Guidelines for Collective Action and Scaling

Results and Lessons Learned from the CARE Project

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Guidelines for Collective Action and Scaling: Results and Lessons Learned from the CARE Project:

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CARE Project – Collective Action for Recycling and Empowerment

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- Aluminium Stewardship Initiative (ASI)
- Compromiso Empresarial para el Reciclaje (CEMPRE Colombia)
- International Aluminium Institute (IAI)
- Canpack Colombia
- Crown Holdings
- One Planet Ltd (Roundtable on Responsible Recycling of Metals - RRRM)
- Recycled Materials Association (ReMA)
- Associação Brasileira do Alumínio (ABAL)

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1. EXECUTIVE SUMMARY

The CARE Project (Collective Action for Recycling and Empowerment) was led by the Aluminium Stewardship Initiative (ASI) and implemented by CEMPRE in Colombia in 2025 in Bogotá and Barranquilla. Its purpose was to explore how to move towards greater traceability of post-consumer aluminium and a more inclusive integration of waste pickers, recognising their central role in the circular economy. CARE did not seek to solve the sector's structural problems, but rather to generate practical evidence to inform strategic decisions and future intervention models.

Through a pilot, the project tested the feasibility of implementing traceability and collective action mechanisms in the post-consumer aluminium supply chain, under real market conditions and with heterogeneous organisational capacities. It combined target-linked incentives, continuous technical support, and actions aimed at reducing barriers associated with living and income conditions, alongside evidence generation through a value chain mapping exercise and a quality-of-life study.

The pilot experience indicates that partial progress towards progressive traceability schemes can be achieved when requirements are aligned with real capacities and are sustained through technical support; these advances were observed mainly in the adoption of record-keeping, use of a tool, and compliance with reporting; and they do not equate to full traceability. Economic and non-economic incentives aligned with clear targets were associated with greater uptake of record-keeping practices and a stronger willingness to meet collective commitments, according to pilot monitoring, target verification and testimonies from waste picker organisations (WPO). In addition, the studies conducted documented social, labour and economic risks that are often overlooked in approaches focused exclusively on environmental performance, based on mapping and interviews.

At the same time, the project revealed clear structural limits. Market dynamics—characterised by price volatility and prioritising sales to the highest bidder—made direct integration with processors more difficult. Exporter participation was low, confirming that traceability cannot be sustained through voluntary commitments alone. It also became clear that non-productive activities are only viable if they do not result in lost income for waste pickers.

This project provides concrete evidence for a key debate: post-consumer metals recycling is not inherently a low-risk stream. The project confirms that the greatest social risks are concentrated in the earliest stages of the chain and that full traceability is not always feasible. In this context, CARE reinforces the need for differentiated, progressive, shared-responsibility due diligence approaches, aligned with global discussions on responsible and inclusive recycling.

Although implemented in Colombia, CARE is relevant to other countries and regions with informal or semi-formal recycling chains. The project demonstrates that it is not possible to scale responsible recycling models without recognising the living conditions and economic rationality of waste pickers. Its lessons offer an adaptable framework based on four principles: living conditions as enabling factors, incentives aligned with economic sustainability, progressive traceability, and continuous technical support.

2. INTRODUCTION

This document consolidates the lessons learned from the CARE project, developed in collaboration with the Aluminium Stewardship Initiative (ASI) and implemented as a pilot in Bogotá and Barranquilla during 2025. The project aimed to strengthen the traceability of post-consumer aluminium and the technical, organisational and social capacities of waste picker organisations (WPO), recognising their strategic role within the value chain and within circular economy and Extended Producer Responsibility (EPR/REP) schemes. CARE approached post-consumer aluminium traceability from a perspective that acknowledges the social, labour and human rights risks present in the earliest stages of the chain, particularly in contexts of informality and subsistence.

The project was delivered in phases: an initial information-gathering and diagnostic stage, based on interviews and surveys with waste picker organisations, intermediaries, exporters and processors, helped to understand marketing dynamics and the chain's main challenges; on the basis of this evidence, a pilot was implemented to test traceability mechanisms from material collection by waste pickers through to delivery to processors, linking target achievement to the provision of support.

The report aims to systematise the main learnings derived from the project's design, implementation and follow-up, in order to provide inputs for the design of future interventions, strategic decision-making and the scalability of the model. CARE was not intended to comprehensively solve structural challenges such as informality, poverty or market distortions within the post-consumer aluminium chain, nor to constitute a closed or certifiable model, but rather to generate practical evidence and applicable lessons to inform more realistic, progressive and responsible intervention approaches.

Image 1. Collection and storage of aluminium cans

3. METHODOLOGY FOR IDENTIFYING LESSONS LEARNED

Lessons learned were identified through a qualitative and technical analysis process that integrated multiple information sources and perspectives:

- Experience of the project coordination team during pilot implementation.
- Feedback from participating waste picker organisations.
- Inputs from the internal technical team.
- Review of technical outputs produced under the project, particularly the Waste Pickers' Quality of Life Study and the Aluminium Value Chain Mapping
- Monitoring of target achievement, indicators and delivered activities.

This approach made it possible to identify both operational and structural learnings linked to market dynamics, organisational capacities, incentives, wellbeing and traceability.

3.1. Supporting studies

3.1.1. Waste Pickers' Quality of Life Study

The Quality of Life Study was developed as a diagnostic input to understand the social, economic and labour conditions of waste pickers engaged in the CARE project. The analysis covered dimensions such as income, economic stability, working conditions, access to services, wellbeing and perceptions of the future, with the aim of identifying structural factors that affect their capacity to participate, organise and meet targets.

The results showed a high dependence on daily income from recycling activities, as well as significant limitations in accessing wellbeing and leisure opportunities. These findings helped to interpret barriers observed during implementation (e.g., the opportunity cost of time and dependence on daily income) and supported the decision to include incentives and measures to mitigate these barriers.

3.1.2. Report on workshops and capacity strengthening for waste picker organisations

This report documents the design, implementation and results of the capacity strengthening processes delivered with waste picker organisations as part of CARE. It captures the delivery of training workshops and experiential sessions aimed at strengthening, in an integrated way, the social, technical and regulatory capacities of waste pickers linked to the aluminium value chain in Barranquilla, Bogotá, Cajicá and Puerto Colombia.

The interventions addressed key components for the dignity and sustainability of recycling work, including Occupational Health and Safety (OHS), Human Rights, the provision of the public cleaning service within the recovery activity and formalisation processes, as well as the development of soft skills and the overall wellbeing of waste pickers. The methodological approach combined technical training, participatory spaces and experiential activities, allowing content to be adapted to the territorial and operational contexts of participating organisations.

The report provides inputs on the potential usefulness of integrating wellbeing, recognition and organisational strengthening components as enablers of participation and ownership of traceability and regulatory compliance processes. It also underpins lessons learned from CARE regarding the need for integrated and progressive approaches that connect social and

technical capacities to move towards viable and sustainable collective action and traceability models.

3.1.3. Aluminium Value Chain Mapping

The Aluminium Value Chain Mapping aimed to characterise material flows from collection to processing and export, identifying key actors, trading dynamics, points of value concentration and the main bottlenecks for traceability.

The study found that the trading decisions of waste picker organisations respond primarily to price signals and immediate liquidity, as well as to the structural weight of the export market within the chain. These findings help explain the difficulty of achieving direct integration with processors and suggest the need for clear incentives (economic, regulatory or contractual) to sustain traceability schemes.

3.1.4. CARE Pilot Plan Results Report

The CARE Pilot Plan Results Report documents the implementation and results of an applied intervention aimed at strengthening traceability of post-consumer aluminium cans from the first mile of the value chain, through work with five waste picker organisations in Bogotá and Barranquilla. The report presents the pilot design, its components, targets and indicators, as well as results achieved in terms of material traceability, organisational performance and the social reach of the support provided.

The document systematises operational evidence on the partial feasibility of building traceability from the waste picker in a bounded pilot and under certain conditions (support, incentives, verifiable targets); the evidence is based on pilot records and should not be extrapolated without prior diagnostics. The report also identifies structural limits of the pilot, tensions between market requirements and first-link capacities, and key lessons for replicability and scaling of the intervention approach in future projects or initiatives.

3.1.5. Generating evidence for decision-making

The studies developed under the project provided strategic inputs to understand the context and conditions of the sector. The Quality of Life Study helped make visible the social, economic and labour conditions of waste pickers, highlighting structural gaps that directly affect their capacity to participate and meet targets. It also made visible labour and safety conditions that influence exposure to occupational risks and waste pickers' ability to participate in due diligence schemes.

In turn, the Aluminium Value Chain Diagnosis provided a detailed understanding of material flows, trading dynamics, bottlenecks in traceability and the high dependence on the export-driven model. These findings reinforced the need for integrated interventions that connect technical, social and regulatory aspects.

4. MAIN DIFFICULTIES AND CHALLENGES IDENTIFIED

4.1. Market dynamics and target achievement

One of the main challenges identified during project implementation related to meeting targets for delivering material directly to processors. In practice, waste picker organisations continue to

prioritise selling material to the highest bidder, reflecting a rational economic logic aimed at maximising income in a context of high price volatility and thin operating margins.

The chain diagnosis showed that this dynamic is not an organisational failure, but a structural characteristic of the post-consumer aluminium market. Factors such as higher operating costs for ECAs, limited local industrial capacity and the efficiency of the export model create economic incentives that favour sales to intermediaries or exporters, even when this runs counter to the project's traceability objectives.

In this context, CARE faced an ongoing tension between seeking greater traceability and preserving the immediate economic sustainability of waste picker organisations. This experience suggests that objectives around integration into formal and traceable chains must be designed with explicit recognition of these market conditions, avoiding approaches that penalise rational economic decisions or shift traceability costs onto the most vulnerable actors in the chain.

4.2. Barriers to participation in non-productive activities

While experiential and wellbeing activities generated positive effects in terms of motivation, social cohesion and recognition, their implementation also highlighted structural barriers to waste picker participation. In particular, the opportunity cost of not working during time allocated to non-productive activities emerged as a determining factor for attendance and engagement.

In Barranquilla, the attendance of some organisations at experiential outings was conditioned on these coinciding with the delivery of food vouchers. This illustrated that, in contexts of unstable income, prioritising daily work reflects an immediate economic need rather than a lack of interest in wellbeing or training spaces.

This learning reinforces that wellbeing activities can only play an enabling role when embedded within a broader approach aimed at avoiding negative impacts on income, recognising the opportunity cost of time, and reducing social and economic risks. Without these conditions, such activities lose effectiveness and may create unintended exclusions, limiting their contribution to due diligence and traceability objectives.

4.3. Constraints in engagement with exporters

Access to dialogue and engagement with exporters proved more difficult than initially expected. Some of these actors do not perceive clear benefits in traceability processes and therefore show limited interest in active participation.

The diagnosis showed that, in the current context, exporters operate under efficiency and competitiveness models in which post-consumer material traceability is not a meaningful differentiator, particularly in the absence of regulatory, contractual or market requirements that value these attributes.

This experience suggests that integrating exporters into traceability schemes cannot be based solely on voluntary approaches or appeals to corporate social responsibility. Rather, it requires the development of systemic incentives—regulatory, economic or reputational—that align traceability objectives with the operational and commercial logic of these actors, avoiding shifting the burden of integration onto the most vulnerable links in the chain.

5. PRACTICAL GUIDELINES DERIVED FROM THE CARE PROJECT

Based on the evidence generated during project implementation and the lessons learned from the pilot delivered in Bogotá and Barranquilla, the following practical guidelines were defined. These orientations do not constitute universal recommendations, but context-specific learnings shaped by the institutional context, the organisational capacities of waste picker organisations, and the specific dynamics of the post-consumer aluminium market. Applying them in other territories or value chains requires prior adjustments and contextual diagnostics to adapt approaches to local realities.

5.1. Guidelines for collective action

5.1.1. Collective incentives vs individual incentives

In the context of the CARE pilot, collective incentives can contribute to organisational cohesion and co-responsibility among members when minimum economic conditions and clear rules are in place, with a risk of disincentives if individual effort is not recognised.

5.1.2. Wellbeing as an organisational enabler

The pilot experience showed that wellbeing-related interventions only make sense when they are directly linked to reducing economic barriers and risks that limit participation. They are not stand-alone social activities, but complementary mechanisms aimed at mitigating the opportunity cost of time and facilitating participation in traceability and risk management processes. Experiential and recognition activities helped strengthen social capital and willingness to engage in collective processes only when implemented in a way that complemented income and did not generate additional economic costs. In this sense, wellbeing does not replace economic sustainability mechanisms or risk reduction; rather, it can facilitate participation in traceability and collective action processes when designed realistically and contextually.

Image 2. Experiential activity, Barranquilla

5.1.3. Co-responsibility mechanisms

Linking support to target achievement helped progress towards co-responsibility schemes. However, these mechanisms require clear rules, simple monitoring systems and ongoing support that enables organisations to understand and meet the commitments they take on.

5.2. Guidelines for reporting and traceability

5.2.1. Realistic minimum requirements for WPO

The pilot experience showed that, in contexts with limited organisational capacity, reporting and traceability requirements must be aligned with waste picker organisations' real capacities. Requiring high levels of formalisation or systematisation without a prior strengthening process limits participation and the sustainability of traceability schemes.

5.2.2. Continuous technical support

Observed progress in traceability was concentrated in organisations that received close and sustained technical support. This suggests that one-off training is insufficient and that reporting processes require follow-up, feedback and progressive adjustments.

Image 3. Training on occupational risk

5.2.3. Avoid one-size-fits-all approaches

Participating organisations show different levels of operational and administrative maturity. Traceability systems therefore need to be flexible and adaptable, allowing differentiated implementation pathways depending on each organisation's context and capacities.

5.3. Guidelines for market integration

5.3.1. Recognise the waste picker's economic rationality

Prioritising the best price reflects a logic of subsistence and economic sustainability. Any market integration strategy must start by recognising this rationality and avoid approaches that directly conflict with short-term income generation.

5.3.2. Engage exporters only where clear incentives exist

Low exporter participation showed that their involvement cannot be based solely on voluntary appeals. Effective integration requires regulatory, economic or reputational incentives that make participation in traceability schemes attractive.

5.3.3. Do not force traceability without adequate market conditions

Based on the pilot experience, the project suggests that traceability cannot be imposed in isolation. Its viability depends on market conditions, organisational capacities and regulatory frameworks that support it. Forcing these processes without such conditions can create additional burdens for organisations without achieving the expected results. This approach provides a reference framework for designing future interventions that prioritise shared responsibility, capacity strengthening and transparency about the limits of traceability, avoiding disproportionate burdens on the first link in the chain.

6. ELEMENTS OF THE CARE-DERIVED INTERVENTION APPROACH WITH SCALING POTENTIAL

The CARE project identified a set of components which, in combination, form an intervention approach derived from the pilot experience, with potential for adaptation and scaling in similar contexts. The pilot showed that these components do not operate in isolation and are not independently interchangeable; their effectiveness depends on the interaction and balance between them. Replicability in other contexts is therefore conditioned on the ability to adapt and implement these elements in an integrated way, taking account of institutional, organisational and market particularities in each territory.

The components described below should be understood as interdependent parts of a single intervention approach. The pilot experience showed that partial or disconnected implementation of these elements significantly reduces effectiveness and can lead to limited or inconsistent results.

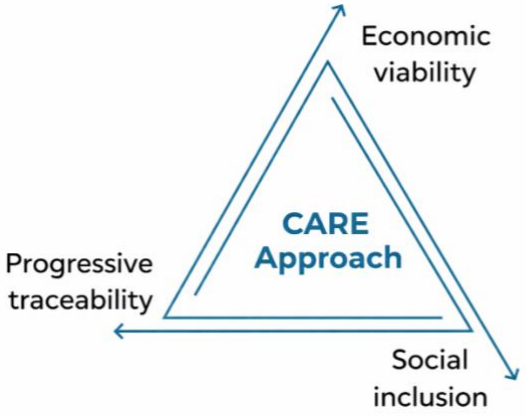

Figure 1. Key components of the CARE-derived intervention approach

6.1. Key components of the intervention approach

The CARE approach is structured around four interdependent components:

- **Living and income conditions as enabling factors:** recognition that living conditions, income levels and the opportunity cost of time determine waste pickers' real capacity to participate in organisational strengthening and traceability processes. The Quality of Life Study helped identify these constraints and informed the design of interventions that would not negatively affect income or exclude the most vulnerable waste pickers.
- **Incentives aligned with economic sustainability:** design of economic and non-economic incentives linked to clear and verifiable targets, aimed at promoting co-responsibility without negatively affecting short-term income. The pilot showed that incentives are more effective when they recognise the waste picker's economic rationality and internalise, fully or partially, the costs associated with participating in traceability and reporting processes.
- **Progressive traceability:** the project adopted a progressive traceability approach, with record-keeping and reporting requirements aligned with waste picker organisations' real capacities. The pilot showed that requiring high levels of formalisation early on limits participation and sustainability; by contrast, gradual progress, with achievable and verifiable targets, builds capacities and trust over time.
- **Continuous technical support:** close and sustained technical support, complemented by capacity development processes, was central. Beyond one-off training sessions, this approach combined practical learning, follow-up and iterative adjustments, facilitating ownership of traceability tools and strengthening organisations' ability to sustain these processes over time, under an adaptive management approach.

Replicability of the CARE-derived intervention approach lies not in adopting these components in isolation, but in implementing them in an integrated and contextualised manner. Applying it in other territories or value chains requires prior diagnostics to adapt the balance between living and income conditions, incentives, traceability and technical support to local realities and specific market dynamics.

6.2. Replicable elements of the model

The following components have potential to be replicated in other territories and value chains, provided implementation is based on prior diagnostics and is adapted to the social, organisational and economic realities of each context:

- Recognition of living and income conditions as the starting point for designing organisational strengthening processes, avoiding interventions that negatively affect income or exclude the most vulnerable waste pickers.
- Design of economic and non-economic incentives linked to clear, verifiable targets, aimed at promoting co-responsibility and participation without distorting market dynamics or shifting traceability costs onto waste picker organisations.
- Progressive traceability logic, based on record-keeping and reporting requirements proportionate to organisational capacities, avoiding disproportionate demands in early phases.
- A technical support and capacity development methodology combining practical training, ongoing follow-up and adaptive adjustments according to organisational maturity.

These elements can be replicated in different urban contexts and with different types of waste picker organisations, provided flexibility is maintained in implementation and coherence across the model's components is preserved.

6.3. Highly contextual elements

The project also identified components whose effectiveness depends strongly on the specific context:

- Local material trading dynamics and price volatility.
- The structure, trajectory and operational capacity of participating ECAs and WPO.
- The level of engagement with processors, exporters and other market actors.
- The regulatory framework in force and the regulatory incentives associated with traceability and EPR/REP.

These factors require prior diagnostics and specific adjustments before replicating or scaling the model.

6.4. Enabling conditions and limits to scaling

To scale the CARE-derived intervention approach, the following are identified as enabling conditions:

- Availability of sufficient resources to sustain technical support and capacity development processes over time.
- Incentive design that recognises the waste picker's economic rationality and income sustainability.
- Existence of regulatory, contractual or market frameworks that support traceability and co-responsibility among actors across the chain.
- The model's limits include:
- The impossibility of imposing traceability schemes without minimum market conditions and organisational capacity.

- The risk of administratively or operationally overburdening organisations without clear and tangible benefits.

7. SCALING STRATEGY

Based on the pilot lessons and the identification of elements with scaling potential, a strategy is proposed based on a progressive, multi-actor approach that is sensitive to waste pickers' living conditions and to economic and organisational realities. The phased approach presented below does not constitute a universal or linear sequence applicable to all contexts; rather, it is a flexible orientation built from the pilot experience and subject to adaptation according to local market dynamics, organisational capacities and regulatory frameworks.

In this sense, the intervention approach should not be interpreted as a standardised solution or a certifiable scheme, but as a flexible learning framework whose application and adaptation depend on contextual diagnostics, institutional capacities and specific market conditions.

7.1. Roles of key actors in scaling

Scaling requires a clear articulation of roles among chain actors, understood as a dynamic, contextual process:

- Waste picker organisations (WPO and ECAs): central actors, responsible for operational implementation of traceability mechanisms and participation in organisational strengthening processes.
- Exporters and processors: key to consolidating formal and traceable chains; their integration should occur only where clear incentives exist—regulatory, contractual or market-based.
- Extended Producer Responsibility (EPR/REP) schemes: potential enablers, through recognition of traced material, provision of economic incentives and support for strengthening processes.
- Local governments: essential to create enabling conditions, facilitate progressive formalisation and connect the model with waste and circular economy public policies.
- CEMPRE and ASI: convening entities, responsible for technical coordination, methodological support and trust-building among chain actors.

7.2. A phased, progressive approach

Scaling is conceived as a gradual process, structured into three phases:

- **Phase 1. Targeted pilots with incentives and capacity development:** bounded interventions integrating incentives aligned with economic sustainability and close technical support. This phase prioritises trust-building, participation and basic organisational strengthening.
- **Phase 2. Consolidation of minimum viable traceability:** simplified record-keeping and reporting systems aligned with organisational capacities, generating reliable information without administratively or operationally overburdening waste pickers.

- **Phase 3. Progressive integration into formal and certified chains:** gradual engagement of processors, exporters and certified schemes once market conditions, clear incentives and sufficient organisational capacities are in place.

The pilot showed that some contexts may require longer cycles in particular phases, combinations of phases, or sequencing adjustments depending on local dynamics and intervention objectives.

Table 1. Summary of Scaling Strategy

Phase	Main Objective	CARE Approach Components	Key Actors	Enabling Conditions	Risks to Manage
Phase 1. Focused pilots with incentives and capacity building	Build trust, participation, and basic organisational capacities	Enabling conditions (life/income conditions and opportunity costs), economic and non-economic incentives linked to goals, technical accompaniment, and capacity building	WPO, ECAs, CEMPRE, ASI	Resources to sustain participation without loss of income; proportional incentives; close accompaniment; realistic and verifiable goals	Dropout due to income loss; low participation
Phase 2. Minimum viable traceability	Generate reliable information without administrative overload	Progressive traceability, practical training, continuous follow-up	WPO, ECAs, CEMPRE, ASI, REP	Simple tools; realistic minimum requirements; continuous feedback	Administrative overload; demotivation
Phase 3. Integration into formal certified chains	Integrate market actors and formal schemes	Consolidated traceability, market articulation	Exporters, transformers, REP, local governments	Normative or economic incentives; strengthened organisational capacities	Exclusion of vulnerable actors; price pressure

7.3. Risks and safeguards for responsible scaling

The project identified potential risks associated with accelerated scaling, which should be managed through explicit safeguards:

- Avoid negative impacts on waste pickers' income: no traceability or formalisation requirement should reduce short-term income. Incentives should compensate, fully or partially, the costs of participation.
- Avoid excluding waste pickers with lower capacities: scaling should include organisations with different maturity levels, avoiding technical requirements becoming barriers to entry.

- Scale only what has been validated in each context: intervention components should be adjusted through prior diagnostics and local learning, avoiding mechanical replication that fails to recognise local conditions.

7.4. Link with standards, chain of custody and due diligence (DD)

The CARE progressive traceability approach is conceptually compatible with risk-based due diligence. Where full traceability is not feasible, pilot learnings suggest that phased approaches can be adopted, aligned with:

- risk differentiation by recycled input type;
- focus on structurally influential points in the chain (such as ECAs or formal aggregators); and
- mitigation measures proportionate to organisational capacity.

In this sense, ASI members could incorporate CARE learnings into due diligence processes related to post-consumer recycled inputs, particularly regarding:

- identification of social risks in the earliest stages of the chain;
- transparent definition of practical traceability limits; and
- adoption of complementary models such as mass balance or book-and-claim where relevant.

7.5. Mechanisms to avoid shifting the burden onto waste pickers

A central CARE learning is that the costs associated with traceability, formalisation and due diligence should not be shifted disproportionately onto waste pickers or resource-constrained organisations. Within this framework, ASI and its members can contribute to responsible scaling through:

- explicit recognition of shared responsibility in due diligence implementation;
- design of economic or contractual incentives that internalise part of the costs of documentation and improved practices;
- inclusion of proportionate and progressive criteria in audits and assessments related to recycled inputs; and
- technical or financial support for organisational strengthening processes upstream.

This approach aligns compliance expectations with the real capacities of the first link in the chain, reducing risks of exclusion or unintended precarisation.

8. LINKING THE FINDINGS OF THE ROUNDTABLE ON RESPONSIBLE RECYCLING OF METALS WITH THE CARE PROJECT

8.1. Context and purpose

The CARE project and its pilot offered a practical case that enabled dialogue with, and comparison against, key due diligence (DD) findings and recommendations developed through the Roundtable on Responsible Recycling of Metals (RRRM). Connections between the two processes were first explored through a virtual due diligence workshop with CARE pilot participants, jointly facilitated by the RRRM Secretariat and ASI, which examined current practices and inclusion opportunities. The outcomes of this workshop were subsequently systematised and shared externally through a public webinar, with the purpose of exchanging learning and comparing methodological approaches to due diligence in the recycling of aluminium and other metals.

8.2. Recycled material typologies and risk differentiation

RRRM identified that recycled metals cannot be treated as a homogeneous, low-risk category, and instead proposed four types of recycled inputs with differentiated due diligence implications. The CARE pilot sits within the highest-risk category identified by RRRM: post-consumer scrap from distributed and mixed sources, collected through informal and semi-formal systems and often associated with subsistence conditions.

CARE's mapping showed dynamics consistent with this higher-risk typology: aluminium collected by waste pickers and co-operatives is aggregated mainly by type and quality, with limited origin-level information—and therefore limited risk information—as the material moves through the value chain. This finding is coherent with RRRM's risk differentiation approach and reinforces the importance of calibrating due diligence expectations according to the specific type of recycled input, rather than directly applying approaches developed for primary minerals or for pre-consumer and closed-loop flows.

8.3. Limits of traceability and the practical boundaries of due diligence

RRRM findings underline that collection, mixing, aggregation and trading practices in recycled metals supply chains often prevent full upstream traceability, and that due diligence systems should define and communicate the practical limits of traceability clearly, considering alternative approaches to assess risks associated with informal and subsistence systems.

CARE provided evidence consistent with this framing based on the pilot experience, showing that in the earliest stages of collection, the vast majority of transactions lack formal documentation. In the specific context of the CARE pilot, it was estimated that around 95% of initial transactions lacked systematic records, with documentation becoming more frequent only once material

entered classification and recovery stations (ECAs). Downstream, in warehouses, exporters and processors, records tend to be more consistent.

CARE pilot participants indicated that ECAs and exporters already operate basic documentation systems and maintain regular commercial relationships, making them more realistic entry points for due diligence interventions. This is consistent with RRRM's identification of structurally influential "choke points" in recycled metals value chains, and supports the idea that focusing due diligence efforts on these links may be more effective than pursuing end-to-end traceability in highly fragmented post-consumer systems.

CARE also identified the importance of maintaining transparency about these practical limits of traceability, as overstating traceability can undermine trust in due diligence processes, particularly for high-risk post-consumer materials.

As part of the pilot interventions, a simple mobile-based reporting tool was implemented at ECA level, designed to record individual collection events and link them to basic information about the material and the supplier. Use of this tool was supported through economic and non-economic incentives, aimed at promoting more consistent documentation at the point where material first enters a more formalised part of the value chain.

8.4. Shared responsibility and differentiated costs of due diligence

RRRM noted that due diligence costs are not evenly distributed along recycling value chains, and that downstream actors are often better positioned to support improvements upstream, where ESG risks are concentrated. The CARE pilot provided practical elements illustrating this point: many co-operatives and aggregators lack the financial and technical capacity to adopt traceability tools without external support. In many cases, these co-operatives are managed by civil society organisations and are not fully financed through the value of collected materials.

CARE identified and tested mechanisms that could operationalise shared responsibility within a pilot (e.g., performance-linked incentives); their applicability at larger scale depends on contributions from downstream companies and programmes, alongside collection-event recording in ECAs. These mechanisms should not be understood as permanent transfers, but as transitional support intended to internalise part of the costs associated with due diligence in high-risk stages.

This experience suggests that RRRM's call for differentiated responsibility is particularly relevant in supply chains where upstream actors face the greatest social and environmental risks, but have the fewest resources to respond to rising compliance expectations.

8.5. Integration of informal and small-scale actors

RRRM identified informal and small-scale recyclers as essential—though often invisible—actors in metals recovery, noting that these materials can represent relatively higher income for collectors compared with other flows. CARE pilot mapping confirmed that waste pickers and co-operatives play a central role in aluminium recovery in Colombia and that participation in these activities constitutes a critical source of livelihoods.

However, the Quality of Life Study developed under CARE showed that average waste picker incomes remain significantly below the estimated living income threshold, indicating that reliance on this activity does not necessarily translate into an adequate standard of living. Despite their importance for material recovery and livelihoods, these actors continue to operate largely outside formal due diligence systems, even in contexts where they have legal recognition or form part of EPR schemes.

These findings are in dialogue with recent evidence from the Fair Circularity Initiative, which indicates that waste picker income levels tend to improve as organisation levels increase. In this context, CARE pilot results provide elements that support the relevance of integrating informal actors through practical and incremental measures that improve documentation and risk management without imposing unrealistic compliance burdens. This approach can be strengthened through public policy improvements, including greater recognition and financial flows through EPR schemes, as well as through adjustments in sustainability certification programmes such as ASI, incorporating more explicit provisions for risk assessment and considering complementary approaches such as mass balance or book-and-claim models.

8.6. Contributions of the CARE pilot in relation to RRRM findings

While RRRM findings apply to multiple metals, the CARE pilot offered a specific test case for aluminium, enabling observation of how these challenges and possible responses manifest in a post-consumer recycling context. The pilot results are coherent with RRRM's observation that traditional due diligence approaches, on their own, may be insufficient to identify and manage the highest-risk segments of recycled metals value chains.

The CARE project showed that activities such as value chain mapping, targeted interventions at formal classification and recovery stations, and the use of performance-based incentives can contribute to operationalising RRRM recommendations in aluminium recycling systems. These experiences offer relevant inputs for the design of future pilots and for the evolution of tools, standards and approaches promoted by ASI—particularly regarding differentiated due diligence expectations by recycled input type, focusing interventions on structurally influential points in the chain, and strengthening co-operative capacities—while maintaining transparency about traceability limits.

Discussions held during the due diligence workshop also highlighted that alternative approaches recommended by RRRM—such as chain-of-custody models based on mass balance or book-and-claim—could complement future CARE-type interventions where full traceability is not feasible. Used alongside targeted field activities, these approaches could allow downstream aluminium users to support upstream improvements while maintaining credible responsible sourcing assertions. Overall, these learnings suggest that the CARE pilot provides a practical learning base to inform future responsible aluminium recycling initiatives aligned with RRRM recommendations and relevant to the ongoing evolution of ASI's standards and tools.

9. CONCLUSION

The CARE project generated relevant learnings on the conditions under which it is possible to move towards more inclusive traceability and market integration schemes in post-consumer aluminium value chains. The pilot experience confirmed that these processes cannot be approached only through technical or regulatory lenses, but require a deep understanding of living conditions, income levels and the economic dynamics that structure waste pickers' participation in the value chain.

One of the project's main contributions was to show that traceability and collective action are only viable when designed in a way that is compatible with waste pickers' economic sustainability, avoiding shifting additional costs onto them or generating negative impacts on short-term income. In this regard, the Quality of Life Study helped ground the design of incentives, support mechanisms and training approaches in concrete evidence, reinforcing the need for context-sensitive interventions and recognition of the sector's organisational heterogeneity.

CARE also highlighted that integration into formal chains cannot be imposed in isolation or accelerated. Market dynamics, price volatility, the structure of the export-driven model and the absence of systemic incentives for downstream actors limit the effectiveness of approaches based exclusively on voluntary commitments. These findings underline the importance of aligning efforts among waste picker organisations, market actors, EPR schemes, local governments and convening entities such as ASI, under a progressive and adaptive approach.

From a scaling perspective, the project identified an intervention model whose components—living and income conditions as enabling factors, incentives aligned with economic sustainability, progressive traceability and technical support with capacity development—must be understood as an interdependent set. Replicability does not lie in mechanically adopting tools or phases, but in the ability to adapt this balance to specific contexts through prior diagnostics and continuous learning processes.

Finally, the evidence and lessons systematised by CARE reinforce that advancing towards more transparent and inclusive value chains in the aluminium sector requires combining ambition with realism. Pilots play a fundamental role as spaces for learning and adjustment, provided their results are used to inform strategic decisions, avoid prescriptive approaches and strengthen coherence between social, economic and environmental objectives. In this sense, the learnings consolidated in this report seek to contribute to the broader debate led by ASI and other actors on how to integrate waste pickers effectively into responsible supply chains, without undermining their sustainability or their central role in the circular economy.