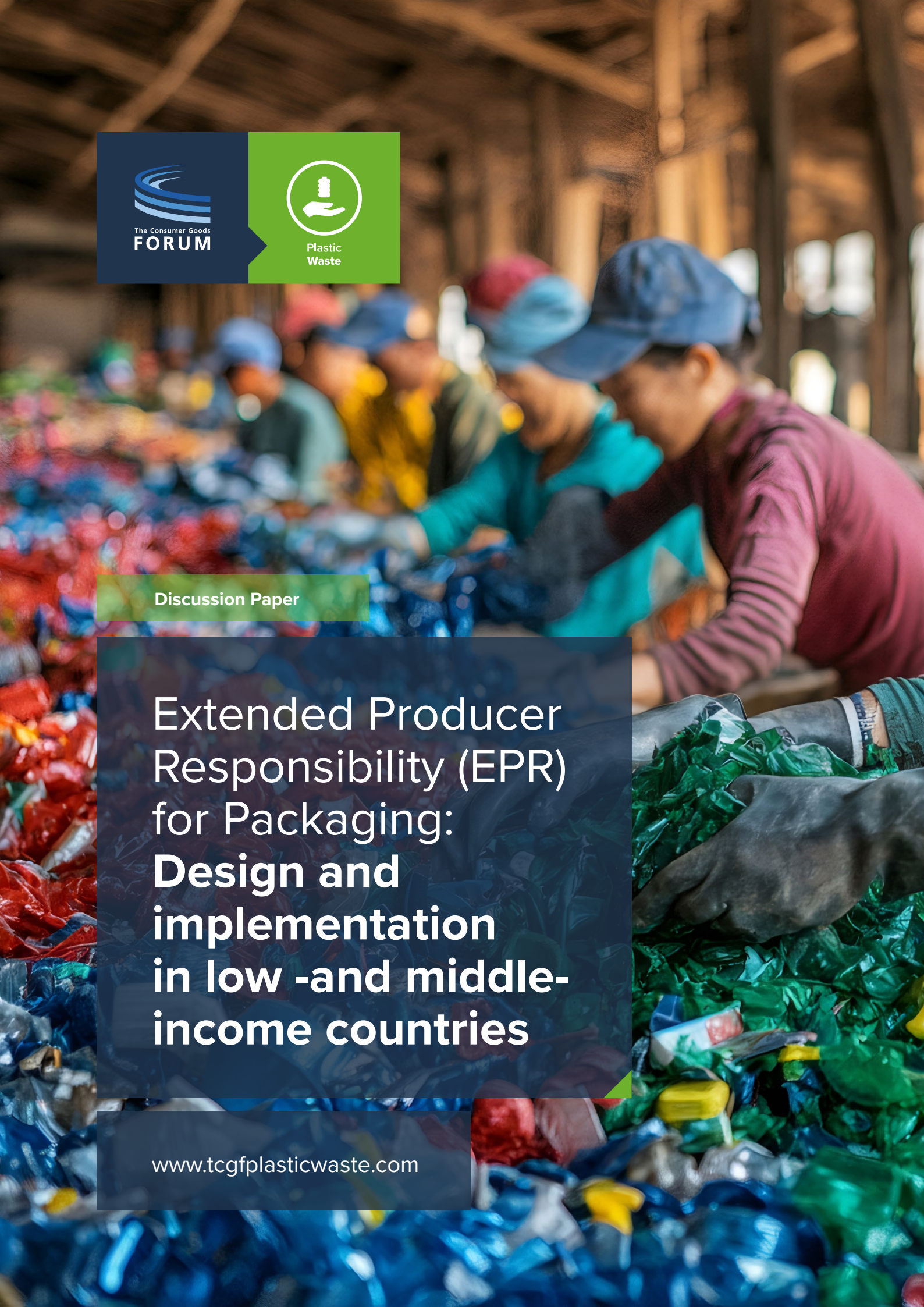

Discussion Paper

Extended Producer Responsibility (EPR) for Packaging: **Design and implementation in low -and middle-income countries**

www.tcgfplasticwaste.com

About The Consumer Goods Forum's Coalition of Action on Plastic Waste

The Consumer Goods Forum ("CGF") Plastic Waste Coalition of Action was founded in 2020 with the aim of developing a more circular approach to the development and processing of plastic packaging in the consumer goods industry. The development of the Coalition builds of the CGF's 2018 endorsement of the Ellen MacArthur Foundation's New Plastics Economy. As a CEO-led group of 40+ committed and innovative retailers, manufacturers, and converters, the Coalition's vision of accelerating progress towards the New Plastics Economy is embodied by its central aims for members to work towards implementing impactful measures through multi-stakeholder collaborations that will help make circularity the norm in the industry.

The CGF Plastic Waste Coalition of Action has been exploring Extended Producer Responsibility (EPR) from its inception in 2020 with the publications of "*Building a Circular Economy for Packaging. A View from the Consumer Goods Industry on Optimal Extended Producer Responsibility*", followed by "*Guiding principles for ecomodulation of EPR fees for packaging*" published in 2020.

All initiatives and action points are subject to antitrust rules and will be vetted by external counsel before implementation.

Content

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Partners of CGF's EPR Workstream

The Fair Circularity Initiative (FCI) has made a significant contribution to this paper through the development of the section on the Informal Waste Sector. The FCI brings businesses together around the aim of ensuring the human rights of informal waste workers are respected and their critical role in circular value chains is recognised.

Fair Circularity Initiative

We would like to acknowledge the valuable perspectives shared by members of the CGF's Human Rights Coalition of Action. Their expertise has been invaluable in ensuring that this paper reflects a strong people-centered approach, particularly in relation to circularity and EPR implementation.

This paper would also not have been possible without the contribution of many experts whose time and commitment deserve to be warmly thanked.

NEXT STEPS

The Consumer Goods Forum welcomes additional feedback and encourages ongoing engagement on this complex and evolving topic. Please direct any further input or inquiries to:
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Introduction

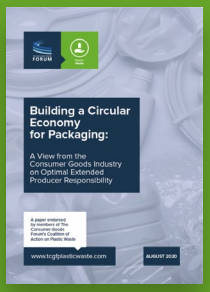
Well-designed packaging EPR is supported as a positive force for achieving government and industry goals to help reduce packaging waste and pollution. However, in low- and middle-income countries with under-developed solid waste management systems, packaging EPR is unlikely to succeed without parallel investments in solid waste management systems. Partnership between the public sector and the private sector remain key for success.

Optimal EPR principles developed by CGF member companies in 2020 provide a shared industry view on key design elements that apply in all geographies. This paper provides additional recommended guidance for policymakers and implementation institution(s) to set EPR in low- and middle-income countries (LMICs), to complement these global principles, with a focus on three areas:

- Establishment of a central institution to govern the EPR system, with strong involvement from the value-chain
- Deliberate design of EPR systems to increase “investability” into waste management infrastructure
- Inclusion of waste pickers in EPR system design and implementation

BOX 1 The CGF Principles for Optimal EPR Design (2020)

To progress towards a circular economy, the performance of waste management and recycling systems throughout the world needs to urgently improve. As important manufacturers and retailers of consumer packaged goods, we believe that EPR programmes for packaging can accelerate this progress and provide critical and effective support to recycling, particularly when the right conditions are in place for a given market. This paper reflects our view on the recommended guiding principles and key design parameters of such optimal EPR programmes. It supports a proactive stance across our industry to deliver constructive recommendations when such programmes are being pursued or developed while fostering pre-competitive collaboration at the local level.



The policy outcomes we prefer should meet the following general principles:

- Strong environmental outcomes;
- Efficient, cost-effective, transparent and accountable;
- Shared financial responsibility;
- Convenient for consumers;
- Long-term financial sustainability;
- Allow producers to secure material for closed loop recycling; and
- Social inclusiveness and fairness, especially in transitional markets with informal sector involvement.

Executive Summary

Packaging Extended Producer Responsibility (EPR) has traditionally been adopted in high-income countries but is now gaining momentum in low- and middle-income countries (LMICs). In these countries, EPR has the potential to play a significant positive role in accelerating progress towards a circular economy and reducing packaging pollution. It can provide sustainable financing for packaging collection, improve the waste and recycling systems for packaging (with responsibility fairly shared across industry) and create critical positive incentives to help companies to reduce unnecessary packaging and re-design packaging for reuse or recycling.

Packaging EPR on its own cannot solve all waste management challenges in LMICs. Packaging only constitutes around 20% of municipal solid waste in LMICs[1] and cannot finance the entire waste management system.[2] Since packaging EPR funds should be ring-fenced for investment into collection, sorting, and recycling of packaging materials, parallel investments in broader waste management infrastructure and system developments are essential alongside EPR policy implementation.

EPR policy should be simple and designed in close collaboration with stakeholders (including industry and informal sector representatives)[3] and should include a set of regulatory principles set by policymakers (such as performance targets and timelines, financing and fund management, governance structure, monitoring, compliance, data reporting and protection).

The existing CGF Optimal EPR principles, developed by CGF member companies in 2020 (see Box 1), provide a valid framework to guide EPR policy developments in LMICs. Additional recommended guidance for policymakers and implementation institution(s) is also required alongside these principles to reflect the LMICs context.

Designing and successfully implementing packaging EPR in LMICs is complex. While models continue to evolve and adapt to local contexts, no single approach has addressed all key challenges. LMICs face specific difficulties in designing and implementing EPR due to (1) the high demand it places on government institutions, (2) the basic waste management and recycling infrastructure gaps in many countries, and (3) the need to integrate waste pickers' and their organisations that are an essential part of the recycling system.

Six additional guidance elements are identified[4], alongside the existing CGF Optimal EPR principles. Of these, three elements are particularly challenging and require careful attention in EPR policy design and implementation:

Institution(s): Current EPR institution design and governance differs widely by country. The biggest distinction is between a centralised EPR model (common in high-income countries) and a decentralised market-based EPR model (e.g., in India). A centralised single-institution / single Producer Responsibility Organisation (PRO) model[5] (responsible for managing the EPR Obligations) governed by producers[6] through an industry-run

1 Based on high-level estimation for low- and middle-income countries based on "What a Waste" (https://datatopics.worldbank.org/what-a-waste/report) and expert interviews.
2 Municipal solid waste in LMIC consists of: ~20% packaging, ~60% organics, ~20% others (e.g., textile, inert materials)
3 In accordance with antitrust rules
4 Policy, Institution(s), Infrastructure, Informal sector, Financial sustainability, Wider considerations
5 While the term PRO varies in use across different markets, the centralised single-institution / single Producer Responsibility Organisation refers to a central institution responsible for managing the EPR obligations.
6 Producer: Any natural or legal person who manufactures a product or has a product designed or manufactured, and markets that product under that person's name or trademark

Board of Directors is the preferred long-term approach as it aligns best with CGF Optimal EPR Principles and best supports delivery of the seven core functions [7] (see Annex A). If an alternative governance model is chosen, it should still ensure all core functions are effectively fulfilled.

Infrastructure: Packaging EPR relies on basic waste management systems for successful implementation and cannot fully fund a solid waste management system. Mobilising the financing required to build and operate functional waste management and recycling infrastructure is a key challenge. EPR policy design and implementation should help attract public or private sector investment and be directed to help close local infrastructure gaps.

Informal Sector: In many markets, the informal sector plays a central role in the collection and recycling economy, contributing significantly to the collection, sorting and processing of packaging waste. It is possible to design EPR systems that integrate waste pickers,[8] but in practice, funds often flow toward government-run or formalised waste systems, risking their exclusion. EPR policy design and implementation should recognise waste pickers as key actors and integrate them through action across three key pillars: 1) participation in EPR set-up and governance, 2) fair and consistent payment mechanisms, and 3) contracting directly with waste picker organisations.

7 Seven core functions: Defining the roadmap to achieve legislative targets, coordinating waste management operations, integrating informal waste workers, ensuring consistent implementation and enforcement for all producers, reporting, online data management and protection, as well as auditing.

8 Waste pickers can be described as people who participate (individually or collectively) in the collection, separation, sorting, transport, and sale of recyclable and reusable materials and products (paper, plastic, metal, glass, and other materials) in an informal or semi-formal capacity, as own-account workers, in a cooperative or social and solidarity economy setting, and as workers who subsequently achieved formal work arrangements through their organizations.

Summary of EPR design desired outcomes and recommendations for the six guidance elements:

Desired Outcome		Recommendations
A clear, enforceable, and transparent EPR legislative framework, co-designed with key stakeholders, that starts with basic requirements and evolves over time (e.g., expanding material scope, introducing ecomodulation)	1 POLICY	Establish a strong and adaptable EPR legislative framework aligning with the following principles: • **Embedding core regulatory principles —** performance targets and timelines; financing and fund management; governance structure; enforcement, monitoring, compliance, data reporting and protection • **Co-designing through inclusive consultation** with key stakeholders including industry and the informal sector • **Phasing in complexity** — begin with realistic and enforceable basics and evolve over time, with ecomodulation based on design guidelines playing an important role in a second phase • **Aligning with existing policies and government departments** to ensure coherence and coordination.
A robust, transparent governance structure that drives a long-term waste management and recycling infrastructure development in line with set EPR regulation, enforces compliance, and ensures fair, effective fund management.	2 INSTITUTION(S)	• **In all models, an authority formally appoints a centralised institution / PRO that is a professional, not-for-profit entity, responsible for implementing and governing an EPR system, governed by producers through a** multi-stakeholder governing board. • **Preferably, adopt a centralised, single-institution / single-PRO model** • **If an alternative model is chosen, legally ensure all the seven core functions are fulfilled by the institution(s):** strategic roadmap, operational coordination, informal sector integration, consistent producer implementation and enforcement, reporting, online data management and protection, and auditing
EPR drives sustained private and public investment into packaging waste management infrastructure	3 INFRASTRUCTURE	• **Potential to establish mechanisms that attract substantial external investment for packaging waste collection and end of life infrastructure** • **Rely on existing basic collection services** to help fund packaging waste management operations • **Prioritize infrastructure investments based on local gaps** • **Institution(s) to design EPR fee structures to guarantee long-term service revenue for collectors and stable feedstock supply for recyclers,** for both lower-value and higher value packaging materials • **Use EPR to underwrite long-term contracts between central institution and recyclers** to unlock investments. • **Explore complementary tools** (e.g., recycled content mandates) to increase offtake certainty and support a business case for investment.
EPR supports the effective integration of informal sector waste workers*, contributing to a decent livelihood (e.g., informed by living income methodology) and reinforcing efforts to address human rights impacts **Wording is aligned with FCI*	4 INFORMAL SECTOR	**Collaborate with the waste value chain and informal sector representatives to ensure integration:** • **Governance participation:** Legally recognize informal waste pickers as stakeholders with the right to participate in EPR design and governance; establish an integration taskforce and implement a formal integration plan. • **Guaranteed payments:** Establish a service fee, systems for registration, payment, and material tracking, and accessible grievance mechanisms. • **Contracting with their organisations:** Mandate the centralised institution to facilitate procurement/service contracts, support organizing and capacity-building, and establish grievance procedures for Waste Picker Organisations.
EPR systems should be designed to be cost-effective, especially in LMICs, where any inflation of food and basic goods would be acutely felt	5 FINANCIAL SUSTAINABILITY	• **Reflect in producer payments the actual costs** of managing packaging waste by high level materials type (e.g., plastic, paper, glass), offset by any revenues generated from the sale of recovered materials **("net cost" principle),** allowing cross-subsidization of materials. • **Regularly adjust payments** to ensure they reflect changes in costs and commodity values over time. • **Minimize administrative costs** to maximise the funds that are flowing through to fund systems
EPR policies consider wider system impacts and ensures that reuse/refill business models are not unintentionally penalized	6 WIDER CONSIDERATIONS	• **Ensure circularity is considered beyond recycling - reduce, reuse, and substitution - are carefully considered and actively supported** through other policy instruments (e.g. reuse models face less packaging weight) • Once the system is in place, **use complementary tools to improve efficiency** (e.g., recycled content mandates, design guidelines, ecomodulation)

Policy design

A clear, simple, and transparent legislative framework is the starting point for mandatory packaging EPR. It lays the foundation for establishing the institutional structures, financing infrastructure, and integrating the informal sector, while aligning with broader policy objectives. The success of packaging EPR depends on a supportive context, most importantly basic waste management practices, investment and legislation. EPR alone cannot solve all waste challenges, especially in LMICs where packaging represents only a small share of total waste and cannot fund the entire system. This section outlines the key components and design considerations for effective EPR policy.

The legislative framework must include a set of regulatory principles, next to setting the purpose and objective of the EPR law, clear definitions of relevant roles (e.g., who is considered a producer), and the scope of covered products and materials:

- **Performance targets and timelines.** EPR regulation must set collection and recycling targets for the material types in-scope with gradual and realistic timelines set for each target. These targets should evolve to reflect progress and should be simple at first and become more specific over time (e.g., individual targets for each material in-scope).
- **Financing and fund management** (links to institution(s), infrastructure, and informal sector sections): Legislation needs to define (1) how producers can fulfil their EPR obligations (e.g., by developing a proprietary centralised institution, paying fees to an existing centralised institution, buying certificates from waste management operators, or another mechanism), (2) how EPR funds shall be deployed to ensure waste management infrastructure build-out and operation, as well as (3) how waste pickers are contracted and paid for their collection and sorting services.
- **Governance structure** (links to institution(s) & informal sector sections): The legislative framework must clearly define how the EPR system will be governed — for example, through a centralised single-institution model or a decentralised, market-based model. It should also specify which authority will formally appoint and evaluate the centralised institution(s)/PRO(s)[9] and how it will be governed. In all models, the centralised institution/PRO should be a professional, not-for-profit entity, governed by producers, and establish a multi-stakeholder governing board with decision-making authority and mandatory industry participation to ensure transparency and operational efficiency (to prevent cherry-picking and free-riding). Additionally, the framework should outline how the informal waste sector will be formally represented in EPR governance.
- **Enforcement, monitoring, compliance, data reporting and protection** (links to institution(s) section): EPR regulation must define monitoring responsibilities, how compliance shall be enforced (e.g., penalty scheme), as well as required reporting, data security and protection and auditing of the system.

Based on best practice, the following aspects **should guide the design process of the EPR policy framework**:

- Design EPR framework through consultation process including all relevant stakeholders (incl. industry, informal sector representatives) to ensure co-creation.
- Start with a simple legislative framework to drive compliance and then evolve over time (e.g., adding ecomodulation, more materials in scope, sector specific nuances including for food-contact packaging, design requirements).

9 Centralised institution / PRO is responsible for managing the EPR Obligations

- Set a realistic implementation timeline (e.g., scope, performance targets).
- Involve other relevant government departments for early alignment to facilitate operationalisation (e.g., Ministry of Finance on fiscal incentives).
- Ensure the EPR regulation is well aligned and part of a broader waste management policy and strategy for all types of waste (e.g., DRS, landfill ban, design requirements, recycling labelling mandates) (links to Wider considerations).

Institution(s)

This section refers to how institution(s) implement, operate, and enforce EPR policy. The objective is to set a governance structure that implements a long-term waste management and recycling strategy in line with the legislative EPR framework, and effectively manages EPR funds in a fair and transparent way. While the choice of the governance structure is highly dependent on the exact local context, seven functions[10] that are structured around achieving three key objectives must be performed:

- **Infrastructure development**: A long-term waste management and recycling strategy and roadmap should be defined based on the targets set by the EPR regulation. It focuses on expanding access to collection and recycling infrastructure. EPR funds should be allocated and ring-fenced to local waste management operations for packaging in line with this strategy and roadmap.
- **Level-playing field**: Effective and consistent implementation and enforcement mechanisms ensure all statutory obligated producers contribute fairly, prevent free-riding, and ensure compliance.
- **Effective data monitoring, transparency, and protection**: Financial flows are tracked, efficient and secure registration and robust online reporting systems are provided, and compliance and financial integrity are regularly verified by the institution(s).

While various governance models can be considered to perform these functions, the centralised single-institution / single-PRO model with strong producer involvement is the preferred option as it is more likely to effectively perform all the functions (see Annex A). This model aligns with CGF's Optimal EPR Principles and offers key advantages: it creates a level playing field for all obligated companies, reduces fragmentation and enables centralised and consistent registration and monitoring, improves cost-efficiency through economies of scale, and enables strategic, long-term investment in circular waste management systems. Ultimately, it ensures statutory obligated producers are truly accountable for driving system transformation.

If an alternative governance model is chosen,[11] it should ensure that the core functions are fulfilled by the institution(s) (i.e., setting the roadmap, coordinating operations, integrating informal workers, ensuring consistent producer implementation and enforcement, and managing reporting, data management and protection, and auditing). In all models, key stakeholders,[12] and particularly industry and informal waste sector, involvement in governance is a key element to facilitate buy-in and to bring know-how to the table. Alternatives:

10 A detailed description of the seven core functions needed for efficient, transparent & accountable governance across all institutional scenarios can be found in the Annex A.
11 Different governance structure archetypes are described in Annex A.
12 Including industry, waste management operators, informal waste sector, trade associations, academics (and municipality/local government where required)

- **In larger countries with a regionalised or federal governance structure, centralised single-institutions that represent a region, province, or state could be considered as a preferred option.**
- **A centralised single-institution / single-PRO model could delegate functions into multiple execution bodies** where needed, e.g., to address capability gaps or avoid over-concentration of responsibilities. One effective option is to appoint several non-competing regional bodies focused on local waste management operations, while retaining central control over core functions such as strategy, enforcement, and informal sector integration. This approach is particularly useful in markets with high regional fragmentation. However, it is essential to ensure clear coordination and avoid overlap between execution bodies.
- **A centralised multi-institutions model (i.e., multiple PROs being responsible for the same geography) is not a preferred solution** as benefits of competition between PROs do not outweigh additional complexity including the risk of a "race to the bottom" and other unintended consequences from competition (e.g., challenges to collaborate on central registration system or informal sector integration and payment). The CGF Optimal EPR Principles suggest that a centralised multiple-institutions setup is a potential option only in more mature EPR systems.
- **A decentralised market-based model is not preferred as a long-term approach.** While it may offer an innovative approach to support collection and recycling of high-value packaging in the absence of a functioning waste management system and prevents abuses around centralised fund management, it has limitations. It does not enable the development of a long-term and coordinated waste management and recycling strategy and struggles to address lower-value materials (avoiding "cherry-picking" of high-value materials). In addition, it remains unclear whether effectively transitioning from decentralised to centralised EPR over time is viable, once the waste management system is more mature (or if there is a "lock-in" risk).

This recommendation is informed by an assessment of various governance models, evaluated against the three objectives outlined above. Annex A provides more details on this assessment.

Infrastructure

Packaging EPR has the potential to establish mechanisms that attract substantial public and private investment for packaging waste collection and end of life infrastructure. It prioritises building a viable business case for packaging waste management investment and closing major waste management infrastructure gaps (e.g., collection of lower-value materials that are unlikely to be collected by private or informal sector networks).

EPR relies on existing basic collection services which must be in place to enable EPR funding to support broader waste management operations. Yet setting up municipal waste management systems remains a complex challenge for many LMIC governments. Hence, in countries with underdeveloped waste systems, EPR developments should happen in parallel with waste system developments mainly funded by government funds and/or service fees from households and businesses.[13]

13 Although this is a critical challenge, this goes beyond the scope of this paper focused on providing the industry perspective on critical design parameters for mandatory packaging EPR in LMIC

EPR can help make packaging waste collection and end of life infrastructure investable by improving the viability of the business case (e.g., secure reliable feedstock for recycling and reliable service fees for collection) for packaging waste management. The underlying drivers require a distinction into lower- vs. higher-value packaging materials:

- **Lower-value packaging materials** rely on municipal collection services funded through service fee contracts to achieve high collection coverage. While EPR cannot cover all municipal collection cost, EPR can facilitate long-term contracts between centralised institution(s) / PRO(s)[14] and waste management operators to help secure predictable and reliable financing of collection and processing services.[15] Beyond EPR, mobilising additional funding by transitioning towards utility-type models[16] and professionalising the collection of household and business waste service fees is important.
- **Higher-value packaging materials** are often collected by the waste pickers to be recycled. Achieving recycling rate targets requires addressing major uncertainties for recyclers related to long-term feedstock certainty (quality, volume, price), fair competition, and offtake to foster investability. To secure access to waste feedstock and protect asset investment, EPR can enable long-term contracts between collection organizations, aggregators, MRFs, recycler, and centralised institution(s) / PRO(s) as well as help guarantee fair and effective payments to informal waste workers for collection. A more detailed description of these investment drivers is provided in Annex B.

Informal sector

In many markets, the informal sector plays a central role in the recycling economy, contributing significantly to the collection, sorting and processing of packaging waste. However, in practice, funds often flow towards government-run or formalised waste systems, risking the exclusion of waste pickers.

EPR design should effectively integrate waste pickers[17] into EPR systems, contributing to a living income[18] for waste pickers and monitor its evolution through time. The Fair Circularity Initiative (FCI) has translated its widely accepted principles for corporate engagement with the informal waste sector into clear and practical EPR design principles and implementation guidance. While a very context-specific approach is required that reflects local market realities, action across the three core pillars below is needed. A more detailed description of these three pillars is included in Annex C.

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14 Negotiating and concluding those contracts on behalf of obligated companies
15 Building on existing informal sector collection in contexts where the informal sector has been involved in household collection
16 Relies on the regency or city governments taking responsibility for and professionalising the collection of household and business waste service fees (ideally supported by national policy) as a revenue source for paying a tipping fee (https://www.stopoceanplastics.com/wp-content/uploads/2023/06/Systemiq_Mobilizing-Blended-Finance-for-Waste-Management_EN_final-1-compressed.pdf
17 Waste pickers can be described as people who participate (individually or collectively) in the collection, separation, sorting, transport, and sale of recyclable and reusable materials and products (paper, plastic, metal, glass, and other materials) in an informal or semi-formal capacity, as own-account workers, in a cooperative or social and solidarity economy setting, and as workers who subsequently achieved formal work arrangements through their organizations.
18 Living income is defined as the required earnings to afford a standard of living with all the components essential for a decent life or decent livelihoods. This concept acknowledges the right of every individual to earn an income that allows them to meet their basic needs, lead a dignified life and escape the cycle of poverty.

- To ensure **participation in EPR Governance**, legislation must recognise waste pickers as key stakeholders and provide the right to participate in governance. Centralised institution(s) / PRO(s) need to develop and execute an integration plan, and a multi-stakeholder Waste Picker Integration Taskforce should provide an open communication channel and monitor integration progress.
- To **guarantee payments**, a service fee for informal collection and sorting services needs to be legally established, aiming to support movement towards decent livelihoods for waste pickers, informed by the living income methodology.[19] A contextually-appropriate approach to waste picker registration, payment, and material tracking (incl. monitoring and reporting) is needed. Accessible and contextually appropriate grievance procedures are essential to ensure formal channels for raising complaints.
- A centralised institution / PRO needs to be mandated[20] to **facilitate establishment of contracts with Waste Picker Organisations** (links to Policy Design).[21] [22] Pathways for waste picker organising and capacity development support must be ensured (for example to support their participation in governance and establishment of contracts), and a grievance procedure for Waste Picker Organisations must be established.

Beyond these three pillars, EPR should be designed to support and reinforce initiatives designed to address human rights impacts, including facilitating access to social security, healthcare, education and housing, and to help mitigate the impacts experienced most severely by female waste pickers (occupational health, personal safety and security, discrimination and harassment). Centralised institution(s) / PRO(s) should carry out human rights' due diligence in their value chains and operations.

Financial sustainability

EPR systems should be designed to be cost-effective, especially in LMICs, where any inflation of food and basic goods would be acutely felt.

Following the CGF Optimal EPR principles, the following is recommended:

- Producer payments should reflect the actual costs of managing packaging waste by high-level material types (e.g., plastic, paper, glass), offset by any revenues generated from the sale of recovered materials (***"net cost" principle***), avoiding cross-subsidisation of materials.
- Payments should be regularly adjusted to ensure they reflect changes in costs and commodity values over time.
- Administrative costs should be minimised to maximise the funds that are flowing through to fund systems.

19 FCI's Living Income Toolkit provides a step-by-step methodology to assess living incomes for informal waste picker communities.
20 On behalf of obligated companies
21 Legislation must maintain safe and legal entry points for waste pickers to access waste (i.e. does not exclude those unable to register/contract).
22 Although the PRO facilitates contracting, depending on the context, either the PRO directly or its suppliers will enter into agreements with the Waste Picker Organisations.

Wider considerations

EPR design currently primarily focuses on recycling, but it should also carefully consider other circularity levers and wider system impacts. For instance, current fee structures could unintentionally penalise **reuse and refill models**, as this packaging is often heavier. Deploying parallel policies and incentives is essential to encourage reuse and refill.

EPR systems should start simple, to avoid overly complex designs that are unlikely to be effectively implemented, but must apply to all packaging types to ensure fairness and avoid giving an advantage to any one material. Policy should be forward-looking, encouraging innovation in materials and technology by avoiding overly prescriptive rules. As systems develop, institution(s) can introduce **ecomodulated fees**[23] based on the net cost of managing different materials, helping to avoid unintended outcomes or regrettable substitutions.

To further strengthen investability beyond the direct EPR policy, **recycled content** mandates (where possible), or voluntary commitments can help guarantee steady demand for recycled materials. Industry should aim to commit to long-term recycled content offtake to create long-term offtake security for recyclers.[24]

Finally, EPR policy should operate alongside **other waste management policies** to enhance its effectiveness, including landfill management policies that set reduction targets and implement landfill gate fees.[25]

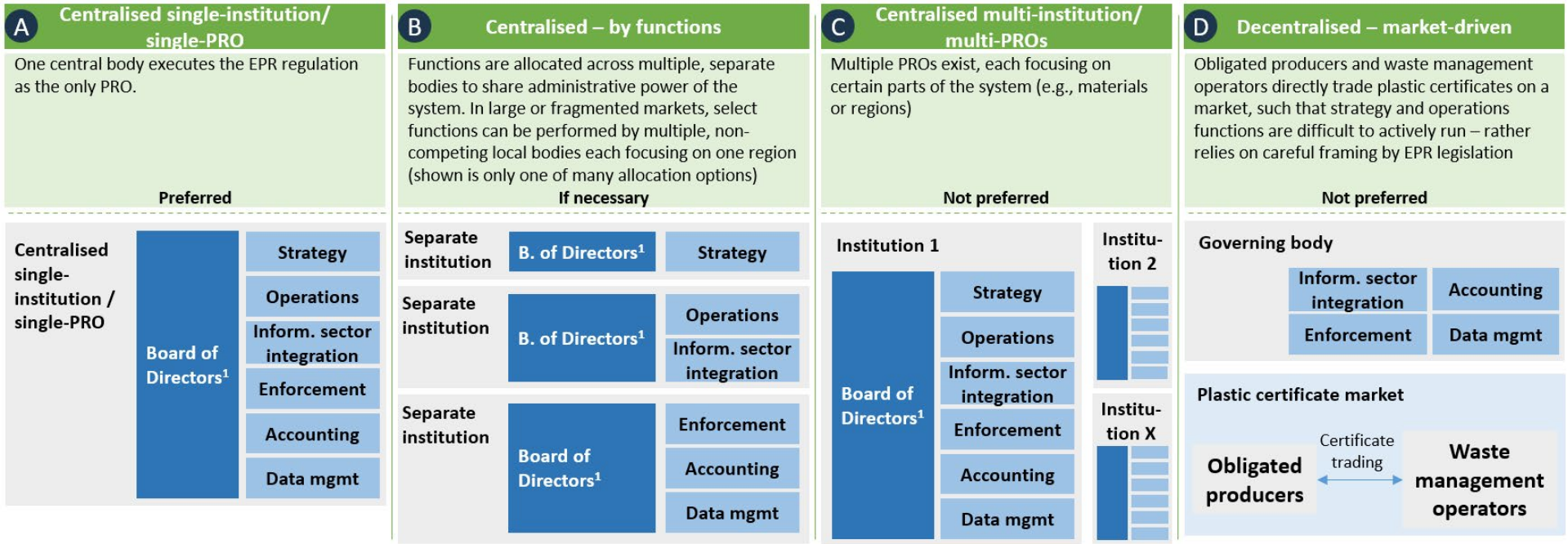
23 Beyond simple fee differentiation by material type (e.g., plastic, paper, glass)
24 This needs to be balanced with locations of producers' manufacturing sites that are sometimes not in the same country.
25 Price charged per unit of waste to dispose of waste at a landfill site.

Annex A: Main institutional setups and key governance functions

7 KEY FUNCTIONS OF INSTITUTION(S)[1] FOR EFFICIENT, TRANSPARENT & ACCOUNTABLE GOVERNANCE ACROSS ALL INSTITUTIONAL SCENARIOS

Infrastructure development	**Strategy: define the roadmap to achieve legislative targets** • Develop a waste management and recycling strategy to realise targets set by the EPR regulation and increase consumer access to collection and recycling infrastructure • Follow a phased implementation approach – starting with getting the basics right (collection) and gradually introducing more complexity (e.g., ecomodulation) • Translate strategy into actionable waste management roadmaps tailored to regional context • Collaborate with the government to shape and further refine EPR legislation
	Operations: coordinate waste management operations (centrally or locally) • Execute the roadmap by managing tenders, contracting, helping improve, and monitoring compliance with local waste management standards within budget constraints, also by fostering local entrepreneurship and optimization of infrastructure facilities • Facilitate payments to waste management service providers, ensuring all recipients can access payments (incl. informal sector) • Once collection systems are set up, enhance consumer awareness on the importance of and their role in recycling in order to maximize collected materials and its quality
	Informal waste sector integration: Foster participation and ensure benefits for informal waste workers • Ensure registration and waste collection tracking systems are developed in close collaboration with the informal sector • Identify payment systems that are effectively working in the local context
Level-playing field	**Consistent implementation and enforcement: ensure all producers fulfil obligations** • Register and monitor all statutory obligated producers, creating a level-playing field • Fee management (if system is not market-based): set and control EPR fee structure in line with the waste management strategy • Ensure all producers pay fees according to their obligations and fee structure (if applicable)
Effective data monitoring and protection	**Accounting: track, audit, and report financial flows** • Monitor all fee payments and expenditures • Publish regular reports on fund allocation to uphold transparency
	Data management and protection: set up, manage, and streamline robust online platform for registration and reporting, whilst guaranteeing data protection • Ensure registration and data exchange with obligated producers and waste management operators is as automated and efficient as possible • Ensure sensitive producer and waste management operator data is protected
	Auditing: verify compliance and financial integrity • Verify documentary evidence to prove that all producers have fulfilled their EPR obligations, and all funds are managed efficiently, fairly, and in line with regulations

Note: *wording is aligned with the Fair Circularity Initiative (FCI) | 1) Not all functions shown here, rather the focus is on the ones that are key for achieving the intended outcomes. Functions can have multiple roles/FTE.



1. **Board of Directors:** Appoints organisations that lead the bodies, influences strategic decision making, and is ideally made up of representatives from industry, waste management operators, informal waste sector, trade associations, academics – also include municipality/local government where required
2. **Auditing role:** Not shown but should be performed by a separate body in every governance structure to ensure integrity of the system

Annex B: Drivers for investment in low- and high-value waste management

1. MUNICIPAL COLLECTION & DISPOSAL (LOW-VALUE MATERIALS)

EPR policy is enabling 4 key investment drivers and/or enabling public entities to set up waste management of low-value materials:

Investment drivers	Description	EPR design principles to support investment driver	Action beyond EPR
Local collection activation plan	Prepare a clear execution plan that drives efficient achievement of collection targets set in EPR policy (for all packaging materials) across regions by providing incentives while preventing competition that lowers collection costs below sustainable levels	• Establish a governance structure that clearly allocates collection services locally *(links to institutions deep dive)* • Provide incentives for high-recovery rates (e.g., tax benefits, subsidies) • Promote local job creation • Enforce compliance with minimum for work safety, social and environmental standards	n/a
Reliable financing through long-term service fee contracts	Enable long-term contracts between PRO (or similar) and waste management operator, to secure predictable and reliable financing of collection and processing services	• Long-term contracts (10+ years) guaranteeing stable and attractive service fee payment to protect asset investments of, e.g., collection vehicles and warehouses, sanitary landfills, co-processing sites • Adapt service fee to actual costs in urban vs. rural areas • Guarantee long-term EPR roadmap and clarity on strategy for potential landfill and co-processing reduction targets • Protection against new political parties/actors being able to replace service contractor without performance reasons	• Transitioning towards a utility-type business model, professionalizing the collection of household and business waste service fees
Fair competition (landfill/co-processing)	Audit of compliance with technical, social and environmental standards and best practices	• EPR to impose recommended minimum requirements for technical, social, and environmental operating standards *(links to policy critical element)* • Ensure control & enforcement mechanisms *(links to institutions deep dive)*	n/a
'Ease of operating'	Other elements that help collectors / landfill / co-processors to operate in a certain context, e.g. fast and predictable permitting	n/a	• Define and enforce clear permitting processes and criteria

2. INFORMAL AND PRIVATE SECTOR COLLECTION & RECYCLING (HIGH-VALUE MATERIALS)

EPR policy is enabling 5 key investment drivers in waste management of high-value materials :

Investment drivers	Description	EPR design principles to support investment driver	Action beyond EPR
Long-term feedstock security	Enable long-term contracts between recycler, aggregator, and PRO(s) to secure access to waste feedstock volume, quality, and price as well as protect asset investment	• Guarantee fair and effective payment to informal waste workers for collection *(links to Informal Waste sector deep dive)* • Guarantee long-term EPR roadmap • Establish a governance structure that ensures consistent feedstock availability through long-term arrangement with aggregators and the informal sector • Digital registry and tracking to provide visibility of waste volumes (PRO)	• Waste picker programmes to support informal collection
Consistent offtake	Predictable revenue stream from stable recycled material offtake in the region	• Need the right local infrastructure to facilitate realistic achievement of rContent targets	• Incentivise or mandate the gradual use of recycled content beyond the scope of the EPR regulation gradually and in the longer term
Long-term EPR continuity	Ensure continuity / confidence EPR will lift off (even when governments change)	*tbd*	*tbd*
Fair competition	Audit of compliance with technical, social and environmental standards and best practices	• EPR to impose minimum proposed requirements for technical, social, and environmental operating best practices *(links to policy critical element)* • Ensure control & enforcement mechanisms *(links to institutions deep dive)*	n/a
'Ease of operating'	Other elements that help recyclers to operate in a certain context, e.g. fast and predictable permitting	n/a	• Define and enforce clear permitting processes and criteria

Annex C: FCI Principles for corporate engagement with the Informal waste sector translated into EPR design

PARTICIPATION IN EPR GOVERNANCE

Relevant FCI Principles	• Include waste pickers as **relevant and legitimate stakeholders** and their **interests and concerns as essential considerations**. This may mean taking significant steps to create direct engagement with waste pickers, or it may mean engagement with legitimate representatives of the waste pickers community, or credible proxies for their views, to align on expectations and action. (FCI Principles 1, 5 and 8)
Core tools	• Legal inclusion as key stakeholders and right to participate in governance • Waste Picker Integration Taskforce and integration plan

Required outcome of the EPR design

What should be included in policy?

- Waste Picker representatives should be **included as key stakeholders and consulted** as part of developing legislation.
- A **Waste Picker Integration Plan** should be produced early on in the EPR design process.

How should this be implemented?

- Government should convene a **Waste Picker Integration Taskforce** to provide an ongoing forum for Government, PROs, Waste Pickers and other key stakeholders to monitor progress on waste picker integration.
- **Each PRO (or similar entity) should have a Waste Picker Integration Plan,** with responsibility for implementation resting with a senior executive.
- Where EPR legislation establishes PROs or similar bodies, WPs should have the opportunity to **participate in their governance**.

Examples from country implementations

- **Included as key stakeholders**: Section H of the South African Government's Waste Picker Integration Guideline provides a step-by-step process for engaging with waste pickers. Brazil also has a long history of consultation with and integration of waste pickers, using mechanisms such as Waste and Citizenship Forums and a Federal Inter-Ministerial Committee for the Social Inclusion of Waste Pickers.
- **Waste Picker Integration Plan**: South Africa's WP Integration Guideline sets out a step-by-step process for this in Section H.
- **Waste Picker Integration Taskforce**: Brazil's governance processes (including those above) provide a helpful starting point.
- **Participate in PRO (similar body) governance**: In Kenya, the Kenyan National Association of Waste Pickers is on the Advisory Council of the PRO PAKPRO; in South Africa, Waste Picker Organisations are on the PRO Alliance's new Waste Picker Integration Taskforce; in Brazil, waste pickers participate in the governance of waste management systems at several levels

WASTE PICKER PAYMENT

Relevant FCI Principles	• Support **decent livelihoods** for waste pickers, using the **living income methodology** to benchmark progress. This should involve an examination of market conditions, including the ways in which prices are set and workers are compensated. (FCI Principle 10 and FCI Living Income studies)
Core tools	• Legally established service fee • Contextually-appropriate approach to waste picker registration, payment, material tracking (incl. monitoring and reporting) • Accessible and contextually appropriate grievance procedures

Required outcome of the EPR design

What should be included in policy?

- Stakeholders should work together with waste picker representatives **to assess existing waste picker living standards and the gap with a Living Income** (the FCI's Living Income Toolkit sets out how to do this; responsibility based on country context: government-, private sector-, or civil society-led).
- Government should establish an **environmental service fee in EPR legislation with a mechanism for adjusting the service fee over time**.
- Government should work with waste picker representatives to **design a contextually-appropriate approach to waste picker registration** (which will then guide who is entitled to the service fee).
- Government should consider how **the pricing of recyclable materials impacts waste pickers, and assess structural barriers** (for example, market power) to waste pickers receiving an appropriate price. They should consider whether pricing mechanisms such as price floors could play a role (in some DRS systems, the deposit price is linked to the amount of material collected, such that if collection falls below a certain percentage, the deposit is increased).

How should this be implemented?

- **Registration**: Government should work with waste pickers and other stakeholders to implement the registration process outlined, to create a database of registered waste pickers, which integrates with the below-mentioned material tracking / payment system. Registered waste pickers should be issued with occupational ID cards. Different approaches to waste picker registration exist according to country. Support for waste picker registration is often required through awareness raising, publicity, and outreach events.
- **IT Platform:** Create an IT platform that **logs material brought to aggregators/recyclers** (or equivalent entities) against registered waste picker IDs, and enables **payment** of waste pickers.
- **Grievance procedure**: Establish clear, accessible and contextually appropriate **grievance procedures** so that waste pickers have formal channels for raising complaints.
- **Reporting and monitoring for government and PROs**:
  - Report regularly on the number of waste pickers registered, and on payment of the service fee,
  - Monitor price levels and ensure price transparency by making the prices paid by buyback centres accessible in real-time,
  - Monitor waste picker incomes and progress towards living incomes.

Examples from country implementations

- **Service fee**: South Africa's EPR law requires PROs to "compensate waste collectors, reclaimers or pickers, who register with the National Registration Database, for collection services and environmental benefits, through the collection service fee... the collection service fee and the National Registration Database shall be reviewed annually by the national Department responsible for Environmental Affairs". A number of other countries, states and municipalities have a similar approach as part of their waste management systems, including Colombia and Brazil.
- **Registration**: There are various different approaches to this, in countries such as India (under the 2016 Solid Waste Management Rules), Chile, Colombia, Brazil, and elsewhere. The South African registration protocol is a good example of a process established through multistakeholder consultation (although the IT system built to implement it has experienced technical issues recently).
- **Material tracking & payment systems**: Several approaches exist internationally. In South Africa, buyback centres and PROs have created their own systems. In Brazil, ANCAT, the technical arm of the national waste picker association, operates a tracking system. In Bogota, Colombia, a variety of different registration and payment systems have been used over the last twenty years. Further research is required to understand the benefits and drawbacks of each specific approach.

CONTRACTING WITH WASTE PICKER ORGANISATIONS

Relevant FCI Principles	'Look for ways to promote the greater integration of the waste pickers into more formal value chains, tailored to local contexts. (However, formalization should not become a requirement for waste pickers to maintain access to recyclable materials.)' (FCI Principle 9)
Core tools	• PRO (or similar entity) mandate to facilitate establishment of contracts with Waste Picker Organisations • Grievance procedure for Waste Picker Organisations • Pathways for waste picker organising and capacity development support

Required outcome of the EPR design

What should be included in policy?

- PROs (or similar entity) should be mandated to establish **accessible channels for facilitating establishment of contracts with Waste Picker Organisations as service providers** with them for collection of materials.
- The EPR system should provide opportunities for Waste Picker Organisations to function in collection, **sorting, and aggregation of materials**.
- Ensure that legislation maintains **safe and legal entry points** for Waste Pickers to access waste (i.e. does not exclude those unable to register).

How should this be implemented?

- Government and PROs should support **low-barrier pathways for waste picker organising** and provide **capacity development support** for Waste Picker Organisations.
- PROs (or similar entity) should **monitor and report on the scope of contracts** established with Waste Picker Organisations, in accordance with antitrust rules.
- Establish clear, accessible, contextually-appropriate **grievance procedure** so Waste Picker Organisations have formal channels for raising complaints.

Examples from country implementations

- **Registration and contract establishment**: Brazil's National Solid Waste Policy (nº 12.305/2010) mandates that "the participation of waste picker cooperatives must be prioritized" and Brazil has a simplified process for contracting with them; South Africa's EPR law section 5A, 1(m) says that Producer Responsibility Organisations (PROs) "must integrate informal waste collectors, reclaimers and pickers into the post consumer collection value chain". Capacity building support for waste pickers to meet appropriate standards may also be required (see 3.b.i below).
- **Function in collection, sorting, and aggregation of materials:** In Brazil, waste picker cooperatives often operate sorting centres.
- **Organisation & capacity building**: In Brazil, waste pickers are supported to organise as professional associations and co-ops.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