The Circulate Initiative | Responsible Sourcing Initiative



Understanding the Economics of Responsibly Sourced Recycled Plastics

Unpacking the Costs, Benefits, and Financing Mechanisms

November 2026

About this Report

This report presents one of the first assessments of the costs and benefits of implementing responsible sourcing practices across recycled plastics value chains. As expectations around human rights due diligence, supply chain transparency, and responsible business conduct continue to grow, recycling businesses need practical insights into the investments required to strengthen responsible sourcing while remaining commercially viable. This research aims to clarify what it takes to implement responsible sourcing in practice, who can cover these costs, and what value these investments can create.

Using the Harmonized Responsible Sourcing Framework for Recycled Materials (Harmonized Framework), we estimated implementation costs through case studies from India and Kenya. We identified key investment areas, cost estimates, and financing pathways, and explored the long-term economic, social, and environmental value that responsible sourcing can create. By translating responsible sourcing expectations into practical investment estimates and value creation opportunities, this report aims to support businesses, investors, brands, policymakers, and development partners in accelerating the transition to more transparent, inclusive, and resilient recycling value chains.

DISCLAIMER

This report provides indicative estimates of the costs, potential financing pathways, and benefits associated with implementing responsible sourcing in recycled plastics value chains.

The cost estimates, financing opportunities, and projected benefits are intended to serve as practical reference points rather than prescriptive benchmarks or guaranteed outcomes. Actual costs, financing options, and realized benefits will vary depending on business maturity, operational scale, existing management systems, local market conditions, regulatory requirements, and the effectiveness of implementation.

PEER REVIEW

This report was independently peer reviewed by experts in responsible sourcing and circular economy from the recycling sector. The peer review process helped strengthen the technical quality, methodology, and practical relevance of the report. Reviewer comments were considered and incorporated where appropriate. Responsibility for the final content and conclusions remains with The Circulate Initiative.

Peer Reviewers:

- **David Lerpiniere, PhD –** Independent Expert on Circularity and Financing Sustainable Supply Chains and Visiting Lecturer, University of Leeds
- **Ellen Martin –** Partner and Chief Impact and Operations Officer, Circulate Capital; Senior Advisor, The Circulate Initiative

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Lead Author: Santwana Sneha

Co-Authors: Annerieke Douma, Michael Sadowski

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Executive Summary

Growing waste generation, rapid urbanization, climate change, and increasing pressure on natural resources have made recycling more important than ever. In many emerging markets, recycling depends on a network of actors, including junk shops, aggregators, informal businesses, and informal waste sector workers. However, these supply chains often lack transparency and adequate safeguards for human rights and responsible business practices.

An estimated 20–40 million waste pickers[1] globally, along with many other informal waste sector workers and businesses, play an important role in recycling value chains, often while facing unsafe working conditions, income insecurity, and limited social protection. Small and medium-sized businesses also frequently lack the resources and capacity to improve working conditions, wages, and responsible sourcing practices.

A critical question is therefore **what it takes to implement responsible sourcing in practice.** Businesses and other stakeholders need greater clarity on the investment required, what makes up these costs, and who can reasonably bear them. Equally important is understanding how these investments can be financed and what economic, social, and environmental value they can create. Using the **Harmonized Responsible Sourcing Framework for Recycled Materials (Harmonized Framework),** we conducted this study to understand the economics of responsible sourcing across recycling value chains and answer these questions.

We developed cost estimates based on case studies in India and Kenya, examined potential financing pathways, and explored the benefits that responsible sourcing investments could generate over time. Through this research, we aim to provide businesses, brands, investors, governments, and development partners with practical insights to support the transition toward more transparent, inclusive, and responsible recycling value chains.



[1] International Alliance of Waste Pickers. (2026). *New Norad-supported initiative puts waste pickers at the centre of a just transition to a circular economy* [online]. Available from: https://wastepickersinternational.org/2026/10/08/new-norad-supported-initiative-puts-waste-pickers-at-the-centre-of-a-just-transition-to-a-circular-economy/ [accessed October 23, 2026].

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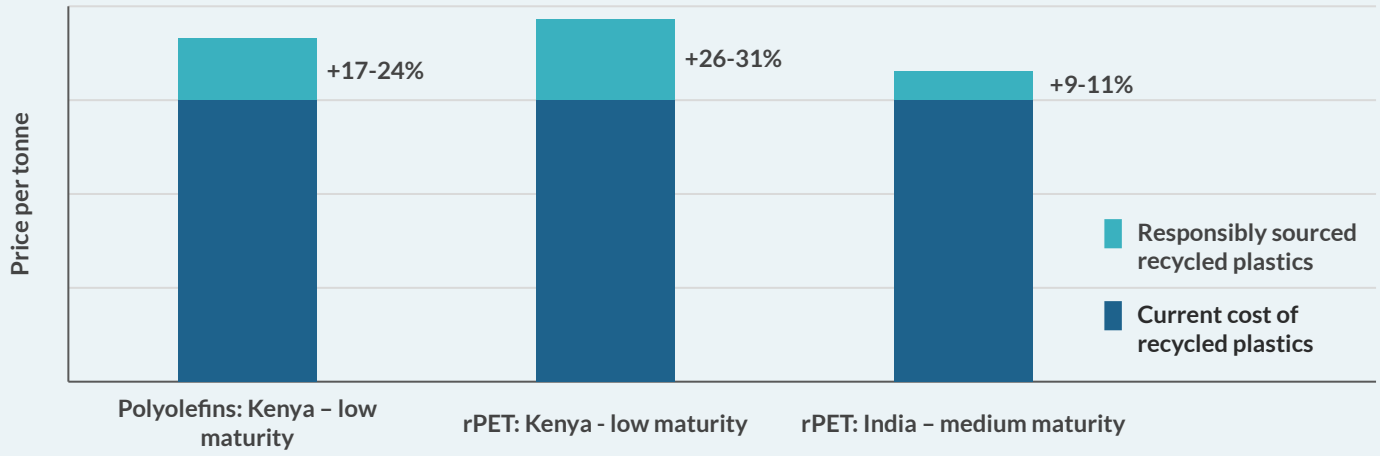
Key Insights

Responsible sourcing adds an estimated US$ 40–50 per tonne to the cost of recycled plastic.

Across the two case studies, we estimated that implementing minimum responsible sourcing requirements adds approximately US$ 40–50 per tonne to the current cost of recycled plastics. This represents an increase over existing recycling costs of 9–11% for rPET in the medium-maturity market (India) and 17–24% for polyolefins and 26–31% for rPET in the low-maturity market (Kenya).

However, we recognize that these estimates provide a conservative starting point. Our assessment primarily captures costs that are within reasonable business control and visibility. Broader investments, including living income, remediation of human rights risks, and wider worker and ecosystem interventions, could not be fully estimated and are contextual. The actual cost of implementing comprehensive responsible sourcing practices across the full value chain is therefore higher.

Figure 1: Difference between current and responsibly sourced recycled plastics costs



Market and business maturity influence the nature and distribution of responsible sourcing costs.

Responsible sourcing costs are influenced by both market maturity and business maturity.

Market maturity reflects the existing policy and regulatory environment, waste collection and recycling infrastructure, and the organization and integration of informal waste sector workers. In lower-maturity markets, businesses may need to invest more in foundational improvements, such as workplace health and safety, water and sanitation facilities, worker inclusion, and supplier capacity building.

Business maturity also influences the level and type of investment required. Businesses with established management systems, traceability, and supplier engagement processes may need less additional investment to put responsible sourcing systems in place. As implementation advances, investment priorities shift toward recurring costs, including those associated with addressing identified risks, improving supplier performance, remediation, and monitoring outcomes.

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We found that responsible sourcing costs need to be understood in the context of existing market conditions and business capacity, rather than through a single cost estimate.

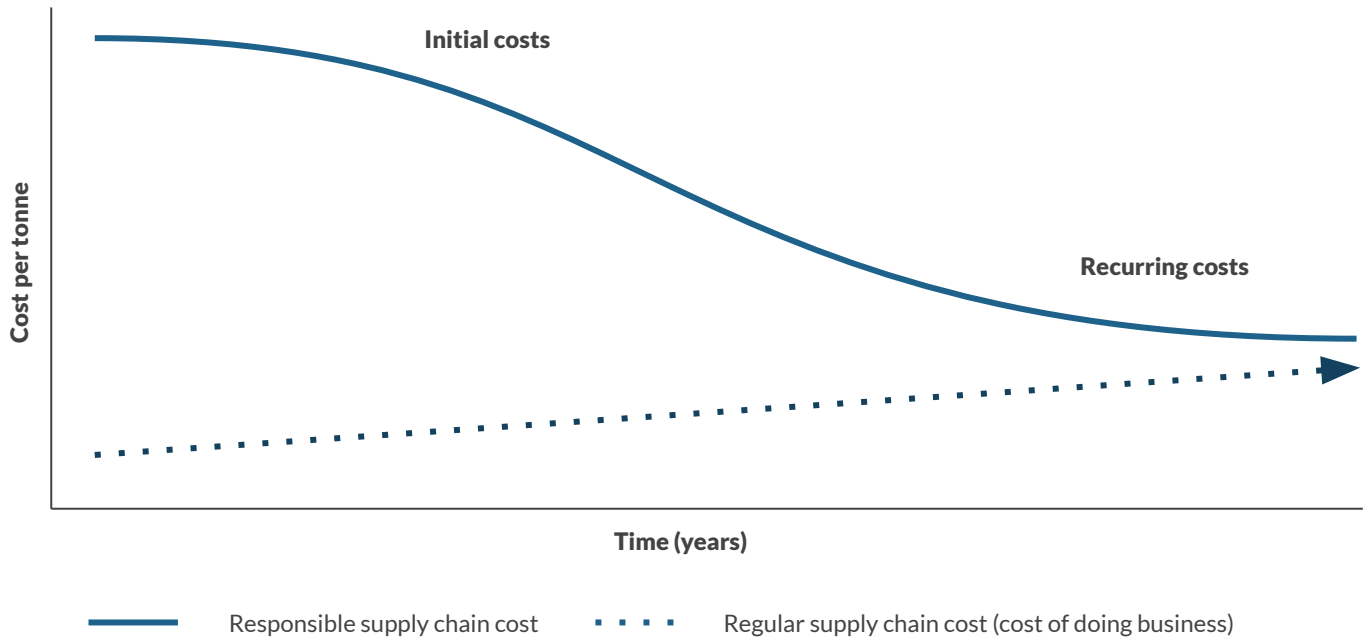
Responsible sourcing is predominantly a direct and recurring business cost, rather than a one-time investment.

Responsible sourcing costs are higher initially to set up systems and mitigate salient risks in the supply chain. However, the costs of mitigation and remediation are not always direct business costs. As our study primarily assessed the costs within reasonable business control, we found that responsible sourcing costs are predominantly direct and recurring across both case studies.

Core responsible sourcing systems, including compliance, documentation, traceability, supplier engagement, and human rights due diligence, account for approximately 40–47% of the assessed costs. Recurring expenditure represents approximately 66% of costs in the medium-maturity case and 81% in the low-maturity case. These costs include ongoing supplier management, risk assessments, audits, training, monitoring, and maintaining responsible sourcing systems.

This reinforces the important finding that responsible sourcing is not a one-time investment. It requires continued investment and should increasingly become part of regular business operations and commercial pricing.

Figure 2: Indicative cost per tonne over time



Note: *The curve is indicative of the expected trend – from initial investments in introducing responsible sourcing to its integration into the regular cost of doing business; it is not a measured time series.*

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The transition to responsible sourcing requires a combination of financing mechanisms.

While responsible sourcing costs should ultimately be integrated into the economics of recycled plastics, the transition will require additional financing, particularly in emerging markets where businesses face resource and capacity constraints and enabling systems remain underdeveloped.

We examined the following potential financing pathways:



Buyer premiums and purchasing commitments, through which brands and buyers can contribute to responsible sourcing costs as part of commercial relationships.



Extended Producer Responsibility (EPR), which can provide policy-backed financing for collection and recycling systems, with opportunities to support upstream actors and informal waste sector workers.



Results- or outcomes-based financing, which can link financing to measurable environmental and social outcomes, including worker income, safety, and inclusion.



Grants and catalytic funding, which can support transition investments, worker inclusion, capacity building, and the mitigation and remediation of human rights risks such as child labor.



Plastic credits, which can mobilize additional financing for recovering low-value materials, underserved geographies, and worker incentives.

In reviewing these financing approaches and existing examples, we found that different cost categories may need different mechanisms, and no single financing mechanism is likely to cover the full cost of transitioning to responsible sourcing. Each pathway has different strengths and limitations, depending on the type of investment, market conditions, and how financing reaches actors across the value chain.

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Responsible sourcing can create tangible benefits, including economic, social, and environmental value beyond compliance.

We explored the potential benefits of responsible sourcing investments and recognize that responsible sourcing is a long-term process whose benefits may take time to materialize as businesses strengthen supplier relationships, improve operational practices, enhance traceability, and build trust across the value chain.

We identified three interconnected areas of potential value creation:

Economic benefits: Stronger traceability, supplier relationships, and management systems can help reduce business risks, improve material security and operational efficiency, strengthen buyer and investor confidence, and create opportunities for new markets and longer-term partnerships.

Social benefits: Responsible sourcing investments can contribute to safer working conditions, more stable incomes, stronger representation, and greater recognition and inclusion of informal waste sector workers.

Environmental benefits: Better collection and recycling practices, improved resource management, and stronger environmental safeguards can support increased material recovery, reduced waste leakage and pollution, and ultimately greater resource efficiency and circularity.

While we identified these potential benefits through stakeholder consultations and available evidence, further research is needed to quantify their scale and better understand how responsible sourcing investments translate into measurable outcomes.

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The Way Forward

Through this research, we have taken an initial step toward making the economics of responsible sourcing clearer and more visible. The estimated cost per tonne provides a practical reference point for businesses and other stakeholders to plan investments, inform commercial negotiations, and explore appropriate financing approaches. It is not intended to serve as a universal benchmark, as actual costs will depend on market conditions, business maturity, and the level of implementation.

Moving toward responsibly sourced recycled plastics at scale will require coordinated action across the value chain. Recyclers and processors need to integrate responsible sourcing into their operations; brands and buyers need to recognize these costs in procurement decisions and purchasing commitments; governments need to strengthen enabling policies and inclusive EPR systems; and investors and development partners can help finance transition and system-level investments that markets are not yet equipped to support.

We believe responsible sourcing should ultimately be part of doing business. This research is a starting point and will evolve as further cost assessments are conducted across different markets, building on this methodology and strengthening the evidence base. The longer-term goal is to move from financing responsible sourcing as a separate intervention to making it a fundamental part of how recycled plastics are produced, sourced, and traded.

Limitations

The cost assessment is based on two case studies,[2] providing directional insights rather than representative benchmarks for all recycled plastic markets. Costs are expected to vary according to market maturity, business maturity, geography, material type, operational scale, supply-chain structure, and existing management systems.

The resulting estimates represent a business-led baseline cost – that is, costs within direct business control and visibility – for initiating responsible sourcing. However, because many interventions – particularly those related to living income, grievances, and remediation for informal waste sector workers – require systemic changes and multi-stakeholder collaboration, the associated costs are not captured. Additionally, limited visibility across the value chain, especially within the informal sector, further constrains the full estimation of responsible sourcing costs. This study demonstrates a methodology for evaluating these costs that could be applied more widely to build the evidence base.

[2] The Circulate Initiative. (2026). *Understanding the cost of responsibly-sourced recycled plastics: Insights from case studies in India and Kenya* [online]. Available from: https://www.thecirculateinitiative.org/research/understanding-the-cost-of-responsibly-sourced-recycled-plastics-insights-from-case-studies-in-india-and-kenya/ [accessed October 23, 2026].

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Introduction

Responsible sourcing is evolving from a voluntary sustainability initiative to a business imperative for the recycling sector. Increasing expectations from regulators, investors, brands, and consumers now require companies to demonstrate how they identify, prevent, and address human rights and environmental risks throughout their supply chains. Responsible sourcing integrates social, environmental, and ethical considerations into procurement and supply chain management, recognizing that long-term business resilience depends on protecting people, the environment, and the integrity of supply chains.

These evolving expectations are also reshaping the recycling sector. While recycled plastics are key to achieving circular economy and climate goals, recycling systems in many emerging economies rely heavily on informal waste sector workers, who recover a significant share of recyclable materials while often facing unsafe working conditions, income insecurity, and limited social protection. As circular economy policies, responsible sourcing expectations, and human rights due diligence requirements continue to evolve, ensuring that recycled plastics are sourced responsibly has become essential to creating recycling value chains that are environmentally sustainable, socially inclusive, and commercially resilient.

Recognizing this need, The Circulate Initiative, through the Responsible Sourcing Initiative, developed the **Harmonized Framework** to establish a shared understanding of responsible sourcing across the recycled plastics value chain. The Harmonized Framework translates internationally recognized principles, including the United Nations Guiding Principles on Business and Human Rights (UNGPs), and expectations of responsible business conduct and human rights due diligence into actionable guidance for implementing responsible sourcing in the recycling sector. By establishing a common language for responsible sourcing, the Harmonized Framework reduces fragmentation across existing standards and initiatives while promoting more consistent implementation across markets.

While the Harmonized Framework establishes **what responsible sourcing requires,** a critical question for implementation is **what it takes to deliver it.** Businesses and other stakeholders need greater clarity on the additional costs of responsibly sourced recycled plastics, what makes up these costs, who can reasonably bear them, and what value these investments can create.

This report addresses these questions through three connected areas:

1. What does responsible sourcing cost?
2. How can these costs be financed?
3. What benefits can responsible sourcing create?

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Responsible Sourcing

As defined in the Harmonized Framework, responsible sourcing means that all participants in the recycling value chain:

- Are meeting their responsibility to respect human rights and environmental standards in their own operations and throughout the value chain.
- Recognize the informal waste sector as part of their own company's value chain and engage meaningfully with all suppliers.
- Take mitigation and improvement action across all tiers of the recycled materials value chain, from global brands that use recycled materials to aggregators that receive materials and contract services from informal waste sector workers and waste pickers.

Research Objectives

The objectives of this research are to:

1. Understand the key cost drivers for responsibly sourced recycled plastics.
2. Estimate the investment needed for responsibly sourced recycled plastics.
3. Identify potential ways to bridge the gap between responsible and conventional recycled plastics supply chains.
4. Assess the potential benefits of investment in responsibly sourced recycled plastics.

This research is based on the hypothesis that, if the cost gap between responsible and conventional recycled plastics value chains is clearly understood, stakeholders will be better positioned to identify and unlock diverse financing mechanisms for responsible sourcing. Over time, this funding is expected to improve transparency and traceability, enhance the livelihoods of informal waste sector workers across the value chain, and support the transition toward making responsibly sourced recycled plastics the industry norm.

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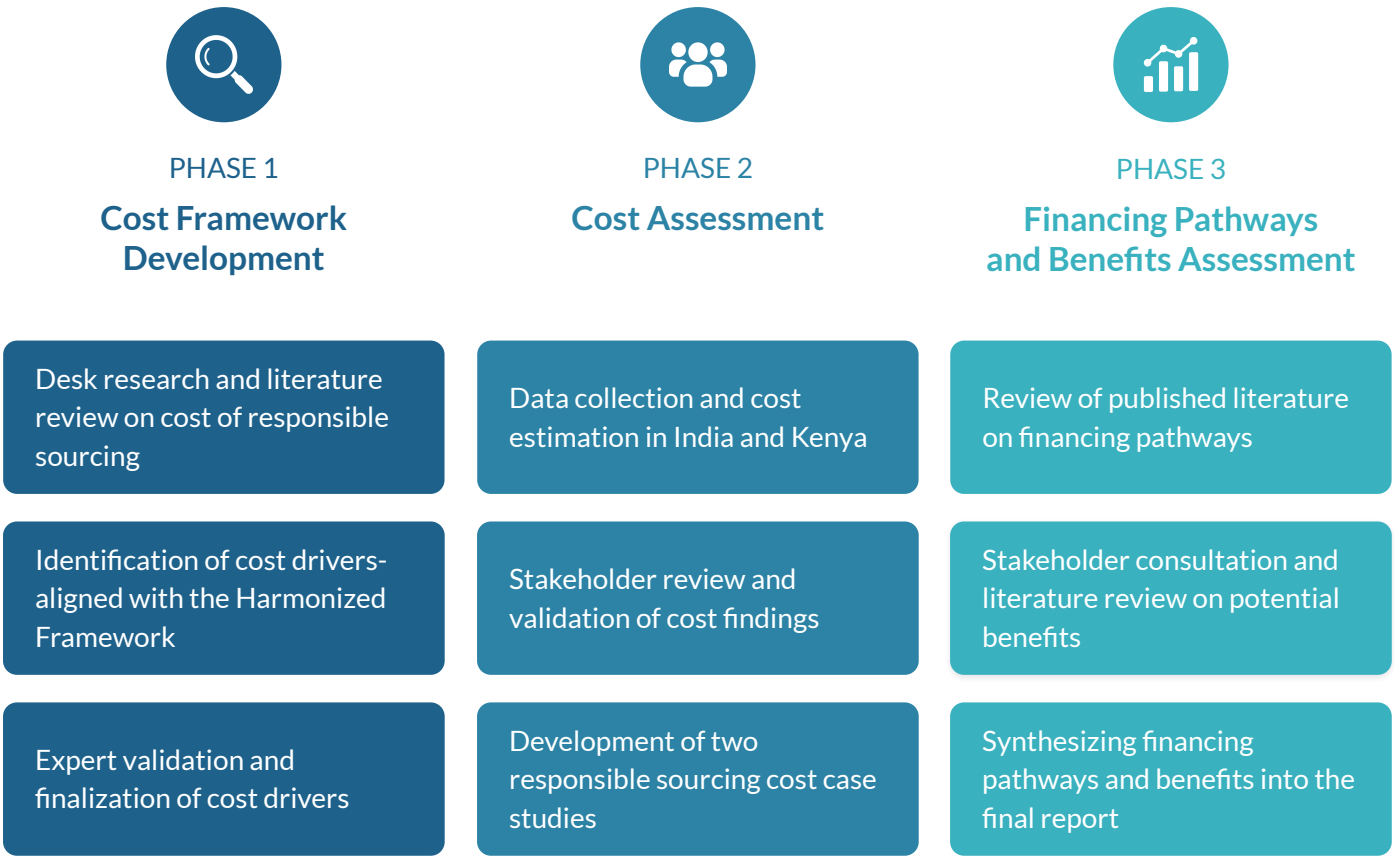
Research Methodology

For this study, we used a phased, mixed-methods approach to assess the economics of responsibly sourced recycled plastics. We combined desk research, stakeholder consultations, field-level validation, and case study analysis to develop practical, evidence-based estimates of the costs of implementing responsible sourcing practices while also exploring potential financing pathways and the broader value created through these investments. Throughout the study, the Harmonized Framework served as the analytical foundation for identifying investment requirements and ensuring consistency with internationally recognized principles of responsible business conduct and human rights due diligence.

The research was conducted in three phases:

1. **Responsible Sourcing Cost Framework Development,** identifying and validating the key cost drivers for responsible sourcing through desk research, alignment with the Harmonized Framework, and expert input.
2. **Responsible Sourcing Cost Assessment,** developing cost estimates through data collection and case studies in India and Kenya, followed by stakeholder validation.
3. **Financing Pathways and Benefits Assessment,** examining potential financing pathways, assessing the economic, social, and environmental benefits of responsible sourcing, and developing recommendations based on the findings.

Figure 3: Research methodology



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To begin the cost assessment, we identified the cost drivers through **desk research aligned with the Harmonized Framework**, followed by consultations with recycling partners across different market contexts and validation through an expert Working Group.

We grouped the cost drivers into four broad cost categories:[3]

1. Compliance and Documentation: Costs associated with establishing and maintaining traceability, human rights due diligence, documentation, monitoring, and compliance systems.
2. Partnerships and Capacity Building: Costs of building partnerships, engaging stakeholders, conducting advocacy, and providing training to strengthen responsible sourcing practices across the value chain.
3. Worker Wellbeing and Inclusion: Costs of addressing risks, improving working conditions and livelihoods, and strengthening the protection and inclusion of informal waste sector workers.
4. Vertical Integration: Costs of strengthening collection systems and infrastructure to improve responsible sourcing practices and oversight across the value chain.

Responsible sourcing cost assessment

Cost estimates were developed using a **bottom-up, full value-chain approach,** based on implementation of the Harmonized Framework. Data were collected through structured consultations with recyclers and upstream suppliers in selected markets to reflect operational realities and identify investments directly attributable to responsible sourcing. We further classified the cost drivers based on two factors: the **timing of investments and the responsibility of stakeholders to cover costs.**

On timing, **initial costs** refer to short- to medium-term investments required to establish responsible sourcing systems, including setup and transition costs (e.g., setting up traceability systems, upgrading health and safety provisions, establishing partnerships, and registering workers). **Recurring costs** refer to ongoing expenses needed to maintain compliance and continuously improve practices, which are expected to become part of regular operating costs as markets mature (e.g., regular audits, supplier engagement, risk assessment, and worker training).

On responsibility, **direct costs** are those borne by the businesses implementing responsible sourcing practices, while **indirect costs** can be shared or co-financed by external stakeholders, including brands, governments, investors, Producer Responsibility Organizations (PROs), and development partners.

Identifying different financing pathways and benefits of responsible sourcing

Building on the cost assessment, the study examined existing and emerging mechanisms that could help finance different responsible sourcing investments. The assessment combined stakeholder consultations with a review of relevant literature and financing models, considering mechanisms including buyer support, grants and catalytic funding, EPR, plastic credits, and results- or outcomes-based financing.

We also explored the benefits of responsible sourcing through stakeholder consultations and a review of available evidence. Rather than quantifying these benefits, we identified key value-creation pathways and potential indicators that can strengthen the evidence base over time.

[3] Details of the cost categories are provided in Annex 1, Table 6 of this report.

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SECTION 1

Understanding the Cost of Responsibly Sourced Recycled Plastics



Responsible sourcing requires investment across the recycling value chain to establish and maintain systems that identify, prevent, mitigate, and monitor human rights and environmental risks. Using the Harmonized Framework, we estimated the costs of implementing minimum responsible sourcing requirements through a bottom-up, full value-chain approach.

We developed cost estimates through structured consultations with recyclers and upstream suppliers in India and Kenya to reflect operational realities. The assessment focuses on investments and ongoing costs that can be directly attributed to responsible sourcing and are within reasonable business control and visibility. Broader costs – including living income, comprehensive remediation of salient risks, and some worker-level interventions – are only partially captured.

To ensure consistency and comparability, all costs were:

- Annualized to represent the equivalent annual cost of implementation.
- Classified as initial or recurring investments.
- Categorized as direct or indirect costs.
- Normalized on a per-tonne basis using annual recycled plastic volumes.

What influences the cost of responsible sourcing?

The assessment indicates that responsible sourcing costs are shaped by two important factors: market maturity and business maturity.

Market maturity influences the enabling environment in which responsible sourcing is implemented. Markets with stronger policies and regulation, waste management infrastructure, and better organization and integration of informal waste sector workers generally have more of the foundational conditions needed for implementation. Lower-maturity markets may require greater investment in worker inclusion, capacity building, infrastructure, and market ecosystem development.

Business maturity influences the starting point for individual companies. Businesses with established management systems, traceability, supplier engagement, and more advanced human rights and environmental due diligence (HREDD) practices may require lower incremental investment to establish these systems than businesses at an earlier stage of implementation. As responsible sourcing matures, investment priorities also shift from establishing systems toward addressing identified risks, strengthening supplier performance, and continuously monitoring and improving outcomes.

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How does market maturity affect costs?

To understand how implementation costs vary across countries, this study developed a **market maturity framework** based on three enabling conditions:

1. EPR and the policy environment.
2. Waste collection and management infrastructure.
3. Organization and integration of informal waste sector workers.

We developed the market maturity framework to compare the case study markets. It draws on national policy documents, waste management infrastructure, stakeholder consultations, and case study evidence, and should not be interpreted as a comprehensive assessment of either country's recycling sector.

Table 1: Market maturity framework

Elements	High Maturity	Medium Maturity	Low Maturity
Extended Producer Responsibility (EPR) and Public Sector Policies for Waste Management	EPR and public sector policies exist with clear implementation plans, targets, and recognition of informal waste sector workers as essential service providers	EPR and public sector policies exist, but do not consistently recognize informal waste sector workers	EPR policies do not exist, and waste management policies exclude informal waste sector workers
Waste Collection Infrastructure	Well-developed waste collection and management infrastructure	Partial or uneven access to waste collection and management infrastructure	Infrastructure for waste collection and management is limited or unavailable
Organization of Informal Waste Sector Workers	Workers are integrated in formal systems and are strongly organized	Waste pickers are partially organized, often in informal groups with limited recognition or influence	Waste pickers are unorganized, lack representation, and have limited recognition and influence within the existing policy framework

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Applying the market maturity framework, India is classified as a medium-maturity market. The country has an established policy environment, including EPR regulations[4] under the Plastic Waste Management Rules, and a relatively developed recycling ecosystem. However, waste collection infrastructure remains uneven and inadequate relative to the volume of waste generated.[5] Despite promising examples of waste picker movements and inclusion in cities like Bengaluru and Pune, legal mandates have not translated into actionable city-level policies[6] – reflecting a broader lack of long-term integration of informal sector stakeholders.

Kenya is classified as a low-maturity market. While the country has established the Sustainable Waste Management Act and recently operationalized EPR regulation,[7] its implementation remains at an early stage. Municipal waste collection services and recycling infrastructure are limited, with a significant share of recyclable materials recovered through the informal waste sector. Despite their central role in collection and recovery, informal waste sector workers have limited integration into formal municipal waste management systems and are not explicitly included in the EPR framework.

How business maturity affects cost over time

Investment requirements also evolve as businesses mature in implementing HREDD across their operations and supply chains. Early-stage investments are primarily focused on establishing the foundations of responsible sourcing, including governance systems, traceability, supplier engagement, and worker identification. As responsible sourcing becomes embedded within business operations, investment priorities shift toward implementing improvement actions, addressing identified risks, strengthening supplier performance, and monitoring the effectiveness of these measures.

A significant proportion of costs are therefore concentrated in the implementation of mitigation and remediation actions, where businesses move beyond compliance to actively mitigate risks and drive continuous improvement. As companies deepen their responsible sourcing practices across the value chain, these investments are expected to increase while becoming an integral part of routine business operations rather than one-time project costs.

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[4] Ministry of Environment, Forest and Climate Change. (2026). *Parliament question: Circular economy framework and Extended Producer Responsibility* [online]. Available from: https://www.pib.gov.in/PressReleasePage.aspx?PRID=2244104&lang=1&reg=1 [accessed October 23, 2026].

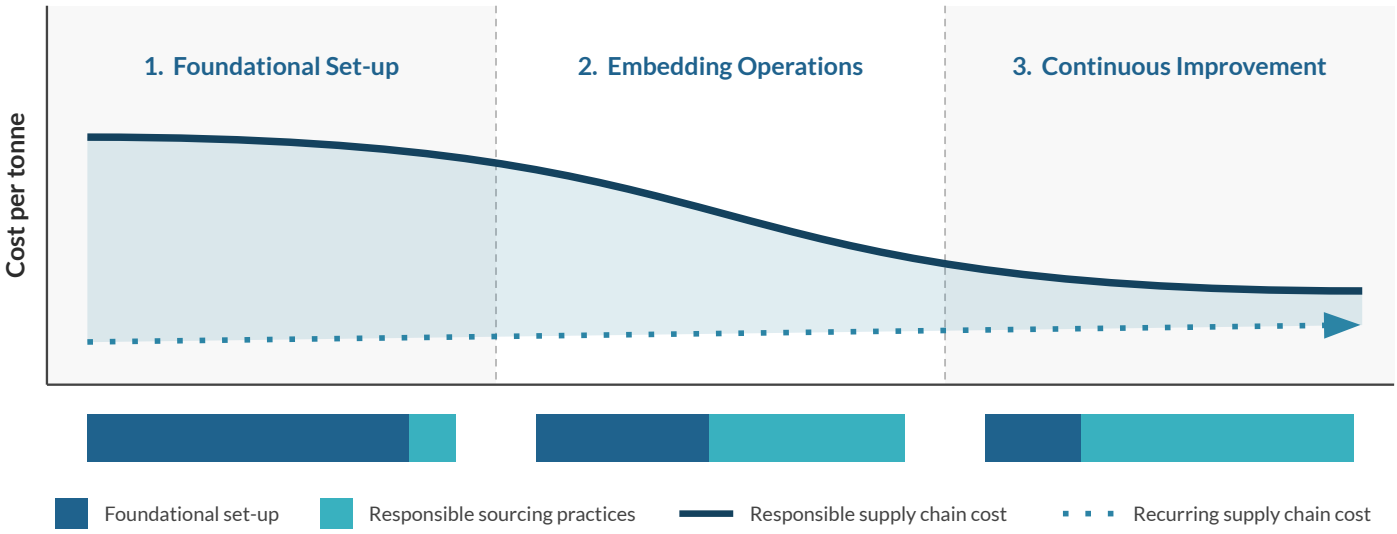
[5] NITI Aayog. (2026). *Scenarios towards Viksit Bharat and net zero – sectoral insights: waste* (Vol. 8) [online]. Available from: https://www.niti.gov.in/sites/default/files/2026-02/Scenarios-Towards-Viksit-Bharat-and-Net-Zero-Sectoral-Insights-Waste_0.pdf [accessed October 23, 2026].

[6] Biswas, A., Sengupta, M., and Bose, S. (2025). *Pathways to inclusion of waste pickers: Exploring various models from Indian cities* [online]. Centre for Science and Environment. Available from: https://www.cseindia.org/pathways-to-inclusion-of-waste-pickers-12814 [accessed October 23, 2026].

[7] National Environment Management Authority (NEMA). (2025). *Implementation of Sustainable Waste Management (Extended Producer Responsibility (EPR)) Regulations, 2024* [online]. Available from: https://nema.go.ke/wp-content/uploads/2025/02/Public_Notice_on_Extended_Producer_Responsibility_2024.pdf [accessed October 23, 2026]

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Figure 4: Illustrative cost trajectory by supply chain maturity



Case Studies: What Does Responsible Sourcing Cost in Practice?

Based on the two case studies, the estimated cost of implementing minimum responsible sourcing requirements adds an estimated **US$ 40–50 per tonne to the current cost of recycled plastics.**

This represents an estimated:

- **9–11% increase for rPET in the medium-maturity market;** and
- **17–24% increase for polyolefins and 26–31% for rPET in the low-maturity market,** compared with current recycling costs.

Table 2: Distribution of responsible sourcing costs by category (%)

Cost Category[8]	Medium Maturity	Low Maturity
Compliance and Documentation	47.3%	40.5%
Partnerships and Capacity Building	7.0%	13.0%
Worker Wellbeing and Inclusion	6.3%	36.6%
Vertical Integration	39.4%	9.9%

[8] Details of the cost categories are provided in Annex 1, Table 6 of this report.

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While the absolute cost of responsible sourcing is broadly comparable across different markets, its affordability is not. Lower-maturity markets require a significantly larger increase over existing recycling costs to implement responsible sourcing (e.g., greater investment in supporting worker organization, health and safety, water and sanitation facilities, and capacity building) than medium-maturity markets.

Beyond the distribution across cost categories, the assessment showed that responsible sourcing costs differ in when they occur and who is positioned to bear them. Across both case studies in India (medium maturity) and Kenya (low maturity),[9] costs are predominantly **direct and recurring,** reinforcing that responsible sourcing requires sustained business investment rather than only upfront expenditure.

Table 3: Understanding the nature of responsible sourcing costs

Cost Type	What this means in practice
Direct costs	Direct costs account for the predominant share of costs captured in both case studies. These are costs directly attributable to businesses implementing responsible sourcing within their operations and supply chains. Examples include the costs of implementing and maintaining traceability and documentation systems, supplier management, audits, personal protective equipment (PPE) and workplace improvements, training, and strengthening supplier networks.
Indirect costs	Indirect costs account for a smaller share of the costs currently captured, but are important where improvements depend on systems or actors beyond an individual business and may require shared financing. Examples include facilitating access to social protection, banking and insurance, and supporting worker organization and formalization. The wider scope can also include interventions related to living income, childcare, and other worker wellbeing needs, which could not be fully estimated in this assessment.
Initial costs	Initial costs also represent the smaller share of overall costs across the two case studies, but are important for establishing the systems and enabling conditions for responsible sourcing. Examples include setting up traceability systems, establishing health and safety provisions, upgrading facilities and collection systems, and putting worker wellbeing mechanisms in place.
Recurring costs	Recurring costs account for the majority of costs in both case studies, demonstrating that responsible sourcing requires sustained investment beyond initial setup. Examples include ongoing traceability and data management, audits and risk assessments, supplier engagement, training, grievance mechanisms, and monitoring.

[9] The Circulate Initiative. (2026). *Understanding the cost of responsibly-sourced recycled plastics: Insights from case studies in India and Kenya* [online]. Available from: https://www.thecirculateinitiative.org/research/understanding-the-cost-of-responsibly-sourced-recycled-plastics-insights-from-case-studies-in-india-and-kenya/ [accessed October 23, 2026].

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Table 4: Percentage breakdown of responsible sourcing costs in India (medium maturity) and Kenya (low maturity)

Cost Category	India (medium maturity)				Kenya (low maturity)			
	Direct	Indirect	Initial	Recurring	Direct	Indirect	Initial	Recurring
Compliance and Documentation	47.3%	0.0%	1.3%	46.0%	40.5%	0.0%	0.0%	40.5%
Partnerships and Capacity Building	7.0%	0.0%	0.0%	7.0%	13.0%	0.0%	0.0%	13.0%
Worker Wellbeing and Inclusion	3.3%	3.0%	4.8%	1.5%	24.8%	11.8%	19.1%	17.5%
Vertical Integration	39.4%	0.0%	28.2%	11.3%	9.9%	0.0%	0.3%	9.6%
Sub-Total	**97.0%**	**3.0%**	**34.3%**	**65.8%**	**88.2%**	**11.8%**	**19.4%**	**80.6%**

Key Insights

The following overarching findings emerged from the analysis.

Core responsible sourcing systems remain the largest investment need regardless of market maturity

Core responsible sourcing systems include costs related to compliance, documentation, traceability, supplier organization and engagement, and human rights due diligence. Across both medium- and low-maturity markets, these costs account for the largest share of responsible sourcing investments (40–47%). Their predominantly direct (88–97%) and recurring nature (66–80%) demonstrates that maintaining robust due diligence, supply chain transparency, and supplier engagement is an ongoing operational requirement rather than a one-time compliance exercise in emerging markets.

Market maturity shapes investment priorities

Although the overall cost range is broadly comparable across markets, the composition of costs differs considerably. Lower-maturity markets require proportionally higher costs for worker wellbeing, inclusion, and ecosystem development, such as worker training, PPE, identification and registration, and stakeholder partnerships. In contrast, medium-maturity markets allocate a larger share of investment to strengthening infrastructure and maintaining established responsible sourcing systems.

Indirect costs are also significantly higher in lower-maturity markets, particularly for worker inclusion that extends beyond the direct responsibility of businesses, including access to social security, health and safety support, and financial inclusion. These investments are more likely to require co-financing from governments, brands, PROs, and development partners to strengthen the enabling ecosystem.

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Business maturity changes responsible sourcing requirements over time

Investment requirements also evolve as businesses mature in implementing the Harmonized Framework and HREDD. Early-stage implementation is focused on establishing governance systems, traceability, supplier engagement, and other foundational capabilities. As these systems become embedded, investment priorities shift toward implementing remediation and mitigation actions, addressing identified risks, strengthening supplier performance, and continuously monitoring outcomes. Consequently, responsible sourcing evolves from an initial setup investment into a sustained operational commitment, with an increasing share of costs concentrated in implementing and continuously improving responsible sourcing practices.

The current cost estimates represent a practical, but conservative, baseline for businesses

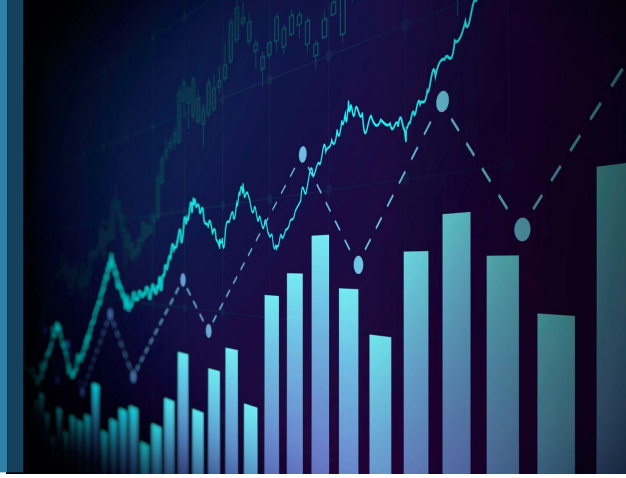
The estimated costs represent a baseline for businesses – capturing investments that are currently within the direct control and visibility of businesses. They do not fully account for broader systemic investments such as living income, comprehensive remediation of salient risks, grievance mechanisms, or wider ecosystem strengthening. In addition, cost visibility declines significantly across lower supply chain tiers, particularly within informal collection systems, suggesting that the total costs of responsible sourcing are likely to be higher.



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SECTION 2

Financing the Transition to Responsible Sourcing



There is a significant financing need to address plastic pollution globally. By one estimate, US$ 15.4 trillion in private sector investments and US$ 1.5 trillion in public expenditure are needed between 2025 and 2040 to reduce annual mismanaged plastic volumes by 90% relative to 2019 levels.[10] Within this broader financing challenge, the case studies in this research indicate that responsible sourcing requires both upfront investment and sustained recurring expenditure in emerging economies, unlike in developed markets, where most of these costs are part of doing business. Many of these investments generate benefits across the value chain and cannot reasonably be financed by recyclers alone.

According to The Circulate Initiative's Plastics Circularity Investment Tracker, developed in cooperation with the International Finance Corporation (IFC), private investment in plastics circularity remains highly concentrated in high-income economies. Between 2018 and 2023, high-income economies attracted 94% of investments, while emerging economies received only 6%. This highlights the significant financing gap in markets disproportionately affected by plastic pollution.[11]

At the same time, financing for circularity in emerging markets is growing. IFC reports more than US$ 2 billion in its own financing and around US$ 600 million in mobilized financing for circular economy projects in emerging markets since 2015.[12] Innovative models are also emerging: the World Bank's Plastic Waste Reduction-Linked Bond, for example, provided approximately US$ 14 million in upfront financing for plastic collection and recycling projects, with returns linked partly to plastic and carbon credit outcomes.[13]

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[10] Systemiq and the Nordic Council of Ministers. (2023). T*owards ending plastic pollution by 2040: 15 global policy interventions for systems change* [online]. Available from: https://www.systemiq.earth/towards-ending-plastic-pollution-by-2040/ [accessed October 23, 2026].

[11] The Circulate Initiative and the International Finance Corporation (IFC). (2024). *The private investment landscape for a global circular economy for plastics: Insights from the Plastics Circularity Investment Tracker* [online]. Available from: https://www.thecirculateinitiative.org/wp-content/uploads/The-Private-Investment-Landscape-for-a-Global-Circular-Economy-for-Plastics_Jul-2024.pdf [accessed October 23, 2026].

[12] International Finance Corporation (IFC). (n.d.). *Accelerating circular economy finance in emerging markets* [online]. Available from: https://www.ifc.org/en/what-we-do/sector-expertise/climate-business/mobilizing-climate-finance-for-emerging-markets/accelerating-circular-economy-finance-in-emerging-markets [accessed October 23, 2026].

[13] World Bank. (2024). *World Bank's new outcome bond helps communities remove and recycle plastic waste* [online]. Available from: https://www.worldbank.org/en/news/press-release/2024/01/24/world-bank-s-new-outcome-bond-helps-communities-remove-and-recycle-plastic-waste [accessed October 23, 2026].

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Against this context, the research examined **key existing and emerging financing pathways** that could help distribute responsible sourcing costs across value-chain and ecosystem actors. While the cost assessment focused on India and Kenya, the research explored financing pathways and examples from a broader range of geographies to identify approaches that could support responsible sourcing investments.



Buyer premiums and purchase commitments: buyer pays more for responsibly sourced recycled plastic or guarantees purchase in advance.



EPR: producer-funded mechanisms supporting inclusive collection and recycling systems.



Results- or outcomes-based financing: funding linked to the achievement of defined environmental or social outcomes.



Grants and catalytic funding: particularly for transition costs, capacity building, and worker inclusion.



Plastic credits: financing linked to verified plastic recovery.

While the above financing pathways represent the main mechanisms for financing responsible sourcing, other market-enabling approaches are also emerging.

- **Advance Market Commitments (AMCs):**[14] Binding financial contracts used to incentivize the development of new products or services in areas where no market exists or where entering the market is risky for private companies. AMCs have the potential to address the supply and demand gap for recycled and alternative materials, particularly for specific resin types and packaging formats. They can provide recyclers with greater demand certainty, helping unlock investment in recycling capacity and innovation while embedding responsible sourcing systems more deeply. In September, The Circulate Initiative published a paper on the potential for AMCs and other collective demand mechanisms to address these challenges.
- **Technical Assistance Facilities (TAFs):** Technical assistance[15] provides non-commercial support to strengthen capacity and improve business operations. Typically funded by public, philanthropic, and institutional sources, these facilities complement investment capital by addressing capacity gaps, reducing implementation barriers, and maximizing development impact.

These pathways differ in the nature of the financial instruments and what they can support. The following examples illustrate their potential and limitations for supporting investments in responsible sourcing.

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[14] The Circulate Initiative. (n.d.). *Breaking the bottleneck: How advance market commitments can bridge the supply-demand gap in recycled materials* [online]. Available from: https://www.thecirculateinitiative.org/research/breaking-the-bottleneck-how-advance-market-commitments-can-bridge-the-supply-demand-gap-in-recycled-materials/ [accessed October 23, 2026].

[15] Proparco. (2022). *Technical assistance: the outlook for a strategic tool for development finance* [online]. Available from: https://www.proparco.fr/en/article/technical-assistance-outlook-strategic-tool-development-finance [accessed October 24, 2026].

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Buyer Premiums and Purchase Commitments

Buyer premiums and purchase commitments provide a direct pathway for brands and other buyers to contribute to the additional cost of responsible sourcing through their purchasing practices. These mechanisms may include payments above prevailing market prices, minimum guarantees for offtake, and long-term buyer commitments.

Plastics For Change and The Body Shop – India

The partnership between **Plastics For Change and The Body Shop**[16] developed a Community Fair Trade model for recycled plastic sourced through informal waste supply chains in Bengaluru. The model uses a guaranteed minimum price regardless of market movements, helping protect suppliers from significant price volatility. The arrangement also includes fair-trade premiums supporting education, healthcare access, and skills development. Since 2019, The Body Shop has purchased over 2,000 tonnes of fairly traded recycled plastic (approximately 100 million bottles' worth), and its annual volume increased from 250 tonnes (2019) to 617 tonnes (2022).[17] However, the price per kilogram and premium percentage have not been publicly disclosed, limiting assessment of the financial benefit reaching individual collectors.

Other emerging models also demonstrate different ways of structuring buyer-funded premiums. **Repa**[18] **(Africa)** is a crowdfunding model through which individuals and businesses can contribute funds to top up the market price paid to waste pickers, with payments digitally recorded and visible through a donor-facing dashboard.

There are limited documented examples of buyer premiums being used to finance responsible sourcing, and no standardized financing model has yet emerged. Their relevance to responsible sourcing depends on clear pricing mechanisms, longer-term buyer commitments, transparency on how additional value moves through the supply chain, and mechanisms to verify that benefits reach intended upstream actors.

Extended Producer Responsibility (EPR)

EPR provides a policy-backed financing mechanism through which producers contribute to the management of post-consumer packaging waste. Unlike voluntary financing mechanisms, EPR has the potential to create recurring flows of finance into collection and recycling systems.

To understand whether and how these resources could also support responsible sourcing, the research examined two contrasting approaches: South Africa, which operates a large mandatory plastic packaging EPR system, and Brazil, where waste pickers (*catadores*) are explicitly recognized within the reverse logistics framework.

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[16] Plastics For Change. (2024). *More than just a business model: The Body Shop's lasting impact on sustainability and communities* [online]. Available from: https://www.plasticsforchange.org/blog/the-body-shops-lasting-impact-on-sustainability [accessed October 24, 2026].

[17] Kumar, R. (2024). *Five years of impact: The Body Shop and Plastics for Change driving environmental sustainability and community empowerment* [online]. TheCSRUniverse. Available from: https://thecsruniverse.com/articles/five-years-of-impact-the-body-shop-and-plastics-for-change-driving-environmental-sustainability-and-community-empowerment [accessed October 24, 2026].

[18] Your Wiltshire. (n.d.). *Tackling global plastic waste from my Wiltshire living room* [online]. Available from: https://www.yourwiltshire.com/blog/tackling-global-plastic-waste-from-my-wiltshire-living-room/ [accessed October 24, 2026]

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EPR in South Africa

South Africa offers an example of how EPR financing can support both recycling systems and the inclusion of informal waste sector workers. South Africa's mandatory EPR regulations, established under the National Environmental Management: Waste Act (NEMWA),[19] require producers to establish or join PROs and finance the collection, recycling, and recovery of packaging waste. South Africa's EPR framework explicitly recognizes the role of waste pickers and provides for their integration into EPR schemes.

A particularly relevant feature is the requirement for EPR schemes to address waste picker integration, including registration, training, and support for their participation in the formal waste management value chain through a multi-stakeholder participatory approach. In subsequent amendments in 2024, South Africa's EPR regulations explicitly required PROs to compensate registered waste collectors, reclaimers, and pickers for collection services and environmental benefits through a collection service fee.[20]

South Africa's EPR framework demonstrates the value of meaningful multi-stakeholder participation, including waste picker organizations, in policy design. However, realizing its full potential requires extending this participation to implementation and strengthening enforcement of requirements for waste picker compensation and integration.[21]

EPR in Brazil

Brazil implements EPR through its reverse logistics (logística reversa) system, under which producers and other obligated companies are responsible for supporting the return of packaging and products for reuse. Since 2023, Brazil has provided three certificate mechanisms[22] that companies can use within reverse logistics systems:

1. **CCRLR,** which recognizes recycling already completed.
2. **CERE,** which supports structured projects for material recovery and recycling.
3. **The Future Mass Certificate,** which allows future recycling targets to be recognized against upfront investment in systems that will generate those results.

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[19] Republic of South Africa. (2024). *Extended Producer Responsibility Regulations, 2020 (Government Notice 1184 of 2020, as amended)* [online]. Available from: https://lawlibrary.org.za/akn/za/act/gn/2020/1184/eng%402024-11-06?utm [accessed October 24, 2026].

[20] Republic of South Africa, Department of Forestry, Fisheries and the Environment. (2024). *National Environmental Management: Waste Act: Regulations: Extended Producer Responsibility: Amendments (Government Notice 5534, Government Gazette No. 51528, 7 November 2024)* [online]. Available from: https://www.gov.za/sites/default/files/gcis_document/202411/51528gon5534.pdf [accessed October 24, 2026].

[21] GRID-Arendal. (2024). *Integration of waste pickers into mandatory Extended Producer Responsibility schemes: South Africa* [online]. Global Partnership on Marine Litter. Available from: https://gridarendal-website-live.s3.amazonaws.com/production/documents/%3As_document/1958/original/South_africa_brief.pdf [accessed October 24, 2026].

[22] Republic of Brazil. (2023). *Decree No. 11,413 of 13 February 2023: Establishes the Reverse Logistics Recycling Credit Certificate, the General Packaging Structuring and Recycling Certificate, and the Future Mass Credit Certificate* [online]. Available from: https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/decreto/d11413.htm [accessed October 24, 2026].

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These certificates are issued by authorized managing entities (entidades gestoras) and can be used by manufacturers, importers, distributors, and retailers to demonstrate achievement of reverse-logistics targets.[23] CERE could be particularly relevant to responsible sourcing because it moves beyond financing recycling volumes toward investment in the capacity of cooperatives and waste-picker organizations. The verification system therefore provides traceability of material volumes and transactions, but does not itself provide equivalent verification of social outcomes or how benefits ultimately reach autonomous waste pickers.

However, participation in the certificate mechanisms is voluntary, and they are just one of the instruments available for EPR compliance. They primarily focus on invoices and material volumes rather than on whether investments translate into improved working conditions or other social outcomes.

Results-Based Financing or Outcomes-Based Financing

Results-based financing links the disbursement of funding to independently verified outcomes. This makes it particularly relevant to responsible sourcing, as financing can be directly tied to specific environmental or social results. However, implementing organizations may need to finance activities upfront until results are verified, while verification itself adds cost and time. The research examined two approaches: one in which worker payments are directly linked to financing outcomes, and another that provides upfront capital against future verified credits.

World Bank Plastic Waste Reduction-Linked Bond – Ghana and Indonesia

The Plastic Waste Reduction-Linked Bond addresses a different constraint: when capital becomes available. Investors in the US$ 100 million, seven-year bond forgo part of the ordinary coupon, and the present value of the foregone coupons, approximately US$ 14 million, is channelled to two projects before any credits are sold.[24] Across 19 World Bank results-based solid waste projects approved between 2012 and 2024, only one of the 62 identified performance indicators addresses informal waste pickers and one addresses female participation, while 67% target municipalities.[25] This highlights an opportunity for responsible sourcing: worker-related outcomes – such as income, working conditions, safety, or inclusion – could be explicitly incorporated into performance indicators and payment triggers, creating a clearer pathway for financing to reach and benefit upstream workers.

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[23] Republic of Brazil. (2023). *Law No. 14,260 of 8 December 2021: Establishes incentives for the recycling industry and creates the Recycling Projects Incentive Fund (ProRecicle)* [online]. Federal Senate. Available from: https://legis.senado.gov.br/norma/36837750/publicacao/36837861 [accessed October 24, 2026].

[24] World Bank. (2024). *World Bank's new outcome bond helps communities remove and recycle plastic waste* [online]. Available from: https://www.worldbank.org/en/news/press-release/2024/01/24/world-bank-s-new-outcome-bond-helps-communities-remove-and-recycle-plastic-waste [accessed October 24, 2026].

[25] World Bank Group and Global Partnership for Results-Based Approaches (GPRBA). (2024). *Results-based financing for solid waste management: Results and lessons from the World Bank-financed project experience* [online]. Available from: https://documents1.worldbank.org/curated/en/099102224160594702/pdf/P1773441219c420f21b2eb169c8dba96d98.pdf [accessed October 24, 2026].

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Grants and Catalytic Funding

Grants are among the most flexible financing pathways because funding can be directed toward activities without requiring a commercial return or payment against a specific quantity of recovered material. Catalytic funding plays a related role in unlocking investment that may not otherwise flow into early-stage or higher-risk recycling systems.

This makes grants and catalytic funding particularly relevant for cost drivers such as worker organization and inclusion, capacity building, training, social protection linkages, and infrastructure improvements. This is especially important where the benefits of responsible sourcing extend beyond an individual business and where commercial mechanisms alone are unlikely to provide sufficient investment. However, grants are generally time-bound, making them better suited to establishing systems and addressing financing gaps than to permanently funding recurring operational costs.

Latitud R, supported by grants from the Inter-American Development Bank (IDB) and IDB Lab alongside corporate and philanthropic partners, demonstrates how this type of funding can support the **formalization and inclusion of informal recyclers.** The initiative works to strengthen recyclers' socio-economic position, improve access to formal recycling markets, and promote their inclusion in public policy.[26] It also highlights the wider financing challenge: base recyclers are estimated to recover 50–90% of recyclable material used by, or exported from, the region's industry, while receiving approximately 5% of the profits.

Plastic Credits

Plastic credits allow buyers to finance the collection or recycling of a verified quantity of plastic, independent of purchasing the physical material itself. This can create additional value for materials or collection activities that conventional recycling markets may not adequately finance. The research examined two approaches: **CleanHub**, which uses credit revenues to finance collection of low- or no-value plastic, and **BVRio's Circular Credits Mechanism**, which explicitly separates payment for the environmental service of recovery from payment for the recyclable material.

CleanHub – India, Indonesia, the Philippines, and Tanzania

CleanHub sells credits to consumer brands and uses the proceeds to fund the collection of non-recyclable plastic from households in areas with no municipal waste collection. Each credit represents one tonne of plastic material with no recycling value that no one would otherwise pay to collect.[27] CleanHub reports working with over 500 brands, while partnering with local cooperatives in India and Indonesia that collectively support more than 2,000 workers.[28] However, CleanHub maintains no public registry, and the verification covers the material flow and the allocation of credits but not the distribution of revenue between the company, its local collection partners, and the workers.

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[26] Chueke Perles, D. (2021). *Latitud R reúne empresas y organizaciones en torno al reciclaje inclusivo en Latinoamérica* [online]. elTOQUE. Available from: https://eltoque.com/evento-de-latitud-r-gestion-de-residuos-inclusiva-para-la-economia-circular-en-latinoamerica-y-el-caribe [accessed October 24, 2026].

[27] Integra Partners. (n.d.). *Why we invested: CleanHub* [online]. Medium. Available from: https://integrapartners.medium.com/why-we-invested-cleanhub-1d1d4da962e7 [accessed October 24, 2026].

[28] Earth5R. (n.d.). *Ocean plastic solutions: 15 startups making an impact* [online]. Available from: https://earth5r.org/ocean-plastic-solutions-15-startups-making-an-impact/ [accessed October 24, 2026].

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While plastic credits offer financing for plastic waste collection and recycling projects, their potential to scale remains uncertain. Research highlights several challenges, including limited market demand, price uncertainty, high verification and transaction costs, inconsistent standards, and concerns around additionality and transparency.[29] Additionally, evidence of plastic credits supporting responsible sourcing costs is limited. Yet, plastic credits offer a mechanism to support downstream solutions for managing plastic waste.

Financing Responsible Sourcing at Scale: Key Takeaways

The financing pathways assessed in this research can play complementary roles depending on the type of cost, market context, and stage of responsible sourcing implementation.

The financing mechanisms discussed above are not implemented at scale and have limitations on the costs they can cover. Moreover, no single financing mechanism is likely to cover the full costs of transitioning to responsible sourcing. While these costs will ultimately need to be integrated into market mechanisms and absorbed across the recycling value chain as a cost of doing business, the transition toward a more mature and responsibly sourced recycling sector will require complementary and new sources of financing. A combination of financing mechanisms will therefore be essential, tailored to local contexts, market maturity, and available opportunities.

Some pathways may become increasingly important as financing systems evolve. Buyer premiums can help integrate responsible sourcing costs into commercial transactions, while grants and concessional funding can support activities with wider social or system-level benefits. EPR, where supported by conducive government policy and effective implementation, can provide a mandatory and recurring source of financing for waste collection with broader societal benefits.

Results- or outcomes-based financing could similarly become more relevant if responsible sourcing outcomes – such as worker income, safety, inclusion, and working conditions – are explicitly incorporated into payment triggers. Importantly, cost categories differ in nature and will require different forms of finance. Worker livelihood and welfare interventions may require greater support from public finance, grants, and catalytic capital.

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[29] World Bank. (2024). *Unlocking financing to combat the plastics crisis: Opportunities, risks, and recommendations for plastic credits* [online]. Available from: https://documents1.worldbank.org/curated/en/099062424112542582/pdf/P177225-65282896-a5a5-4a42-87b8-56517b1d8c43.pdf [accessed October 24, 2026].



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Table 5: Financing pathways and their potential applications

Financing pathway	Costs it can potentially support	Role in responsible sourcing
 **Buyer premiums**	‣ Recurring audits and certifications ‣ Traceability ‣ Supplier engagement and incentives ‣ Potentially all other costs	Integrates responsible sourcing costs into purchasing and can transfer additional value upstream
 **Grants/catalytic funding**	‣ Worker welfare and inclusion ‣ Training and capacity building ‣ Integration and formalization ‣ Infrastructure and capital expenditure support	Particularly useful for transition costs and activities without an immediate commercial return
 **Extended Producer Responsibility (EPR)**	‣ Collection and recycling infrastructure ‣ Supplier incentives ‣ Capacity building ‣ Potentially worker inclusion and upstream improvements	Can provide a recurring, policy-backed funding source; its impact depends on how EPR resources are designed and distributed
 **Plastic credits**	‣ Recovery of low-value materials ‣ Collection infrastructure in underserved geographies ‣ Worker incentives ‣ Related project costs	Can direct additional voluntary finance toward activities not adequately supported by material value alone
 **Results-/outcomes-based financing**	‣ Collection and recycling infrastructure ‣ Worker inclusion and wellbeing ‣ Traceability ‣ Defined and measurable environmental or social outcomes	Can directly link finance to responsible sourcing outcomes where these are explicitly built into payment triggers

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SECTION 3

Benefits of Responsible Sourcing Investment



Responsible sourcing in recycling supply chains is increasingly recognized as a strategic investment that creates value beyond compliance. It applies the broader principles of supply chain sustainability – managing economic, social, and environmental impacts and promoting good governance– across the product lifecycle.[30] However, responsible sourcing is a long-term journey. Its benefits are realized progressively as businesses strengthen supplier relationships, improve operational practices, enhance traceability, and build trust across the value chain. Over time, as implementation matures, responsible sourcing transitions from an upfront investment into an embedded business practice that delivers economic, social, and environmental benefits and creates long-term value for all stakeholders.

Economic Benefits

Responsible sourcing can strengthen the commercial viability and competitiveness of recycling businesses by improving supplier relationships to enable access to reliable, high-quality feedstock and by increasing operational efficiency. Stronger compliance, traceability, and responsible sourcing practices can also create opportunities to access new markets, financing, and longer-term commercial partnerships. The economic benefits also extend to informal waste sector workers and other businesses in the value chain, including aggregators.

Key economic benefits include:

- Reduced business risks through stronger due diligence, compliance, and supply chain visibility.
- Increased and more reliable material supply through stronger collection and supplier networks.
- Higher productivity and reduced material losses through improved infrastructure, systems, and capacity.
- Better economic opportunities through improved material quality, access to new buyers and markets, and potential premiums for responsibly sourced materials.
- Improved access to capital and incentives, including EPR mechanisms and sustainability-linked financing.
- Improved and more stable livelihoods for informal waste sector workers through better prices, more consistent demand, stronger market linkages, and increased opportunities to participate in formal value chains.

[30] United Nations Global Compact and BSR. (2010). Supply chain sustainability: A practical guide for continuous improvement [online]. Available from: https://www.bsr.org/reports/BSR_UNGC_SupplyChainReport.pdf [accessed October 24, 2026].

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Social Benefits

Responsible sourcing contributes to more inclusive and equitable recycling value chains by improving working conditions, strengthening livelihoods, and increasing the participation of informal waste sector workers in formal supply chains.

Key social benefits include:

- Reduced economic vulnerability through more stable incomes, stronger market access, and greater participation of informal waste sector workers and upstream suppliers.
- Safer and healthier working conditions through improved occupational health and safety, training, and better workplace practices.
- Greater social inclusion and worker empowerment through increased organization, representation, recognition, and integration of informal waste sector workers into responsible supply chains.
- Improved community health and wellbeing through better waste management, reduced open burning and leakage of waste into the environment, and cleaner communities.

Environmental Benefits

Recycling itself delivers important environmental and public health benefits by diverting plastic waste from disposal and leakage, reducing demand for virgin materials, lowering greenhouse gas emissions, and supporting greater resource efficiency. Responsible sourcing can help strengthen these benefits by ensuring that recycling activities are carried out with appropriate environmental safeguards, including better waste handling, water and effluent management, and responsible resource use across the value chain.

Key environmental benefits include:

- Reduced waste leakage and pollution through increased diversion of plastics from open dumping and landfill, resulting in cleaner terrestrial and aquatic environments.
- Lower greenhouse gas emissions and improved air quality through reduced open burning and incineration of waste and increased recycling, creating cleaner living environments.
- Improved water stewardship and reduced environmental contamination through better wastewater and effluent management and more responsible water use.
- Greater resource efficiency and circularity through improved material recovery, responsible resource management, and more efficient use of plastics across the value chain.

These benefits can be assessed using estimates of greenhouse gas emissions avoided, quantities of waste diverted from disposal, virgin plastic displaced through recycled content, and qualitative assessments of improvements in community cleanliness and local environmental conditions.

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Creating Long-Term Shared Value

Investment in circularity and responsible sourcing can create long-term shared value across the recycling value chain. For businesses, it can strengthen supply chain resilience, improve transparency and risk management, and support more stable supplier relationships. For workers and communities, it can contribute to safer working conditions, greater inclusion, and improved livelihoods, while better sourcing and recycling practices can deliver wider environmental benefits.

These outcomes require sustained investment, collaboration, and continuous improvement, rather than one-time interventions. Over time, responsible sourcing can help build more transparent, inclusive, resilient, and competitive recycling systems, creating economic, social, and environmental value for businesses, workers, communities, governments, investors, and brands.

Figure 5: Benefits of responsible sourcing for key stakeholders

Brands and Buyers

- Compliance with Human Rights and Environmental Due Diligence (HREDD) requirements
- Reduced reputational and supply chain risk
- Resilient and stable supply chain

Recyclers and Processors

- Compliance with HREDD requirements
- Resilient and stable supply chain
- Meeting investor and buyer requirements
- Access to capital and new markets

Informal Waste Sector Workers

- Better working conditions
- Improved and stable income
- Improved quality of life

Investors

- Compliance with HREDD requirements
- De-risking of investment portfolios

Government and Communities

- Reduced waste leakage and pollution and related social and environmental benefits (e.g., cleaner cities)
- Economic development

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Conclusion: Responsible sourcing is a cost of doing business that requires shared investment and creates long-term value for businesses and people

This research provides a practical starting point for understanding the economics of responsibly sourced recycled plastics. Across the two case studies, we estimated that implementing minimum responsible sourcing requirements adds approximately US$ 40–50 per tonne to the current cost of recycled plastics. While the overall investment is broadly comparable, its composition varies with market maturity, existing business systems, and conditions within upstream supply chains.

The findings also demonstrate that responsible sourcing is not a one-time compliance investment. Many identified costs – particularly traceability, due diligence, supplier engagement, and monitoring – are recurring and need to become part of normal business operations. At the same time, the estimates remain conservative: investments such as living income, comprehensive remediation, and wider worker protection and inclusion are only partially captured and may extend beyond what an individual recycler can reasonably finance.

This points to a broader conclusion: ensuring responsibly sourced supply chains where human rights are safeguarded comes at a cost and **this transition requires shared investment across the value chain**. Some recurring costs can progressively be embedded within business models and purchasing arrangements, while worker-focused and system-level investments will require complementary financing from brands, producers, governments, investors, and development partners. The financing pathways examined in this research provide different ways to share these costs, but their effectiveness will ultimately depend on whether finance reaches upstream actors and translates into measurable improvements for workers and supply chains.

The potential value of these investments also extends beyond compliance. Stronger responsible sourcing systems can contribute to more transparent and resilient supply chains, improved risk management and material security, safer and more inclusive working conditions, and stronger environmental outcomes. Further evidence will be needed to quantify these benefits, but they reinforce the case for treating responsible sourcing as an investment in the long-term resilience and sustainability of recycled plastics value chains.

Looking ahead, future research should refine these estimates across a wider range of contexts, including differences in material type, scale and stage of operations, supply-chain integration, business maturity, and market maturity. More implementation data will also be important to understand how costs evolve as businesses advance in HREDD and to quantify the economic, social, and environmental benefits generated over time.

The per tonne estimate should therefore be viewed as a starting point rather than a universal benchmark. Its value lies in making an otherwise largely invisible cost more visible – giving recyclers, brands, processors, investors, governments, and development partners a basis for planning investments, strengthening buyer negotiations, designing financing mechanisms, and determining how costs can be shared.

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From Evidence to Action: Applying the Findings

The findings provide a practical starting point for stakeholders to plan, share, and finance responsible sourcing investments across the recycled plastics value chain.

Recyclers and processors: Use the cost categories and estimation methodology to inform budgeting and investment planning, progressively embed recurring responsible sourcing costs into core operations, and support pricing negotiations with brands, buyers, and off-takers by providing greater transparency on the investments required to deliver responsibly sourced recycled plastics.

Brands and buyers: Use the findings to inform sourcing strategies, purchasing decisions, and supplier negotiations by improving understanding of the costs and benefits of responsible sourcing, supporting longer-term sourcing commitments, and developing commercial mechanisms that appropriately share the additional investment required to deliver responsibly sourced recycled plastics.

Investors and financial institutions: Use the analysis to identify financing gaps and align capital with investment needs, particularly for infrastructure, worker inclusion, capacity building, and other costs that may not be financed through business revenues alone. The findings can also support the development of investment assumptions, valuation approaches, and financial models that more accurately assess the long-term value and returns associated with responsible sourcing.

Policymakers: Use the findings to assess the costs and benefits of responsible sourcing when designing or strengthening EPR schemes and other policy instruments, ensuring that financing mechanisms reflect the real costs of responsible recycling and adequately support upstream collection systems, informal waste sector workers, and broader ecosystem development.

Development partners and philanthropic funders: Direct catalytic funding toward transition and system-building needs – such as worker inclusion, capacity building, social protection, and ecosystem development – that commercial mechanisms are less likely to finance.

The path forward is to move from understanding the cost to embedding and sharing it across the value chain. Recyclers and processors need to integrate responsible sourcing into core operations; buyers need to recognize its costs in purchasing decisions; governments need to create enabling policy and financing systems; and investors and catalytic funders need to support investments that markets cannot finance alone. As recycled plastics markets grow, investment in the people, systems, and practices that make those materials responsibly sourced must grow with them.

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Annex 1: Key Cost Drivers[31]

The following table presents the 18 key cost drivers across the four categories related to responsible sourcing in recycling value chains.

Table 6: Cost categories and drivers

#	Cost Category	Cost Drivers
1.	Compliance and Documentation	Implementing traceability and transparency systems
2.	Compliance and Documentation	Setting up confidential grievance and reporting mechanisms
3.	Compliance and Documentation	Conducting human rights due diligence risk assessments
4.	Partnerships and Capacity Building	Advocacy and partnerships with local governments, NGOs, and communities
5.	Partnerships and Capacity Building	Training suppliers on compliance and responsible sourcing practices
6.	Partnerships and Capacity Building	Health and safety training for workers, including informal waste sector workers and waste pickers
7.	Partnerships and Capacity Building	Vocational and skills training for all workers, including informal waste sector workers and waste pickers
8.	Worker Wellbeing and Inclusion	Implementing workplace health, safety, and related compliance measures
9.	Worker Wellbeing and Inclusion	Providing safe drinking water, sanitation, and hygiene in the workplace
10.	Worker Wellbeing and Inclusion	Providing personal protective equipment (PPE) to all workers, including informal waste sector workers and waste pickers
11.	Worker Wellbeing and Inclusion	Supporting access to ID cards, social protection, and financial services
12.	Worker Wellbeing and Inclusion	Supporting the provision of living wages for employees and living income for waste pickers
13.	Worker Wellbeing and Inclusion	Measures to address child labor (including education, childcare, and awareness programs)
14.	Worker Wellbeing and Inclusion	Supporting the organization, formalization, and integration of waste pickers within the value chain
15.	Worker Wellbeing and Inclusion	Providing financial literacy and inclusion training
16.	Worker Wellbeing and Inclusion	Supporting access to health and life insurance for workers
17.	Vertical Integration	Strengthening supplier relationships to ensure responsible sourcing compliance and long-term engagement
18.	Vertical Integration	Investing in collection systems and facility upgrades to meet responsible sourcing standards

[31] These cost drivers reflect the primary categories identified through a multi-stakeholder consultation and are not exhaustive.

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CONTACT

rsi@thecirculateinitiative.org

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