

DISCUSSION PAPER: PLASTIC CREDITS AS AN INNOVATIVE FINANCIAL INSTRUMENT

This discussion paper outlines the opportunity for Plastic Credits as an innovative financial instrument to support the implementation of inclusive extended producer responsibility in emerging market and developing economies.

Plastic waste is projected to triple, growing from 460 million tonnes in 2019 to 1.3 billion tonnes in 2060, threatening the health of our ecosystems, economies, and communities worldwide (OECD, 2023).

Of paramount importance, and the focus of this discussion paper, is the scale of investments that will be required for the operation of effective extended producer responsibility (EPR) systems in many parts of the world. Additional, innovative, and blended finance will be needed to provide immediate capital for infrastructure and operational costs. Finance should also support other critical social and environmental outcomes not typically captured in traditional EPR schemes, such as the just inclusion of the informal sector, and particularly waste pickers. This discussion paper will introduce and elaborate on how Plastic Credits can support the implementation of inclusive EPR in emerging market and developing economies (EMDE).

The international community has come together in a landmark agreement to develop an international legally binding instrument (ILBI) to end plastic pollution (UNEP, 2024) with broad support from actors across the plastic value chain, academia, NGOs, and governments worldwide. A suite of interventions will be required to fully address the scale and breadth of environmental and human health challenges associated with plastic pollution (UNEP, 2023; Nordic Council of Ministers, 2023). Estimates

on the cost of the transition to a circular plastics economy range from US\$60 billion to US\$255 billion per year by 2050 (The Pew Charitable Trusts and SYSTEMIQ, 2020; UNEP, 2024).

Rapid and significant scaling of collection, sorting, recycling, and safe disposal of plastic waste, is needed to end plastic pollution. The majority of the investment needed to improve solid waste management systems should be directed toward collection and sorting. An estimated US\$400 billion is needed per year to increase waste collection and sorting rates from 62% currently to 100% by 2050.

The existing disparity in capital assets per capita in solid waste management infrastructure between mature and EMDEs cannot be overstated (UNEP, 2024; World Bank, 2021). In EMDE countries, waste management costs represent on average 19% of the municipal budget, compared to only 4% in mature economies (World Bank, 2018). Waste management requires substantial investments in physical infrastructure and long-term operations but EMDE countries often face budget shortfalls for these waste services. Financing waste management systems is often one of the greatest concerns for municipalities (World Bank, 2018). This demonstrates the imminent need for innovative financing instruments that can mobilize finance and provide the much needed investment stability for traditionally volatile markets to improve plastic waste management activities and infrastructure.

¹ Including but not limited to the 68 member states of the High Ambition Coalition to End Plastic Pollution (<https://hactoendplasticpollution.org/>) the 220 members of the Business Coalition for a Global Plastics Treaty (<https://www.businessforplasticstreaty.org/>), over 300 members of the Scientists' Coalition for an Effective Plastics Treaty (<https://ikhapp.org/scientist-membership/>), more than 460,000 members of the International Alliance of Waste Pickers (<https://globalrec.org/plastic-treaty/>) among many others.

EPR is a rapidly growing policy approach aimed at producers that can be characterized as “a group of economic instruments that raise revenues and set incentives for the collection and recovery of material at the post-consumer stage of the product lifecycle” (OECD, 2024).

EPR is a performance-based instrument in which financing is directly tied to the achievement of specific outcomes and objectives. These objectives and the roles and responsibilities of the stakeholders involved are ideally set and defined by law (Ellen MacArthur Foundation, 2021).

International policy makers are currently exploring global rules for implementing mandatory EPR in all markets (UNEP/PP/INC.5/4) as a necessary means to provide dedicated, ongoing, and sufficient financing for sustainable waste management (Ellen MacArthur Foundation, 2021).

While EPR is largely accepted as the global best practice for financing and operating the collection, sorting, and recycling of waste (PREVENT Waste Alliance, 2024), there are significant challenges to the effective implementation of EPR, particularly in EMDE countries (OECD, 2016).

Global Starting Point for Introducing Extended Producer Responsibility

Plastic waste accounts for nearly 20% of all global waste generated in 2020 and despite decades of efforts to reduce plastics dependence, it is projected that the intensity of plastics demand will grow by 30% over the next 25 years (OECD, 2022).

Today, 3.5 billion people do not have access to proper waste management services – this is nearly half of the world's population. This number is set to double by 2040 without urgent and coordinated action (UNEP, 2024). In EMDE countries, the collection of recyclables depends almost entirely on the informal sector. Informal waste workers are among society's most marginalized groups with no recognition of their valuable services, often being deprived of access to sustainable income sources and basic social services (UNEP, 2022; WIEGO, 2022, OECD, 2016).

“An estimated US\$1.2 trillion is needed between 2021 and 2040 (approximately US\$60 billion per year) to reduce plastic leakage to the ocean by around 80% by 2040” (Pew Charitable Trust, 2020).

Many areas of the world that are most in need of investments to expand solid waste management infrastructure, are also facing strong economic hardships following the COVID-19 pandemic and recent energy crises compounded by rapid inflation, rising debt rates, and weakening currencies (World Bank, 2024a). With a limited pool of resources, governments face difficult choices about where to allocate resources.

The scale of investment needed to implement efficient EPR schemes and sustainable waste management infrastructure in EMDE countries is significantly higher than the investment needed to implement EPR and waste management systems in higher-income countries in the 1980s and 1990s (OECD, 2016).

Plus, despite the overwhelming demand for plastics circularity investments in emerging and developing markets, 90% of all investments went to North America and Europe, due to lower risk market characteristics and more supportive policy environments (The Circulate Initiative, 2023). To meet the investment needs, EMDEs will require finance from a variety of sources.

Key Challenges to Implementing Inclusive Extended Producer Responsibility in Emerging Markets and Developing Economies

EPR today often involves complex product types and multiple take-back and recycling schemes. Since this model was first introduced in Germany in the 1990s (Der Grüne Punkt, 2024), EPR has been rapidly adopted, particularly in mature markets, and is often considered a best practice for financing and operating solid waste management systems (Ellen MacArthur Foundation, 2021; Prevent Waste Alliance, 2021).

Nearly 400 EPR schemes exist globally covering numerous product types, each underpinned by different policies and system configurations. Approximately 45 policy-backed, mandatory, fee-based EPR schemes exist for plastic packaging worldwide, with rapid adoption expected (Ellen MacArthur Foundation, 2021).

However, the implementation of inclusive EPR in EMDE contexts is challenging for four key reasons:

- The solid waste management sector is nascent and often requires extensive development in EMDEs

- Instituting the legal, regulatory, and administrative requirements to implement EPR is resource intensive for governments
- There is a substantial deficit in the infrastructure funding required for EPR implementation
- The implementation of EPR is often not inclusive of the informal sector, who are significant drivers of the existing systems

Nascent solid waste management sector

The solid waste management sector is nascent and often requires extensive development in EMDEs.

Many times, the policy and regulatory structures that EPR relies on are missing altogether or are at a nascent stage in EMDE contexts, such as systems for tracking compliance and frameworks for regular monitoring and reporting of impacts. This critical consideration is often overlooked when designing and implementing EPR in EMDEs. Well-established waste management systems are often absent in emerging markets and developing economy countries. Further, important stakeholders such as manufacturers, producer responsibility organizations (PROs), municipalities and recyclers, which have a significant role in EPR are not always available in these countries (Akenji et al., 2011).

Legal, regulatory, and administrative requirements are resource intensive

Instituting the legal, regulatory, and administrative requirements to implement EPR is resource intensive for governments.

While EPR is a market-based instrument reliant on industry leadership, it is also incredibly reliant on significant investments from governments to develop operational, administrative, and enforcement capacity and know how to ensure they can partner with and oversee regulated producers (OECD, 2024). The complexity and resource intensity of required capacity building interventions cannot be overlooked and are often subject to limited and inconsistent development aid.

Infrastructure deficit

There is a substantial deficit in the infrastructure funding required for EPR implementation.

Solid waste management (SWM) is one of many competing financing needs for EMDE governments

working to mobilize resources for basic services such as universal housing, health care, education, clean water, affordable foods, and security. As such, municipal and national SWM budgets often experience shortfalls and are largely unpredictable (World Bank, 2021). This often results in volatility in the provision of public financing for infrastructure, which goes against efforts to attract needed private capital to support infrastructure development.

Inclusive implementation

The implementation of EPR is often not inclusive of the informal sector, who are significant drivers of the existing systems.

One limitation to implementing EPR in EMDE contexts is the difficulty to do so in an inclusive and just manner, supporting the key actors who have traditionally been driving most of the global recycling market – informal workers and waste pickers (UNEP, 2024; OECD, 2024; PREVENT Waste Alliance, 2024; Cass Talbott et al., 2022; Ellen MacArthur Foundation, 2021).

To date, countries have struggled to develop effective means for equitably including informal workers and waste pickers into newly introduced EPR schemes (Cass Talbott et al., 2022). An estimated 20 million informal waste workers are engaged in recycling globally. Informal waste pickers play a critical role in providing waste services and are quite effective in collecting material of economic value. Informal waste workers are generally characterized as marginalized groups, including migrants, women, the unemployed, disabled, elderly, and youth. These workers provide fundamental environmental services, often with externalized costs to workers' health, safety, security, dignity, and livelihoods.

Plastic pollution is complex, requires significant investments into infrastructure, regulatory, and data management systems in EMDE contexts, and must equitably include all stakeholders involved in existing waste management systems. It is clear that EPR by itself is insufficient to address the bevy of environmental, social, economic, and infrastructure requirements. EPR must be a part of a larger suite of innovative policy and financial instruments (OECD, 2024).

The Opportunity of Plastic Credits

In 2018 the 3R Initiative began working to conceptualize a global plastic crediting standard in response to the well-documented funding gap for plastic waste management activities. After a 3-year development process, Verra's Plastic Waste Reduction Program (Plastic Program) was formally launched in February 2021, making it one of the first independent standards for Plastic Credits.

Plastic Credits are a results-based innovative finance instrument that allow companies to make downstream investments in new or expanded plastic waste collection and recycling activities and infrastructure. Projects certified with an independent standard, such as Verra's Plastic Program, generate Plastic Credits for their plastic waste collection or recycling activities after being third-party audited to demonstrate their conformance with the relevant program requirements. The purchase of a Plastic Credit channels finance back to the project collecting or recycling the related plastic waste.

Verra's Plastic Program establishes a framework for measuring and verifying plastic waste collection and recycling impacts in line with environmental and social safeguards that can address potential health risks and facilitate additional social benefits for the informal sector. Verra's Plastic Program covers a broad range of impactful activities, such as waste recovery from the environment, creation of waste collection infrastructure, and the development of new and scaled-up recycling projects. There are two types of credits issued under the Plastic Program – Waste Collection Credits (WCCs) and Waste Recycling Credits (WRCs) – which distinguish the types of activities and waste management outcomes of the relevant plastic waste.

Verra does not track the prices of the credits issued by the Plastic Program, but some estimate that the Plastic Credits more broadly could bring approximately US\$30 million a year to plastic pollution interventions within the next five years (World Bank, 2024b).

To date, there are more than 60 projects in over 27 countries worldwide either registered or in the process of registering with Verra's Plastic Program. Various governments in the process of designing or implementing EPR schemes have expressed interest in exploring the role of Plastic Credits within or alongside EPR.

Plastic Credits can support the implementation of inclusive EPR in EMDEs in four key ways:

1. Mobilize additional financing required to overcome the infrastructure deficit
2. Accelerate comprehensive waste collection and treatment
3. Provision of data, infrastructure, and a measurement framework to operationalize EPR schemes
4. Support a just transition and equitable inclusion of waste pickers

1. Mobilize additional financing required to overcome the infrastructure deficit

Ending plastic pollution by 2040 is estimated to require US\$1,884 billion in annual investment by 2040. 93% of the total annual investment is expected to come from private sources (Nordic Council of Ministers, 2023).

The plastics credit market and international stakeholders can benefit from the two decades of experiential learning achieved by the carbon credit market, which mobilized US\$104 billion in revenues in 2023 (World Bank, 2024). Plastic Credits can be leveraged to attract private investments for upfront capital needed by plastics reduction and removal projects, particularly when used within a blended innovative financing instrument that reorients cash flows from traditional financing approaches. The World Bank's Plastic Waste Reduction-Linked Bond is a notable example of this. It uses a novel approach to channel private funds into plastic waste reduction efforts while offering investors Plastic Credit-linked returns. This bond diverges from traditional bonds by linking the interest payments on the bond to the delivery of Plastic Credits. The plastic waste reductions achieved are certified as Plastic Credits through Verra's Plastic Program, and they are monetized through a plastic waste reduction purchase agreement. An equivalent amount of financing is made available upfront to finance the project (World Bank, 2024c).

2. Accelerate comprehensive waste collection and treatment

The development and implementation of EPR schemes take time (OECD, 2016). Development of effective collection and sorting schemes require time to bridge the infrastructure gap, drastically

increase waste collection coverage areas and material types, and effect the behavior change required (World Bank, 2021). The projects financed by Plastic Credits can aid in improving and expanding collection and recycling systems while EPR systems are being developed. Plastic Credits can speed up the implementation of EPR by increasing the financial resources available to establish the infrastructure required for effective EPR implementation. Plastic Credits can play an instrumental role in jump starting local and national initiatives, building momentum, data, accountability, visibility, and voice in relatively short time frames (UNEP, 2022; PREVENT Waste Alliance, 2022).

3. Provision of data, infrastructure, and a measurement framework to operationalize EPR schemes

Best in class plastic credit systems, which are fully independent, transparent, and align with International Social and Environmental Accreditation and Labeling Alliance (ISEAL) best practices (World Bank, 2024b), require robust data and monitoring systems. Governments can benefit from the provision of uniform data on plastic waste collection and recycling reported by Plastic Credit projects. Accurate and current data is essential to ensure the effective design, development, and implementation of EPR systems. This data and the existence of a global framework for measuring these outcomes can relieve governments of the administrative burden of verifying the data or establishing their own measurement methodology, respectively. EPR systems can also leverage Verra's registry system for the transparent tracking of EPR obligations met through the purchase of Plastic Credits.

4. Support a just transition and equitable inclusion of waste pickers

Robust plastic crediting programs, like Verra's Plastic Program, include important social and environmental safeguards that can elevate the conditions of waste pickers involved and support a just transition. All projects generating Plastic Credits with Verra's Plastic Program must show, among other requirements, the following:

- Any negative health or safety risks that could result from the activity have been mitigated through, for example, training and the provision of protective equipment
- There is no income displacement that results

from the introduction of the activity

- There is no forced or child labor, and those involved in the project are paid regionally prevailing wages
- Stakeholder consultation has been carried out at the project's design phase and a plan has been put in place for continued consultation

The Opportunity for Plastic Credits to Support the International Legally Binding Instrument (ILBI) on Plastic Pollution, Including in the Marine Environment, to Drive Innovative and Sustainable Finance for Circular Plastics Management

The core opportunity of the ILBI on plastic pollution is to develop a strong global framework that creates trust, accountability, harmonization, and transparency while promoting ambition and sharing of best practices (Nordic Ministers Council, 2024). The ILBI can be a powerful driver of demand for financing, motivation, and value-add for financiers (UNEP FI, 2024). Plastic Credits are an innovative financial instrument that can complement the suite of tools that will be required in a blended financing approach to achieve the ambitions sets for the ILBI.

Plastic Credits certified to an independent standard program, such as Verra's Plastic Program, can align financial flows towards plastic waste management activities. Plastic Credits can operate either independently, through a blended/innovative finance approach, or integrate with EPR schemes to mobilize large scale capital to address plastic pollution.

More Information To Be Released

Verra is preparing an analytical case study to further explore the themes introduced in this discussion paper. The study will consider the role of Plastic Credits in supporting the implementation of EPR for plastic packaging in an inclusive manner using Ghana as an archetype of an EMDE. This case study report will be prepared and released by the fifth and final session of the intergovernmental negotiating committee (INC-5).

Prepared and written with support from Heather N. Hogan, CEO, Sustainable Development Planning.

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