identification of a product or class of products to which extended producer responsibility applies
5. Identification of the person or category of persons responsible for developing and implementing an extended producer responsibility scheme
6. Responsibilities of producers
7. Targets for each identified stream for the products listed in paragraph 4 of this Notice

For plastic packaging, as for other EPR streams, detailed and ambitious targets have been set, see table 1. The recycling targets for the first year after implementation are set somewhat higher than the existing recycling rates<sup>18</sup>. For PET beverage bottles the rate for 2019 was recorded to be 62 %, whereas the targets for 2022 and 2026 are set to 69 % and 73 %.

*Table 1. South African EPR targets 2022 → 2026 for recycled content, collection and recycling for plastic packaging*

Packaging	Recycled content target (%)	Collection target (%)	Recycling target (%)
Plastic PET Beverage bottles	10 → 20	71 → 75	69 → 73
Plastic PET oil bottles		9 → 40	8 → 39
Plastic thermoformed PET		9 → 38	6 → 35
Plastic PET (flexible)		47 → 55	42 → 50
Polyolefin (rigid)	7 → 20	47 → 55	42 → 50
PVC (rigid and flexible)		6 → 8	5 → 7
Polystyrene (expanded and high impact)		32,09 → 63,69	31,09 → 62,69
Multi-layer films packaging		47 → 55	42 → 50
Biodegradable and compostable packaging		15 → 80	5 → 70
Single use plastic products	8 → 20	60 → 80	30 → 50
Single use compostable and biodegradable products		15 → 80	15 → 80

<sup>18</sup> Implementation was postponed to 5 May 2021 ([Governmental Notice No. 20 \(2021\)](#)).



## Kenya

In Kenya the government imposed a ban on plastic bags in 2017, and establishing EPR has been a priority for some years. Several stakeholder consultations have been conducted. The first EPR regulation is expected to be passed into law by June this year, with plastic packaging coming into force by the end of 2021, and other waste materials to be phased in later. All waste streams will be obliged to manage their respective waste through a registered PRO. Meanwhile the government has pushed businesses into voluntary producer responsibility by setting membership in EPR schemes as a criterion for business permits.

The expected EPR regulation includes the requirement for PROs to be registered and approved by the government. To be approved a PRO needs a coverage rate of more than 70 percent within its material stream (like PET or glass bottles). This requirement shall ensure that approved PROs can focus on fulfilling the obligations of their members and that the members can relate to only one PRO for each stream. The targets for each stream are focusing on diverting from landfilling and uncontrolled dumpsites by supporting all players in the waste management ecosystem (waste pickers, collectors, segregation, cleaning and recycling). Hence all sorts of recovery operations, like mechanical and chemical recycling, are expected to be valued equally.

The Kenya Producer Responsibility Organization (KEPRO) was launched in October 2020 and is today the only registered PRO with 200+ member organizations. Other operating PROs are PETCO Kenya (PET bottles) and Clever Green Kenya. According to KEPRO the two organizations KEPRO & PETCO are in advanced stage discussions of merging.<sup>19</sup> KEPRO today offers recyclers a range of 10-40 Kenyan shilling (~US cents) per kg of plastic packaging going to recycling.

KEPRO is also initiating segregation studies in the market to evaluate the cost effectiveness and waste management efficiencies by implementing segregation at source principles.

## Brazil

The Brazilian Waste Law from 2010 introduced new concepts and built the fundament for extended producer responsibility.<sup>20</sup> According to the national waste management association Abrelpe, this has led to the formation of EPR schemes for different waste materials based on voluntary industry led agreements. For packaging an intermediate agreement was signed in 2012 prior to FIFA World Cup 2014. However, since then little progress has been made on the federal level.<sup>21</sup>

In response to a lack of national action, São Paulo published their own regulation in 2019 based on reversed logistics and certificates.<sup>22</sup> Here, the state authorities have made documentation of compliance with take-back requirements a condition for the issue or renewal of operating permits, required from every producer in the state in order to be allowed to sell their products. The take-back system includes

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<sup>19</sup> Personal communication with KEPRO Chair Priyen Tanna

<sup>20</sup> <https://www.wiego.org/sites/default/files/resources/files/Pereira-Brazilian-Waste-Policy.pdf>

<sup>21</sup> Personal communication with ABRELPE

<sup>22</sup> CETESB 2019: [DECISÃO DE DIRETORIA Nº 114/2019/P/C](#)





the issuing of certificates when plastics enter a recycling operation. Certificates can only be issued to waste management companies or waste pickers cooperatives. This has also proven an effective approach to incorporating the informal sector into an EPR scheme. The certificates are sold to the producers, who need them to demonstrate compliance with the targets laid down in the regulation, currently at 22 % of the packaging. The system has one year of experience now, partly interrupted by the coronavirus situation, but already several other states have shown interest in the regulatory construction.



## Part 2: Ghana

### 4. The context in Ghana - actors, system, and policy

#### Plastics waste in Ghana

Plastic pollution represents a great challenge in Ghana, where, according to recent policy documents, best available data suggests that more than 1.1m tons of plastic waste is generated every year, and at least 60% of generated plastic waste is mismanaged. Among the most common forms of mismanagement are disposal at common dumping grounds or directly in the streets and nature, and burning.<sup>23</sup> An estimated 14% of the waste stream in Ghana is plastics.

The consequences of this include environmental degradation, as plastics kill wildlife both on land and in the oceans, break down into microplastics and ultimately enter the human food chain with unknown consequences. Also the burning of plastics leads to air pollution, affecting the health of humans and other living creatures. The accumulation of plastics on land and in drainage systems also leads to sanitary challenges and flooding.

The economic dimension of the plastics problem concerns both the day-to-day livelihoods of many Ghanaians, with plastic pollution affecting fish stocks and other natural resources many rely on as a source of food and income, as well as a more general economic loss through inadequate resource utilization. Also the indirect effects on environmental degradation on for instance tourism - as already flagged by tourism-dependent locations like Bali - may have a detrimental effect on what is or could become engines for economic development.

Enabling the improved utilization of the plastics resources in the country is expected to have the dual positive effect of economic development and job creation, while safeguarding the environment.

Valuable plastic waste tends to a certain extent to be taken care of, but the challenge is how to enable both the collection and management of materials whose inherent value does not currently incentivize their collection and recycling. As described in the first section of this report, this is one of the key tasks of an EPR scheme - to create a system that finances the management of *all* plastics (or packaging viewed more broadly) without over-burdening the municipalities and households/taxpayers. This is especially important in low- and middle-income countries, where a large proportion of the country's economy is informal, and thus does not generate tax revenue for the authorities.

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<sup>23</sup> Draft National Plastics Management Policy, July 2019



## Overview of relevant actors

In Ghana, as any other place, there are a number of actors who will function as primary stakeholders and thus should be involved in the development of an EPR system. Here, a brief introduction to some of the most important actors are given - albeit this will not be an exhaustive list of relevant entities in the public, private and civil society. The interest in safeguarding the environment and promoting a circular economy concerns all citizens alike, and could be argued to be related to all aspects of government work and responsibilities - including education, health, trade and industry.

The directly affected stakeholders are here viewed as the producers and importers of plastics products<sup>24</sup> - companies that will be obliged to register and contribute to the system - as well as the authorities. This includes national authorities that will often shape any legislative foundation of a mandatory EPR system and be responsible for the implementation, control and further development of such a scheme, and local authorities who are generally responsible for waste collection.

Nonetheless, actors involved in the process of shaping an EPR system should also involve companies involved in waste collection (and informal sector workers engaged in collection), recyclers and other groups that will be affected by the way in which the scheme is designed.

Among the key public entities that will be part of formulating and developing an EPR scheme in Ghana are:

- **The Ministry of Environment, Science, Technology and Innovation (MESTI).** MESTI exists to establish a strong national scientific and technological base for the accelerated sustainable development of the country to enhance quality of life for all.<sup>25</sup> Among the tasks of MESTI is the establishment of regulatory frameworks to govern environmental safeguarding. This ministry is the overarching authority on thematic related to the National Plastics Management Policy and the development of an EPR scheme.
- **The Ministry of Sanitation and Water Resources (MSWR).** The overarching goal of the Ministry of Sanitation and Water Resources is to “contribute to improvement in the living standards of Ghanaians through increased access to and use of safe water, sanitation and hygiene practices and sustainable management of water resources”<sup>26</sup>. The ministry’s main functions are to formulate and coordinate policies and programs for the systematic development of Ghana’s infrastructure requirements with respect to water supply and sanitation, and hydrology.<sup>27</sup>
- **The Ministry of Finance.** The Ministry of Finance (MoF) formulates and implements fiscal and financial policies and is in charge of public financial management. The MoF has created a Natural

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<sup>24</sup> This text focuses on addressing the producers and importers. However it can be envisaged to target another level of the value chain to carry the responsibility of the producers, if it is more effective.

<sup>25</sup> Draft National Plastics Management Policy, July 2019

<sup>26</sup> <http://mswr.gov.gh/about-us/>

<sup>27</sup> Draft National Plastics Management Policy, July 2019



Resource & Environment Unit to oversee, coordinate and manage the financing of and support to natural resources.” This is also the entity that mandates and collects the plastics levy, which will be further elaborated upon later in this section.

- **The Ministry of Local Government and Rural Development (MLGRD).** The Ministry of Local Government and Rural Development exists to promote the establishment and development of a vibrant and well-resourced decentralization system of local government for the people of Ghana, to ensure good governance and balanced rural development.<sup>28</sup> The Ministry furthermore has the goal of facilitating a clean and healthy environment. The MLGRD is responsible for the ten Regional Administrations in Ghana. These regions have Regional Coordinating Councils and are sub-divided into 254 metropolitan, municipal and district assemblies (MMDAs) each with an administrative assembly.<sup>29</sup>
- **Metropolitan, Municipal and District Assemblies (MMDAs).** Local government is enshrined in the constitution, as is decentralization, and the main relevant legislation is the Local Government Act 2016 (Act 936). The country is divided into ten administrative units or regions, each headed by a regional minister appointed by the president. There are three types of assemblies at the higher levels of local government: metropolitan, municipal and district. The assemblies are responsible for the overall development of the district, including the promotion of local economic development, basic education and public health, environmental protection and sanitation, and the improvement and management of human settlements.<sup>30</sup> There are 254 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana.<sup>31</sup> The Metropolitan, Municipal and District Assemblies are responsible for the collection and final disposal of solid waste through their Waste Management Departments (WMDs) and their Environmental Health and Sanitation Departments.<sup>32</sup>

A safeguarded environment and economic development are naturally the interest and concern of all public entities, also all not described in detail in this document.

On the manufacturer/industry side, the direct stakeholders are considered to be the producers and importers of plastics products. In this regard, also a number of associations/private sector initiatives exist, including (but not limited to):

- **The Ghana Recycling Initiative by Private Enterprises (GRIFE).** This is an industry-led coalition formed under the Association of Ghana Industries (AGI). It was founded in November 2017 by 8 multinational companies involved in the plastics value chain. The founding members are Coca-Cola Bottling Company of Ghana; Dow Chemical West Africa Limited; Fan Milk Ghana Limited; Guinness Ghana Breweries Limited; Nestlé Ghana Limited; PZ Cussons Ghana Limited; Unilever

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<sup>28</sup> <http://www.mlgrd.gov.gh/>

<sup>29</sup> Draft National Plastics Management Policy, July 2019

<sup>30</sup> [http://www.clgf.org.uk/default/assets/File/Country\\_profiles/Ghana.pdf](http://www.clgf.org.uk/default/assets/File/Country_profiles/Ghana.pdf)

<sup>31</sup> <https://www.ama.gov.gh/theassembly.php>

<sup>32</sup> <https://www.un.org/esa/agenda21/natlinfo/countr/ghana/SanitationGHANA04F.pdf>



Ghana and Voltic (GH) Limited. The spoken purpose of this coalition is to advocate for better waste management practices, connect various organizations working to create an improved waste management system, contribute to increased collection and recycling rates, and creating employment.<sup>33</sup> As will be described further down in this section, this initiative has been a driving force behind the establishment of current dialogues around EPR in Ghana. With respect to the development of EPR regulation seen elsewhere in middle income countries, GRIPE resembles an intermediate organization for a first producer responsibility organization in Ghana on packaging.

- **The Association of Ghana Industries.** The Association of Ghana Industries counts over 1200 members within the manufacturing and services industry across various sectors. Among its objectives is advocating policies that advance the growth and development of industries and strengthening national industry associations.<sup>34</sup> There has also been strong engagement by this Association for the establishment of an EPR scheme.<sup>35</sup>
- **Ghana Plastic Manufacturers Association (GPMA).** GPMA is a member organization for 79 companies (of about 160)<sup>36</sup> that primarily produce packaging products in plastic based on virgin imported raw materials. The primary focus of this organization is on beverage packaging - PET bottles and water sachets. This association has also advocated for the channeling of the plastics levy towards a consolidated fund and the establishment of an authority to manage this fund<sup>37</sup>.
- **Private Enterprise Federation.** The Private Enterprise Federation (previously Foundation) is a non-profit, non-political, autonomous institution and a Company Limited by guarantees under the Ghana Companies Code, Act 179, has its membership open to all private businesses and trade associations from both the formal and informal sectors of the economy. The Federation was established in 1994 as an institution to forge consensus and conduct advocacy, on the initiative of the Association of Ghana Industries, Ghana National Chamber of Commerce and Industry, Ghana Employers' Association, and the Federation of Associations of Ghanaian Exporters.<sup>38</sup>

Secondary stakeholders include **waste management companies** and industry associations in this space (such as the **Environmental Service Providers Association**), organizations for **informal and semi-formal waste collection** (such as **WIEGO**), and all companies and actors engaged in the **processing and recycling** of plastic waste (and associations in this space, such as the **Ghana Recyclers Association**).

Other international or non-governmental actors that play a role in the formulation of an EPR include:

- **The World Economic Forum (WEF), the Global Plastics Action Partnership (GPAP) and the Ghana National Plastic Action Partnership (NPAP).** The Global Plastic Action Partnership is WEF's

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<sup>33</sup> <https://thegripe.org/what-is-gripe/>

<sup>34</sup> <https://www.agighana.org/about.php>

<sup>35</sup> Interview with Oliver Boachie 16.11.2020

<sup>36</sup> This was the case when PRF met them in 2019, may have expanded further since then

<sup>37</sup> <https://www.businessghana.com/site/news/General/187010/Plastic-Manufacturers-call-for-the-establishment-of-an-Authority><https://www.businessghana.com/site/news/General/187010/Plastic-Manufacturers-call-for-the-establishment-of-an-Authority>

<sup>38</sup> <https://www.pef.org.gh/index.php/en/about-pef/about-us-pef>



platform for public-private collaboration, and aims to bring together policymakers, businesses, civil society advocates and entrepreneurs to align on a common approach for addressing plastic pollution and waste in an effective and sustainable manner.<sup>39</sup> This work is advanced through *national* partnerships, and in October 2019 Ghana became the first African nation, and second nation globally (after Indonesia) to join the GPAP - thus forming the Ghana National Plastic Action Partnership (NPAP). NPAP is a partnership between the Ghana Ministry of Environment, Science, Technology and Innovation (MESTI), and works closely with other ministries, the United Nations Development Programme (UNDP), and over 120 Ghanaian partners across all sectors.<sup>40</sup>

- **Development partners.** Many bilateral and –multilateral agencies active in Ghana undertake a wide array of programmes in the areas of sanitation, environmental safeguarding and natural resource preservation.<sup>41</sup> A non-exhaustive elaboration of actors relevant to the implementation of an EPR scheme is included below:
  - **The German Agency for International Cooperation GIZ** (Deutsche Gesellschaft für Internationale Zusammenarbeit). The key focus of work of GIZ in Ghana is on sustainable economic development, agriculture and governance. In the area of waste management, the agency has furthermore worked extensively on the issue of e-waste, another big challenge for Ghana. Also supported by the Netherlands, the agency currently provides technical assistance to the process of implementing EPR in Ghana, as will be further described in the next section.
  - **The British Department for International Development (DFID)** funded the Accra Plastics Management Pilot (APMP) which lasted from February 2019 until January 2020, and had the main objective of tackling plastic pollution in Accra, with a particular focus on single-use plastic. The pilot was supported by Seureca (Veolia's consulting engineering division), SYSTEMIQ and WasteAid. One of the recommendations from an investment workshop organized to mobilize potential funders/investors to implement solutions for better plastic management in Accra for the enabling of sound plastics management and resource mobilization, was the implementation of an EPR scheme.
  - **The Global Environment Facility (GEF)** funds ongoing work on the establishment of a Circular Economy Framework, which relates closely to the development of an EPR scheme.<sup>42</sup>
  - **UN Organizations** work from different angles on the plastics problem, and **UNDP** has been among the most prominent on the issue of plastics. This agency facilitated the establishment of a waste recovery platform in Ghana, aiming to connect stakeholders and stimulating partnerships to address waste management data, and policy implementation gaps, with the ultimate goal of promoting a transition towards a circular economy.<sup>43</sup> **UNIDO** also supports the work on establishing the Circular Economy Framework.

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<sup>39</sup> <https://globalplasticaction.org/about/>

<sup>40</sup> <https://globalplasticaction.org/countries/ghana/>

<sup>41</sup> Draft National Plastics Management Policy, July 2019

<sup>42</sup> Interview with Oliver Boachie 16.11.2020

<sup>43</sup> <https://www.africa.undp.org/content/rba/en/home/presscenter/articles/2020/transitioning-to-a-circular-economy-with-a-multi-stakeholder-pla.html>



- **The World Bank** has a prominent presence in the country, and is currently implementing among others the Greater Accra Metropolitan Area (GAMA) Sanitation and Water Project for Ghana. Part of this project involves the expansion of environmental services, developing plans for liquid and solid waste management, and strengthening institutions towards this end. Furthermore, the World Bank is currently planning to conduct a technical analysis of options to enhance public sector financing options of sustainable plastics management – potentially also touching upon EPR as a policy tool.

### **General introduction to the policy context**

The management of plastic waste has been on the agenda of the Ghanaian central government for decades, beginning in the late 1980s. This overview is based on the overview provided by the draft Ghana National Plastics Policy, the latest policy document in this space that will also be introduced below.

A National Plastics Waste Management Task Force was established in 2004, aiming to create and support a high-functioning recycling industry in Ghana. A number of collection activities were implemented, and dozens of recycling enterprises established. Financial backing was secured through a subsidy that was voluntarily organized as a fund under the Task Force, and domestic manufacturers received a premium for using domestically recycled plastics rather than imported virgin plastics (in turn securing a market for collectors and recyclers). Due to financial constraints, the Task Force was abolished.

Beginning in 2007, a number of water sachet producers and sellers, and film manufacturers, launched the Plastics Waste Management Project (PWMP). Part of what prompted its establishment was a threat to ban the sale of sachets in the city of Accra. A voluntary financing mechanism by incorporated industry members was established to raise funds to support the management of plastics waste, but the unequal nature of the voluntary contributions distorted the competitive environment (as not all companies contributed). This resembles issues encountered in a volunteer EPR scheme, as described in section 2. The PWMP argued that an environmental tax on all plastics imports channeled towards a fund for better plastics management would be more equitable than the voluntary contributions. This was taken into account, implemented by the government and codified into law as Act 863, passed in 2013. The collection of the tax started somewhat later. The plastics levy charges a 10% ex-factory price on all imported virgin plastics pellets, but not finished plastics products. Thus, it constitutes somewhat of an inverse industrial policy, increasing costs only for domestic packaging producers. The Act holds that “not less than fifty percent of the revenue accruing shall be paid into a fund designated as Plastics Waste Recycling Fund which shall be dedicated to recycling of plastics waste.”<sup>44</sup>

Since the tax was introduced, hundreds of millions of Ghana Cedi have accrued, but no funds have been disbursed towards its dedicated purpose. The inclusion of the plastics tax in the general tax base moreover complicates the prospects of diverting the funds towards a dedicated purpose, as it has become a reliable

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<sup>44</sup> Draft National Plastics Management Policy, July 2019



source of income for the state budget. Meanwhile, because the plastics industry is now contributing to the legal Plastics Waste Management Fund, there is little incentive for manufacturers to put additional money into parallel, voluntary funds. To quote the words of the National Plastics Management Policy: “This has been the main bottleneck and stalemate in plastics recovery over the past 6 years.”<sup>45</sup>

Other efforts that should be mentioned include the Cash Your Trash pilot (2010) that was implemented by the CHF international together with the Accra Metropolitan Assembly and the PWMP. This project aimed to improve source segregation in Accra. The pilot concluded that segregation can be achieved if there is a system to effectively support and manage it.

In May 2020, the National Plastics Management Policy was approved in Cabinet<sup>46</sup>. This policy document can be described as an overarching strategy for plastics management. The five focus areas the policy presents, supported by a number of strategic actions, are:

1. Behavioral change,
2. Strategic planning and cross-sectoral collaboration,
3. Innovation towards a Circular Economy,
4. Resource mobilization, and
5. Good governance, inclusiveness and shared accountability

Within these focus areas, a total of 17 strategic actions are presented, one of which is establishing an Extended Producer Responsibility Scheme. To accompany the Policy, an implementation plan has been developed. The description of EPR in this policy document, and process laid out, is further described in the next section - “Status of EPR in Ghana”.

### **Considerations around logical objectives for an EPR scheme in Ghana**

Before venturing into an assessment of the status of establishing Extended Producer Responsibility in Ghana, some considerations around potential and logical objectives for EPR in Ghana are presented here. The National Plastics Management Policy describes a number of challenges that have strongly affected management of plastic waste, such as lack of coordination between sectors and actors, lack of appropriate planning, and absence of policy incentives for the general public and the private sector.<sup>47</sup> These challenges may be directly addressed through EPR.

Some observations with regards to the characteristics around waste collection and processing should be mentioned in relation to considerations around logical objectives for an EPR scheme in Ghana. Ghana has

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<sup>45</sup> Draft National Plastics Management Policy, July 2019

<sup>46</sup> Interview with Oliver Boachie 16.11.2020

<sup>47</sup> Draft National Plastics Management Policy, July 2019





a sizable informal sector that takes care of a large proportion of both general waste collection, but especially the collection and management of recyclables. An EPR scheme should take steps to take into account the informal workers, as well as carving out a role for them in the path towards a more formalized sector. Generally, the professionalization of the plastics and waste management value chains by taking steps to incorporate and formalize the informal sector is desirable, but this must be done in a conscious and inclusive manner.

In Ghana, source separation is generally not implemented. Although this may be desirable, it is a costly and lengthy process to implement that must be balanced with the resources required for simply improving overall collection. The current situation is that many people do not have access to waste collection services - either because it is not offered or because they cannot afford to pay for it. Lack of waste collection infrastructure can be characterized as a potential obstacle to a universal EPR scheme. On the other hand, improving overall collection of not only plastics but also waste in general may be a potential objective of such a scheme - as inadequate collection is one of the key contributors to plastic leakage into nature, and other environmentally damaging solutions such as open burning. Alternatively, it may make sense to geographically restrict pilot implementation to where waste collection infrastructure is well developed, to subsequently expand to more challenging locations. Experience from Accra shows that changes to the waste collection system have been implemented consecutively in order to optimize the quality of services while minimizing costs. An EPR scheme would have to be designed in a flexible and robust manner, in order to withstand such updates and changes.

On the issue of source separation, a separate report on the challenges encountered by PRF when it comes to plastics quality was authored in parallel to this report, and highlights the benefits of separating organics from other waste, as a low-hanging fruit for improving quality at the collection level. It also proposes numerous steps that may be implemented at central sorting facilities that can enable the sorting out of contaminants post-collection.<sup>48</sup>

Increasing the recycling rate of especially the more difficult plastic types will be a natural priority also towards improving resource utilization. This would be achieved through recycling targets and potentially implementing incentive schemes for “designing for recyclability”. However, with increased complexity comes further reporting and monitoring burdens, which may affect the feasibility of a complex setup to begin with. It should be highlighted that a challenge to management of plastic waste in Ghana also described by the National Plastics Management Policy concerns the weak enforcement of existing legislation. Naturally, this may also become a challenge for an EPR scheme, considering the monitoring and sanction capacity required for a mandatory, wide-reaching scheme.

Against this backdrop, the inclusion of chemical recycling in the waste management targets for packaging provides useful and necessary. Chemical recycling is regarded more robust within feedstock quality

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<sup>48</sup> Available at: <https://www.revocean.org/report-mapping-of-available-methods-for-plastic-feedstock-quality-improvement-for-pyrolysis-treatment-in-accra/>



criteria and can within certain limits handle mixtures of different plastic types. On the other hand industry scale chemical recycling will demand secure feedstock supply at affordable prices.

Finally, overarching objectives of EPR in Ghana would naturally involve the reduction of the amount of plastics that is introduced to the system in the first place, and shifting the financial burden of managing the plastic waste that *is* introduced from the state and taxpayers, towards obliged companies.



## 5. The current process and status of EPR in Ghana

This section describes PRF's understanding of the current process and status of EPR in Ghana, based on available documents, direct dialogues with stakeholders and other observations. It furthermore serves as a discussion over the current state and potential outlook for EPR in Ghana, referencing back to the previous description of typical features of EPR, steps in the implementation process, and experiences from other locations.

As described in the previous section, the National Plastics Management Policy lists the implementation of an EPR scheme as being one of the 17 strategic actions central to achieving better plastics management in Ghana, as part of focus area 4 - Resource Mobilization. By design, EPR is a policy tool designed to mobilize resources and self-finance adopted measures. Thus, the potential of implementing EPR, if done effectively, has enormous potential in enabling the sound management of plastic waste in Ghana, where resource mobilization has proven an endemic obstacle to effective policy implementation.

In the National Plastics Management Policy, EPR is described in the following manner:

*“Domestic manufacturers of consumer products made of plastics or packaged therein are mandated to pay a normalized Plastics Fee, established by the Resource Recovery Secretariat and updated annually, for the sustainable financial management of waste management and recycling activities. The Resource Recovery Secretariat will be responsible for developing the operational framework for Ghana’s Extended Producer Responsibility (EPR) scheme in the context of a technical working group to be established with broad representation of implicated stakeholder groups including: importers, plastics manufacturers, plastics users (e.g. “brand owners”), waste management and recycling entities, MMDAs, regulators and other relevant public institutions. These parties must have a say in how Ghana’s EPR scheme is managed such that there is both genuine accountability and buy-in.”<sup>49</sup>*

This policy also includes an ambition to amend the plastics tax to: *“(a) include imported finished plastics products, and (b) be placed under the responsibility of the Resource Recovery Secretariat to manage the revenues of the prescribed – albeit defunct – Plastics Wastes Management Fund.”<sup>50</sup>*

The Resource Recovery Secretariat is according to information from MESTI in the process of being set up. The aim is for this secretariat to be the primary organ within MESTI to deal with plastics, including EPR. It would moreover constitute the interface between MESTI and numerous other stakeholders, with defined

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<sup>49</sup> Draft National Plastics Management Policy, July 2019, p. 42

<sup>50</sup> Ibid.



terms of engagement. A technical committee will be established as part of this secretariat, that will manage the implementation of policies.<sup>51</sup>

Given the available information, it is the understanding of PRF that Ghana can currently be said to be in the early stages of implementing EPR, with preliminary dialogues being held, an overarching government strategy involving EPR having been launched and approved, and initial producer organization having emerged over the past years. However, concrete next steps and a common understanding of how an EPR scheme should be shaped has not yet been reached.

The fact that major producers are organizing behind GRIPE and engaging in the process appears to have been a reassuring foundation also for the authorities. As described in section 3, ways in which the industry may support the realization of EPR and take active ownership over the process, includes organizing and contributing to an initial dialogue, and establishing a voluntary PRO. This allows paving the way of setting up some of the mechanisms through which a mandatory system may later be implemented.

The process in Ghana is receiving technical support by GIZ and their mandated consultancy Cyclos, a German consultancy specializing in EPR. This work is financed by the state of North-Rhine Westphalia. More recently, it is also supported by the Dutch Government. Finances have however not been secured beyond the beginning of 2022. The technical support has thus far involved dialogue with GRIPE, educational workshops with MESTI, and participation in broader dialogues with various stakeholders.

A central piece of material used in the workshops was the EPR toolbox previously described. The toolbox was developed by the Prevent Waste Alliance - an alliance initiated under the patronage of the German Development Minister in May 2019 - as a practical tool for governments and other actors wishing to implement EPR. Ghanaian actors, including MESTI, were consulted in the process of writing the toolbox. However, at the time that the material was developed, and these actors consulted, it was not clear that there would be a larger scale implementation plan in Ghana. The Toolbox has already been utilized in Asia, including Vietnam and Indonesia.

The first general feedback workshop of GIZ and MESTI on the toolbox as a material was conducted in May 2019, which centered around covered modules 1-3, namely:

- General aspects of EPR schemes for packaging
- Packaging waste collection and sorting
- Packaging waste recycling

Furthermore, it opened to a small extent up for the discussion of applying the toolbox in Ghana.<sup>52</sup>

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<sup>51</sup> Interview with Oliver Boachie 16.11.2020

<sup>52</sup> Materials received from Ghana NPAP/Heather Troutman 26.10.2020



When a more concrete dialogue emerged around the implementation of EPR in Ghana, final copies of the toolbox were sent to MESTI. The purpose of this was to gain further understanding of the fundamentals and necessary considerations of an EPR scheme, and this was described to PRF as having been of great use.<sup>53</sup>

Cyclos was mandated to follow and support the process of developing an EPR scheme through elaboration on the Toolbox, with a relatively open mandate. The initial process focuses primarily on support within the first 4 key topics of the Toolbox - defining roles & responsibilities of an EPR scheme: Establishing a PRO, managing financial flows and setting fees, and setting up a register for obliged companies. In order to facilitate the dialogue and begin the process, some introductory workshops were arranged to set the stage and understand where additional support may be necessary.<sup>54</sup>

The Ghana NPAP has also supported the process of initiating a broader dialogue around EPR among stakeholders. As the role of NPAP is further being shaped over time, it is according to one interviewee evolving into an “innovative policy workshop”<sup>55</sup>. NPAP is currently facilitating integrated workshops, bringing together the relevant partners. Their role in this regard can be seen as ensuring that the relevant parties are given the opportunity to participate, all parties have the relevant information prior to meetings, meetings are scheduled at a regular rate to ensure progress, and the dialogue conducted is constructive. In other words, a facilitating role for supporting the process for a constructive dialogue around the shaping of an EPR system.<sup>56</sup>

The consultation and support process has begun, but due to the Coronavirus situation, the parties have not been able to conduct physical meetings and workshops.<sup>57</sup> From experience in the dialogues over EPR currently taking place, involving the informal sector is difficult, especially with the repercussions of the COVID-19 pandemic (for instance manifested through lack of access to tools to communicate online).<sup>58</sup>

NPAP itself will launch task forces to assist on implementation across 6 thematic areas: i) circular economy framework and policy, (ii) value chain infrastructure and financing, (iii) education, awareness creation and behavior change, (iv) innovation and technology transfer, (v) metrics, monitoring and evaluation, (vi) informal sector integration and gender inclusion.<sup>59</sup> The core of these Sub-committees was formed in January 2021, and the six groups are working to develop a skills assessment framework to determine the institutions needed to enable the Sub-committees' work. The work plan, timelines and further

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<sup>53</sup> Interview with Oliver Boachie 16.11.2020

<sup>54</sup> Interview with GIZ, 13.01.2021

<sup>55</sup> Interview with Hilde Opoku 27.10.2020

<sup>56</sup> Interview with Heather Troutman, 15.10.2020

<sup>57</sup> Interview with Oliver Boachie 16.11.2020

<sup>58</sup> Interview with Heather Troutman, 15.10.2020

<sup>59</sup> Interview with Heather Troutman, 15.10.2020, follow-up information from email correspondence



membership for these sub-committees are still under development, but EPR has been identified as a priority issue by several committees.<sup>60</sup>

A potential medium-term goal of the process around EPR is to set up a pilot, as a step towards implementation on the ground. At the time the data for this report was gathered, it was not yet determined what types of packaging may be covered by such a pilot, but possibly PET and HDPE.<sup>61</sup> The determination of what polymers should be the focus are intended to be part of the upcoming dialogues.<sup>62</sup> The ambition of this pilot would be to move towards practical testing and learning what is most important for a successful implementation of an EPR scheme.

Lifting the focus to what an overarching EPR system may look like in Ghana, any mandatory system would require the passing of the scheme into a regulation or similar mechanism to ensure participants to take part (see section 2). The process for doing this has not yet been initiated.<sup>63</sup> The development and implementation of a regulation that will regulate the management of plastics, if this is deemed the intention, would take time and should likely be considered a long-term goal. Dialogue with MESTI indicates that the authorities currently maintain an open-minded approach to how a future EPR scheme would look like, and that the top priority is identifying and tailoring a solution that is best suited to Ghana, rather than relying on what other countries are doing or have done.<sup>64</sup>

What however has become clear early on, and is a topic that regularly emerges, is the significance of the already-existing plastics tax in Ghana. There appears to be a broad understanding that one of the challenges to implementing an EPR scheme is the setup of this tax, and the fact that funds have not been earmarked for plastic waste management over the past years. While it may support engagement towards EPR - a number of companies currently pay the plastics tax but do not clearly see what they gain from it and would thus prefer better insight and control into the management of funds - the role and design of the tax going forward must be considered.

Any change to the current setup of the plastics tax requires coordination and collaboration between the affected ministries and other government entities. A steering committee has been set up between MESTI, the Ministry of Finance and the Ministry of Local Government and Rural Development - chaired by the minister of MESTI.<sup>65</sup> This committee will oversee the management of these funds.

Whether or not to keep this tax, and how it is utilized if it is kept in place, is vital to other aspects of designing a future EPR system. If the tax is kept as the sole source of revenue of a plastics management

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<sup>60</sup> Interview with Heather Troutman, 15.10.2020, follow-up information from email correspondence

<sup>61</sup> Interview with Heather Troutman, 15.10.2020

<sup>62</sup> Interview with Oliver Boachie 16.11.2020

<sup>63</sup> Interview with Hilde Opoku, 27.10.2020

<sup>64</sup> Interview with Oliver Boachie 16.11.2020

<sup>65</sup> Interview with Oliver Boachie 16.11.2020



scheme on the basis of volumes introduced to the market, and all funds are directed towards the Resource Recovery Secretariat under MESTI, this would resemble the introduction of a state-led PRO. If so, the potential pitfalls described in Section 2 should be considered and addressed. Moreover, while this may not be the explicit intention at the current stage of EPR development, policy path dependence may result unintentionally making premature decisions on the shaping of a future EPR scheme.

Another possibility is to both keep the plastic tax and in parallel implement and EPR scheme as a complementary institution. While this ensures that the income stream from the tax remains stable to pursue goals of enabling the circular economy (especially when the EPR scheme has not yet been established), this may lead to challenges in motivating obliged companies to pay both (if they are the same for both policy tools).

However, the tax may also be utilized in pursuing alternative EPR designs. The fact that the tax is currently being paid, and obliged companies are registered, may function as leverage in incentivizing a voluntary EPR system - while simultaneously avoiding the market distorting effects of selectively voluntary EPR systems. A way to set this up could involve expanding the existing plastics tax regulation with a paragraph giving the obliged companies the opportunity to solve their end-of-life duties through a membership in a PRO, that need to be permitted by MESTI, and at the same time raise the tax to levels that encourage the companies to go for the EPR alternative. Companies that choose to contribute towards a PRO could in this case be rewarded with a lower plastics tax rates, or not having to pay the tax altogether.

This would be similar to the Norwegian NOx fund described in section 2 - where companies were given the choice between either paying a polluter tax or participating in an industry-led fund that distributes the money back to NOx-reducing projects (or in this case - plastics). This would also be a less coercive variant of the “incentivized voluntary schemes” of Kenya and São Paulo, where obliged companies must be members of a PRO in order to be allowed to operate altogether. As these examples show, alternative models that combine an existing tax scheme with the development of a targeted EPR scheme could also be investigated - and may in some cases be easier to implement, with comparable effectiveness as comprehensive and mandatory regulated EPR schemes.

Developing and implementing Extended Producer Responsibility schemes is a process that involves both regulatory authorities and various levels of stakeholders. With an overarching government strategy in the form of the National Plastics Management Policy established, the political will to establish EPR is in place. Through GRIPE and other organizations, the producers seem ready to make the next step in establishing producer responsibility organizations. The dialogue process has started up through NPAP and other channels ensuring stakeholder involvement. A natural next move is either to be taken by the government or the industry, to begin shaping how an EPR design may actually look. The necessary clarifications described in this section will be vital to reaching a joint agreement for a functioning system that allows reaching the joint objective of improved plastics management in Ghana.



## Final notes on the role and interest of PRF

As described in the introduction to this report, measures that enable the economic viability of a PtL plant are highly welcomed by the Plastic REvolution Foundation, and Extended Producer Responsibility is a widely adopted policy tool for covering the cost of collection and recovery of various waste fractions. A functioning EPR scheme would make a significant contribution towards covering the cost of collection and pre-treatment - that together constitute a large part of overall costs - and thus the economic viability of this project. It is the view of PRF that, in order to fully support the development of chemical recycling in Ghana, MESTI and the Ghanaian government need to recognize the importance of EPR schemes with chemical recycling within ambitious waste management targets, and move forward towards its implementation sooner rather than later. While the industry has shown interest and commitment to the implementation of EPR, more comprehensive engagement will be depending on clear policy signals from the government.

Discussion over whether chemical recycling is intended to be part of an EPR scheme, indicates that this is indeed the ambition. There is a very large component of plastic waste that cannot be processed mechanically, and MESTI wishes to incorporate alternative and complementary solutions into a future EPR scheme.<sup>66</sup>

Until the widespread implementation of an EPR scheme comes into place, it is however possible to also support the project directly in a manner that will create short-term economic certainty. As mentioned in the End-of-Phase report<sup>67</sup>, and further elaborated upon in-depth in the report from the dedicated Workstream 3<sup>68</sup> concerning local offtake scenarios, granting tax breaks for the local sale of diesel or other products made from plastic waste would strongly support revenue prospects from such a venture. As also mentioned in the End-of-Phase report, it allows local authorities to maintain full control over the value chain, building a sustainable system for plastic collection and valorization within Ghana.

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<sup>66</sup> Interview with Oliver Boachie 16.11.2020

<sup>67</sup> Available at: <https://www.revocean.org/the-plastic-revolution-foundation-summarizes-learnings-in-comprehensive-end-of-phase-report/>

<sup>68</sup> Available at <https://www.revocean.org/report-local-offtake-prospects-mapping-of-the-diesel-value-chain-and-pricing-structure-in-ghana/>