



# GROUND UP INSIGHTS

Unlocking People-Centered Solutions and Pathways  
for Just Transition in MSMEs and Communities



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# MESSAGE FROM THE DIRECTOR



**Pradeep Narayanan**  
Director, Partners in Change

In the race toward net-zero and ESG-compliant economies, a critical blind spot persists: the last tier of global value chains. This is where MSMEs, informal workers, waste reclaimers, farmers, women, youth, and village communities, often located in rural and fragile regions, bear the heaviest burdens of environmental degradation, livelihood disruptions, and climate risks. Yet, they remain largely absent from mainstream conversations on corporate due diligence, risk assessments, carbon market design, funding flows, and accountability mechanisms. Their exclusion reinforces existing inequalities and undermining the long-term resilience of both communities and value chains. As a result, efforts frequently capture compliance at the top while leaving structural vulnerabilities at the bottom unaddressed.

The challenges we face are not technical in nature; they are systemic. Fragmented accountability, weak integration of social dimensions, and insufficient alignment between global mandates and local realities continue to constrain meaningful progress. A just transition cannot be achieved through isolated interventions or disclosure-driven approaches alone. It requires integrated, place-based models that recognise the interdependence

between enterprises, workers, communities, and the ecosystems in which they operate.

At this defining moment in the development journey, it is becoming increasingly clear that the true measure of progress will lie in how effectively transition pathways reach communities at the end of value chains. This demands a reimagining of ESG and Just Transition through a people-centred, ecosystem-based lens, one that moves beyond risk mitigation toward shared value creation. Locally grounded approaches, anchored in waste circularity, community-defined metrics, participatory governance, and inclusive financing, offer practical pathways for climate action while strengthening livelihoods, social equity, and local resilience.

This report brings together key learnings from sustained, place-based engagements, emerging models, insights from experts, to outline an emerging Action Blueprint for last-tier transitions. Central to this blueprint is a shift from compliance-driven ESG toward place-based transition models that align enterprise goals with village- and cluster-level realities. Waste circularity emerges as a critical entry point, enabling last-tier actors to participate as producers, aggregators, and stewards of value rather than as peripheral beneficiaries. Similarly,

aggregation-based approaches to carbon markets and green finance demonstrate how climate finance can be democratised transforming carbon and environmental performance into shared community assets

Equally important is the development of community-defined metrics that complement existing ESG frameworks by capturing lived experiences of work, dignity, safety, and environmental exposure. These participatory metrics strengthen accountability while enabling communities and MSMEs to access ESG-linked finance. Unlocking such finance requires people-centred instruments—blended finance, guarantees, and collective performance-based models—that recognise social capital and long-term impact, rather than collateral alone.

Finally, inclusive transition pathways depend on strong local governance and participatory accountability. By embedding ESG and transition objectives within local

institutions and decision-making processes, transitions become more legitimate, resilient, and scalable. Emerging models demonstrate that centring the last tier is not only feasible but essential for credible and enduring ESG outcomes.

By placing dignity, agency, and accountability at the end of value chains, we can design frameworks that are both equitable and sustainable. A truly sustainable future will only be realised when transition pathways are built from the ground up, with last-tier actors recognised as active contributors to resilience, innovation, and leadership.

I extend my deep gratitude to all contributors and partners whose insights, experience, and commitment have advanced this collective learning. Together, we seek to shape replicable frameworks that centre agency, accountability, and equity at the end of global value chains.



# BACKGROUND & RATIONALE

As India enters a critical phase of development, it is essential to foreground the challenges faced by the most vulnerable communities and enterprises, for the true test of ESG and Just Transition lies at the “last tier” of value chains—among communities, workers, and ecosystems. This report synthesizes deliberations from a two-day multi-stakeholder conference that examined these pressing challenges related to waste circularity, carbon markets, community impacts, and the unlocking of finance.

India stands at a pivotal moment in its development trajectory. As global conversations on sustainability, ESG (Environmental, Social and Governance) frameworks, and Just Transition accelerate, there is a growing recognition that progress cannot be measured only at the level of corporations and global supply chains. The true test of an equitable and sustainable transition lies in how effectively it reaches the last tier — micro-enterprises, informal and invisible workers, and rural communities whose lives and livelihoods are intertwined with both economic and ecological systems.

Over 63 million MSMEs form the backbone of India’s production ecosystem, employing millions, particularly from informal and marginalised groups. Yet, these actors often operate without access to finance, visibility in supply chains, or the capacity to transition to cleaner and more resilient models.

At the same time, global regulations and sustainability expectations are becoming more stringent. International buyers and

investors increasingly require traceability, responsible production, and circular practices. If last-tier actors are not supported to participate in this transition, India risks creating a fragmented sustainability movement — where progress is concentrated in boardrooms and export hubs, while exclusion and vulnerability deepen at the base of the pyramid. A place-based Just Transition approach recognises that collective progress requires equitable inclusion, locally rooted innovation, and community participation. It also demands recognising waste workers, sanitation workers, rural women, small entrepreneurs, and youth not as recipients of change, but as powerful contributors to resilient and sustainable economies.

***This report presents insights and directions emerging from the Travelling the Last Mile First dialogue — an effort to place communities, last-tier businesses and informal actors at the centre of the sustainability conversation, and to explore pathways that align local realities with global ambitions.***

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# TRAVELLING THE LAST MILE FIRST

The dialogue focused on challenges and priorities shared directly by MSMEs and local enterprise networks, collaborative models linking ESG ambitions to on-the-ground realities, and pathways to align investments, innovation, and policies with inclusive climate action. A collaborative effort by Partners in Change, Praxis- Institute for Participatory Practice, Dialectics and Gethu Group four thematic roundtables explored tangible levers for inclusive and future-ready transitions.



# Objectives

The convening sought to:

- Catalyse a national conversation on place-based Just Transition rooted in dignity, equity, and community agency.
- Identify practical pathways for integrating MSMEs and informal workers into emerging ESG and sustainability ecosystems.
- Shape the evolution of PiC's Progress Villages model, designed to embed circularity, social protection, and livelihood resilience at the grassroots.
- Build shared understanding across policy, finance,

# Format & Methodology

The dialogue followed a structured consultation format featuring:

- Four thematic round-tables anchored in priority transition pillars
- Participation from MSMEs, grassroots leaders, finance experts, researchers, and industry representatives

The engagement emphasised open, reflective conversations with a commitment to future collaboration and co-creation.

# Participants

The convening brought together:

- MSME representatives and cluster associations
- Civil society and grassroots organisations
- Sustainability and supply-chain practitioners
- Policy, finance, and climate transition experts
- Platforms and innovators working on circularity, community data, and social protection

Speakers and contributors represented diverse geographies, institutional backgrounds, and practice areas, ensuring rich dialogue grounded in both field experience and policy perspectives.



# THE CASE FOR A LAST-TIER FOCUS IN INDIA'S JUST TRANSITION

## Travelling the Last Mile First

There is a growing recognition that concentrating only on the environmental aspect of transition, while ignoring the impact on labour, consumers, and local populations, will result in backlash and pushback that can derail decarbonisation plans. It can alienate investors and consumers as social impacts become more pronounced and unaddressed. It can also compromise supply-chain relations, disrupting production operations and

businesses. In this context, the concept of Just Transition is gaining prominence globally.

While the nature and scale of transition may vary across sectors and regions, it will require an integrated, multi-stakeholder, and bottom-up approach. Achieving targets will involve process, material, and energy shifts across value chains and tiers, including those actors often perceived as peripheral. For example, in

the textile sector, Just Transition extends beyond spinning, ginning, and garment units to include interconnected activities such as chemicals, agriculture, energy, logistics, and waste systems. It also requires integrating enterprises and workers beyond formal supply-chain boundaries, where much of India's production takes place.

India has over 63 million MSMEs, 99% of which are micro-enterprises that operate with limited resources and capabilities. These enterprises are disproportionately vulnerable to disruptions. Climate change continues to strain their operations, and shifts toward new production models risk further marginalisation unless support reaches them. These units serve local markets and employ a significant proportion of informal workers. Disconnected from larger companies, investment, financing, and capacity-building programmes, they operate in an ecosystem defined by informality and limited resilience.

Just Transition for these enterprises is not only necessary for social equity but also for fostering employment and strengthening local economies. The transition must expand beyond enterprise-level interventions to strengthen the ecosystem and environment within which micro-enterprises operate. This means collaborative planning to build resilience, creating local opportunities, ensuring social cohesion, and developing models for positive climate action at the village and cluster level.

### **It is about travelling the Last Mile First!**

The discourse on ESG and Just Transition often begins with corporations and global frameworks, but its true credibility lies in how deeply it engages the last tier — communities, workers, and ecosystems at the base of value chains. In villages and local production systems, environmental and social impacts converge most acutely, demanding approaches rooted in lived realities.

A place-based Just Transition approach recognises that villages, micro-enterprises, and marginalised worker groups — including waste and sanitation workers — are not passive recipients of interventions but active partners in resilience, innovation, and equity. Embedding ESG practices in local realities transforms compliance into co-created value.

Global transitions create new economic opportunities while also posing risks to traditional livelihoods. Without intentional design, those at the margins — communities, workers, and enterprises — risk being left behind.

Progress Villages represent a model where last-tier actors — farmers, waste workers, MSMEs, women, and youth — are integrated into ESG frameworks through participatory mechanisms. These localised models demonstrate how bottom-up solutions can unlock finance, enhance BRSR "social" metrics, and root Just Transition in lived experience.



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## **The Urgency of Placed Models**

The push for place-based Just Transition — especially in waste circularity — reflects global pressure for sustainable and transparent supply chains. Yet MSMEs, sanitation workers, and rural communities remain largely invisible and unsupported. This disconnect risks deepening inequality and undermining India's competitiveness.

Addressing circularity, livelihood security, and climate resilience at the grassroots is central to ensuring that the green transition benefits the most vulnerable.



# OUR PROGRAMME JOURNEY

ProgReSS (Programme on Resilience and Sustainable Systems for MSMEs) strengthens MSMEs to navigate an increasingly complex and evolving environment. By building future-ready and resilient enterprises, the programme focuses on developing sustainable transition strategies that ensure long-term viability, inclusivity, and alignment with broader environmental and social goals.

## From Global Mandates to Local Realities

India's evolving sustainability landscape — shaped by global mandates such as the EU Corporate Sustainability Due Diligence Directive (CSDDD) and national frameworks like the BRSR — requires deep integration of MSMEs into responsible business ecosystems. However, compliance-focused models are often inaccessible to micro-enterprises that operate informally and

lack institutional support.

Recognising this gap, Partners in Change developed ProgReSS for MSMEs — a capacity-building and action-learning programme designed to empower micro and small enterprises to transition toward responsible and sustainable business practices in ways that are context-responsive and community-anchored.

## What the Programme Aims to Do

ProgReSS focuses on:

- Strengthening MSME understanding of ESG and Just Transition
- Building capacities for ethical, inclusive, and environmentally responsible business
- Enhancing worker dignity, safety, and social protection
- Supporting resource efficiency, circularity, and climate preparedness
- Facilitating connections to local financing, institutional support

India's evolving sustainability landscape, shaped by global mandates such as the EU Corporate Sustainability Due Diligence Directive (CSDDD) and national frameworks like the BRSR, requires deep integration of MSMEs into responsible business ecosystems. However, compliance-focused models are often inaccessible to micro-enterprises that operate informally and lack institutional support. The remote location of these enterprises coupled with the challenges in access resources, including finances and expertise, renders them at risks.

COVID-19 pandemic exposed these pre-existing vulnerabilities, supply-chain disruptions, migrant worker exodus, and zero cash reserves forced lakhs of micro-units to close permanently. Official estimates project closure of over 75,000 MSMEs during the pandemic.

Post pandemic as well the growing vulnerabilities and lack of the synergy between these enterprises and the global environment has led to continuity of this trend. According to Government, 98,990 MSME units have shut down over the past five years, accounting for only 0.15 per cent of the 6.62 crore enterprises registered on the Udyam and Udyam Assist platforms since July 2020.

Recognising this gap, Partners in Change developed ProgReSS for MSMEs a programme designed to empower micro and small enterprises to transition toward responsible and sustainable business practices in ways that are context-responsive and community- anchored. ProgReSS uses action-learning clusters, peer mentoring, and local-language facilitation to co-create practical, low-cost sustainability roadmaps that enterprises can actually implement.

**98,990**

**MSME UNITS SHUT DOWN**  
over the past five years

**6.62 CR**

**TOTAL ENTERPRISES**  
registered on Udyam

**75,000+**

**PERMANENT CLOSURES**  
during the COVID-19

## The programme focuses on

- Strengthening MSME understanding of ESG and Just Transition
- Building capacities for ethical, inclusive, and environmentally responsible business
- Enhancing worker dignity, safety, and social protection
- Supporting resource efficiency, circularity, and climate preparedness
- Facilitating connections to local financing, institutional support

Overall the programme is working to demystify ESG and Just Transition for informal micro-enterprises through local-language, cluster-based action learning. It enables small businesses to adopt low-cost ethical labour practices, enhance worker safety and social protection, and

implement resource-efficient and circular processes for climate resilience. By linking participants to localised green financing and government schemes, it turns sustainability from a compliance burden into a practical pathway for survival and growth.

## Over the last 4 years the programme has

- Worked with over 250 Micro enterprises
- Across 4 locations — Dindigul, Virrudhunagar, Erode and Tirupur
- Organised over 35 trainings and workshops on Occupations Health and Safety, Worker Rights, ESG and RBC, Schemes and Programmes
- Facilitated uptake of ZED certifications (Gold, Silver and Bronze)
- Facilitated Energy Audits
- Adoption of Solar, Waste and Water Management Solutions



# CHALLENGES & ENABLERS IN INDIA'S LAST-MILE TRANSITION

**65M**

TOTAL MSMEs  
in India

**30%**

CONTRIBUTION  
TO GDP

**48%**

CONTRIBUTION  
TO EXPORTS

**<16%**

FINANCIAL INCLUSION

## Pradeep Narayanan

Director, Partners in Change

According to the MSME Ministry's 2022—23 Annual Report, India hosts over 65 million MSMEs, contributing nearly 30% to GDP and 48% to exports. However, less than 16% of these are integrated into formal financial systems. As India accelerates its climate goals under the Nationally Determined Contributions (NDCs) and the National Green Hydrogen Mission, it becomes imperative to centre

these last-tier actors in the transition—both as agents of change and as beneficiaries of transformation.

This section situates the Dialogue's core premise: Travelling the Last Mile First—to bring the margins to the centre of transition frameworks, by addressing four interlinked challenges that define India's last-tier readiness for Just Transition.

# Exclusion of MSMEs from Finance and Support Systems

Despite their scale, MSMEs face systemic exclusion from formal credit and sustainability-linked financing. Out of India's 65 million MSMEs, only 1.5 million (2.3%) are considered creditworthy, with a credit gap of ₹20–25 lakh crore.

**High transaction costs, lack of collateral, and complex application procedures deter both enterprises and lenders.**

Moreover, the emerging green finance architecture—carbon markets, ESG-linked funds, and blended finance—remains largely inaccessible to micro and informal enterprises.

In response, several initiatives piloted by civil society and intermediary institutions have begun leveraging the “BRSR Lite” framework, introduced under India's National Guidelines for Responsible Business Conduct (NGRBC). This enables micro-enterprises to self-assess and report on sustainability metrics, building capacity for future compliance.

Collectivisation has also emerged as a key enabler—forming producer associations or clusters reduces audit costs, enhances visibility, and builds eligibility for certification or partnership with larger brands.



**A people-centred transition must begin by financially de-risking MSMEs & strengthening their ability to report, adapt & attract investment.**

## Neglected Role of MSMEs in Circularity

While circular economy initiatives gain traction among large corporations, the role of micro-enterprises in waste circularity remains marginalised. Sectors like garments and food processing generate significant pre-consumer waste, yet weak documentation and informal linkages push them outside the emerging circular ecosystem.

Pilot initiatives across textile clusters—such as those in Tirupur—illustrate how cluster-level nodal hubs can aggregate, price, and manage pre- and post-consumer waste

streams. Mapping of MSME associations has enabled identification of collection nodes, facilitating both traceability and value recovery. This decentralised model creates local employment while reducing leakages in the recycling chain.

**By recognising MSMEs as active agents of circularity, rather than passive suppliers,** India can foster inclusive green value chains where waste is reimagined as a community resource, and micro-enterprises gain visibility in sustainability-led procurement.

## Weak Local Infrastructure & MSME–Village Interdependence

The readiness of last-tier enterprises is deeply tied to the **social and physical infrastructure** of the villages they operate within. Many clusters lack functional waste management, renewable energy integration, or green public spaces, impeding transition efforts.

To address this, Partners in Change and local collaborators have piloted the concept of **ESG Smart Villages**—an approach that transforms public spaces into green infrastructure and aligns business practices with community development.

Interventions extend beyond environmental aspects to **social safeguards**—for instance, local vendors, photographers, and artisans taking pledges to discourage child marriage and child labour within business networks. This embeds social sustainability within the fabric of enterprise-led development.

Participatory Impact Dashboards, co-created with village stakeholders, visually track progress on multiple ESG indicators. As communities adopt AI-enabled monitoring, local decision-making becomes data-driven and transparent.



True circularity must extend dignity, recognition, and access to every worker enabling the transition—from the factory floor to the waste yard.



Transition-readiness is not only about technology or finance—it is also about community trust, functional infrastructure, and social equity.

## Worker Invisibility in Green and Circular Economies

The invisibility of waste workers, sanitation workers, and other informal labourers continues to shadow India's green transition. Often, their inclusion in programmes is **framed as benevolence rather than responsibility**, despite their indispensable role in keeping cities and supply chains functioning.

Reframing this narrative, recent interventions have **renamed sanitation and garment worker groups as “Green Jobs”**, restoring dignity and visibility. A digital application is under development to **record, recognise, and monetise repair and reuse work** as green contributions within the local economy.

Furthermore, through PiC's capacity building initiative under ProgReSS, MSMEs have been able to unlock over **₹4.2 crore** in subsidies and grants by adopting sustainability measures. Yet, financing at the last mile remains a persistent challenge.

# Bringing the Strands Together

The four challenges—financial exclusion, marginalisation in circularity, infrastructural deficits, and worker invisibility—are interwoven. Addressing them collectively creates the foundation for a “**Last-Tier Just Transition**” that is equitable, participatory, and resilient.

This Dialogue thus calls attention to the urgent need for **policy innovation, collaborative financing, and socially rooted ESG frameworks** that travel the last mile first.





# KEY THEMES & INSIGHTS

## 1 WASTE CIRCULARITY - OPPORTUNITIES AND CHALLENGES

The imperative for a place-based just transition rooted in waste circularity arises from the confluence of global sustainability pressures and local socio-economic realities. In an increasingly globalised economy, there is mounting demand for transparent, circular, and low-carbon supply chains. Yet, those at the “last tier” — micro, small, and medium enterprises (MSMEs), sanitation workers, and rural communities — remain largely invisible and unsupported within existing frameworks.

This disconnect between macro-level ESG standards and ground-level readiness has resulted in fragmented efforts toward sustainability. As articulated by Pradeep Narayanan, PiC, the goal must be to ensure that sustainability efforts “start from the last tier” — strengthening micro-enterprises and informal workers as active

agents of circular transition, not as peripheral beneficiaries.

For India, where rapid urbanisation and a growing middle class drive consumption, waste circularity is both a necessity and an opportunity. The country generates an estimated 150,000 tonnes of municipal solid waste daily, of which over 50% remains unprocessed. If managed effectively, this waste can be transformed into raw materials, employment, and innovation pathways.

Globally, estimates suggest that adopting circular economy principles could unlock USD 4.5 trillion in economic benefits by 2030. Locally, circularity represents a pathway to integrate over two million potential green jobs into dignified, formalised labour systems.

## The Urgency of Waste Circularity in a Globalised World

### A Growing Crisis and a Missed Opportunity

India’s waste management challenge has reached critical proportions. The country produces over 62 million tonnes of waste annually, but only 75–80% is collected, and less than 30% is treated. Unprocessed waste leads to landfill overflow, groundwater contamination, and methane

emissions, which significantly contribute to climate stress. At the same time, the circular economy remains a missed economic opportunity — where waste could be repurposed into inputs for production, renewable energy, and green employment.

## Global Market Pressures & Risk of Exclusion

International markets are tightening sustainability norms. Regulations like the EU Corporate Sustainability Due Diligence Directive (CSDDD) and Extended Producer Responsibility (EPR) frameworks demand waste traceability and Scope 3 emission reduction. Without systemic circularity

across lower-tier suppliers, Indian exporters risk losing access to premium markets. For MSMEs embedded in global value chains, circular compliance is no longer optional — it's a condition for competitiveness and survival.

## The Social Equity Imperative

The invisible workforce driving India's waste economy — waste pickers, sanitation workers, and informal recyclers — remains precarious and excluded from policy protections. According to Chintan Environmental Research and Action Group, India's informal waste sector recovers up to 20% of urban waste, saving municipalities

crores in disposal costs. Yet, these workers face caste- and gender-based exclusion, health hazards, and inconsistent incomes.

Mainstream ESG systems and CSR frameworks continue to overlook these Tier 3–5 actors, reinforcing structural invisibility and broken accountability chains.

# Panel Overview: Diverse Voices Shaping the Dialogue

The session on Waste Circularity convened diverse actors — from MSME leaders and waste innovators to researchers and sustainability experts — to examine how global mandates can connect with grassroots realities through innovation, policy coherence, and inclusion.

“Roughly 150 tonnes of waste are generated daily, and more than 50% are not processed,” noted **Kamlesh Kumar Pal (IDH)**, highlighting the urgency of addressing Scope 3 emissions to retain global market access. He advocated a **jurisdictional approach**, linking policy and business interventions across regions.

**Divya Puramshetty (Sattva Consulting)** reminded that “Policy is the starting point.” She urged expansion of **EPR frameworks** beyond plastics to textiles and other waste streams, arguing that “policy pressure attracts infrastructure and investment.”

From the field, **Dr. Veerapathman (Save Tirupur Movement)** described the **logistical contradictions** in waste management: “Bangalore has no plastic recycling, and waste travels over 150 km to

Hosur — violating Supreme Court guidelines.”

**Aditya Gupta (IIM Bangalore)** shared a story of **innovation without policy**: “Even without EPR support, one firm built India's largest biomass aggregation network to make ‘bio-cremation’ briquettes — now used in 90% of cremations in Pune and Asad.”

**Aashik Rahman (Kabadiwalla Connect)** stressed **dignity** and data: “Our IoT-enabled apps give traceability — and importantly, dignity. Waste pickers should be seen as green workers, not waste workers.”

**Bhagyashree Joshi (Open Supply Hub)** reinforced **transparency**: “Open platforms can make even small actors visible globally. We're now adding gender and environmental data to reshape accountability.”

Together, these insights illuminated how local actors, digital tools, and inclusive frameworks can redefine circularity from the bottom up.



# SPOTLIGHT STORIES

## Community-Led Transformations

In Dhalaivapuram, women's self-help groups turned agricultural and garment waste into high-value crafts across 34 villages, securing partnerships with buyers such as Lulu Hypermarket.

In Tirupur, 133 MSMEs formed waste aggregation clusters, paving the way for scalable and inclusive circular value chains.

## Tech-Enabled Traceability and Dignity

The Kabadiwala Network leverages IoT-enabled tracking to formalise informal recycling systems, enabling real-time data and fair payments — reframing waste pickers as “green workers.”

## Biomass Innovation: Waste to Clean Energy

A pioneering biomass enterprise established India's largest crop residue aggregation network, producing bio-cremation briquettes that now power 90% of cremations in Pune and Asad, significantly reducing wood usage and emissions.

## Jurisdictional Success: The Save Tirupur Model

The Save Tirupur Movement implemented a seven-step waste management model, promoting on-site waste transformation — such as turning discarded paper into reusable products — instead of transporting hazardous materials, ensuring compliance with environmental norms.

**Circularity is not merely about recycling — it is about redistributing value, recognition, and resilience to the last tier. By anchoring waste systems in community agency, India can transform what was once discarded into a foundation for inclusive growth and ecological balance.**



# ACTION BLUEPRINT



To move from dialogue to delivery, the panel proposed a set of actionable priorities that can shape India's next phase of circular economy transition.

## Dignity and Equity

- Design for inclusion — ensure that women and informal workers are core participants, not token beneficiaries.
- Formalise “green jobs” with social security benefits (PF/ESI) and fair wages.
- Track caste and gender data within circular initiatives to monitor equity outcomes.

## Policy Innovation

- Expand EPR coverage to include textiles, e-waste, and solar waste, ensuring uniform standards across sectors.
- Harmonise waste regulations across states to reduce policy fragmentation and compliance costs.
- Recognise waste management as a skill domain, integrating collector and processor certification into the Skill India ecosystem.

## Financing the Transition

- Use blended finance models, combining philanthropic risk capital with commercial scale-up funds.
- Promote patient capital with long-term horizons (15–18 years).
- Develop impact credits and carbon-linked instruments to monetise verified social and environmental gains.

## Data and Transparency

- Promote open mapping platforms like Open Supply Hub to increase visibility of small actors globally.
- Encourage participatory dashboards to enable communities to co-track ESG progress.
- Redefine ESG as “Ecosystem, Society, and Governance” — moving beyond compliance toward community-centred value creation.

## Localised Ecosystems

- Develop MSME waste clusters for shared infrastructure, aggregation, and access to government schemes.
- Embed waste circularity within Gram Panchayat Development Plans (GPDPs) for rural mainstreaming.
- Adopt jurisdictional approaches that align local innovation with broader market incentives and policy support.



## 2 CARBON MARKETS - OPPORTUNITIES & CHALLENGES

Carbon markets have rapidly evolved into one of the most prominent global mechanisms for financing climate mitigation. With the rise of **compliance markets** such as the EU Emissions Trading System and the expansion of **voluntary carbon markets**, the global value of carbon credits surpassed **USD 2 billion in 2023**. Yet, despite this surge, India's last-tier actors—micro-enterprises, farmers, sanitation workers, and rural communities—remain largely excluded from climate finance flows.

India is in the midst of constructing a domestic carbon market under the **Carbon Credit Trading Scheme (2023)**, notified by the Ministry of Environment, Forest and Climate Change (MoEFCC), led by the **Bureau of Energy Efficiency (BEE)**. But the architecture is designed primarily for large industrial emitters, leaving out the millions of small-scale enterprises that collectively contribute significantly to emissions but lack visibility, data, or compliance pathways.

This gap becomes critical because **over 900 million rural Indians** are directly vulnerable to the impacts of climate change—erratic rainfall, heat stress, crop losses—yet have limited access to financing for adaptation or mitigation. As Jyotsna Bhatnagar from Partners in Change framed it during the Dialogue, the fundamental question is:

***“Where do they meet—just transition at one end, and carbon markets and climate finance at the other?”***

Municipal green bonds are emerging as solutions in cities like Indore and Gandhinagar, but similar mechanisms do not yet exist for the rural last mile. The true promise of carbon markets lies not only in reducing emissions but in **unlocking finance for local climate-progressive activity**, turning those most affected by climate change into active leaders of transition.

# The Urgency of Understanding Carbon Markets in a Globalised World

## 1. Exclusion from Nascent Markets

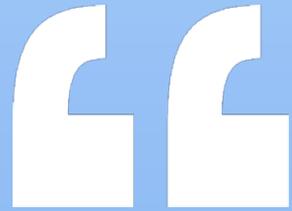
India's evolving carbon market currently prioritises eight high-emission industrial sectors. The compliance structure focuses primarily on steel, cement, thermal power, and petrochemicals.

This leaves out the millions of micro-enterprises, farmers, and rural clusters already practising low-carbon behaviours but unable to monetise them because they fall outside the designated sectors. Their absence from the early phases of the Indian Carbon Market risks deepening inequity, as large entities become “carbon-visible” and finance-ready, while last-tier contributors continue to operate without recognition or access to emerging climate finance pipelines.

## 2. Monitoring and Verification (M&V) Gap

Carbon credits depend on robust M&V systems, yet such infrastructure is largely missing at the grassroots level. Credible MRV requires baseline data, digital documentation, third-party audits, and periodic verification, which are costly and operationally inaccessible for micro-enterprises and farmers. As Shweta Srinivasan, from India Climate Collaborative (ICC), emphasised: “Even if we create alternative economic pathways, farmers cannot monetise carbon without credible M&V.”

The absence of trusted, local verification partners prevents the aggregation of households and MSMEs at scale. Without decentralised MRV ecosystems, India risks creating a carbon market that rewards only those who already possess sophisticated data systems—leaving the last tier invisible.



**EVEN IF  
WE CREATE  
ALTERNATIVE  
ECONOMIC  
PATHWAYS,  
FARMERS  
CANNOT  
MONETISE  
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M&V.**



### 3. High Costs & Low Returns

Participating in carbon markets requires feasibility assessments, registration fees, baseline studies, validation, verification audits, and annual monitoring—all of which impose substantial upfront and recurring costs. For small-scale actors, the economics often do not add up. As Dr. Vimal from Mangla Smart Energy Solutions Pvt. Ltd. cautioned, revenue from carbon credits in many community-level projects may amount to only “1% of the money” required, making credits a supplementary income rather than a primary financing mechanism.

For small units, this means they cannot rely on credits as their primary financing mechanism unless paired with concessional or blended finance.

### 4. “Poverty of Imagination” & Trust Deficit

Globally, carbon markets have been criticised for lacking inclusive designs that account for the needs of smallholders, informal workers, and last-mile actors. As Manishankar Prasad noted, a “poverty of imagination” limits the ability of current carbon market architecture to support rural India’s decarbonisation pathways. This critique is echoed widely in international reviews, which warn that voluntary carbon markets have often failed to ensure fair benefit-sharing or transparency for communities whose activities generate credits.

When local stakeholders feel that “people on the ground... only care about money and not carbon credits,” it highlights the urgent need for transparent monetisation models, community contracts, and fair distribution mechanisms. Without addressing trust deficits, carbon finance cannot become a credible pathway for just transition.

## 5. Inadequate Support for Green

Small businesses across India express strong interest in transitioning to clean energy, but existing schemes are largely geared toward residential, agricultural, or utility-scale installations. Micro-enterprises like Sasikumar's face financial and infrastructural barriers in adopting solar or clean energy: "There are no schemes or subsidies for commercial units. If supply chain partners support us, micro-units can adopt clean energy."

This gap is especially critical as global buyers tighten Scope 3 emission requirements, which directly impact MSME suppliers. Without targeted support, carbon markets and green finance will deepen disparities—rewarding large industries while small enterprises bear transition risks without receiving its benefits.

## PANEL OVERVIEW: DIVERSE VOICES SHAPING THE DIALOGUE

The panel brought together diverse actors—researchers, social enterprises, corporate leaders, MSME owners, and community organisations—to unpack the complexities of linking carbon markets with just transitions.

"We must integrate last-tier actors into ESG frameworks through participatory mechanisms." - Jyotsna Bhatnagar (Partners in Change). She introduced the **Progress Villages model** as a bridge connecting rural realities to corporate ESG expectations.

"A simple switch from coal to LPG by Istris' increased productivity by 28% and saved 700 kg of coal per day - per worker." - **Krishnan Ranganathan (Udhyam Foundation)**. He demonstrated how **alternative technologies** at the micro level can create measurable emission reductions suitable for crediting.

"Green Credits could be more suitable for local bodies than carbon credits - they cover plantation, water conservation, and waste management." - **Dr. Vimal (Mangla Smart Energy Solutions Pvt. Ltd)**

He pointed to the newly announced **Green Credit Programme** as a more accessible

pathway for decentralised climate action.

"Policies exist, but India's climate action requires **breaking policy silos**, and building a ground-up M&V ecosystem." - **Shweta Srinivasan (India Climate Collaborative)**.

"We **created free emission calculators for MSMEs** because most did not know where to begin decarbonisation." - **Amaresh Pradhan (Schneider Electric)**. He detailed Schneider's global commitment to help 1,000 suppliers reduce operational emission intensity by 50% by 2025.

"**Avoidance and removal both offer income streams**—even if small, they matter at the village level." - **Aaditya Malhotra (Council on Energy Environment and Water)**. He highlighted opportunities across biogas, solar pumps, microgrids, biochar, and nature-based solutions.

Together, these voices emphasised the need for practical pathways, aggregation models, and trust-based monetisation mechanisms that genuinely benefit last-tier participants.

## The Istriwalas Transition Project (Udhyam Foundation)

Across India, 8,500 iron workers have shifted from coal to LPG-based ironing systems.

This transition:

- removed 700 kg of coal/day per worker,
- boosted productivity by 28%, and
- created measurable emission reductions suitable for carbon crediting.
- Scaling this model could unlock a significant avoidance-based community carbon programme.

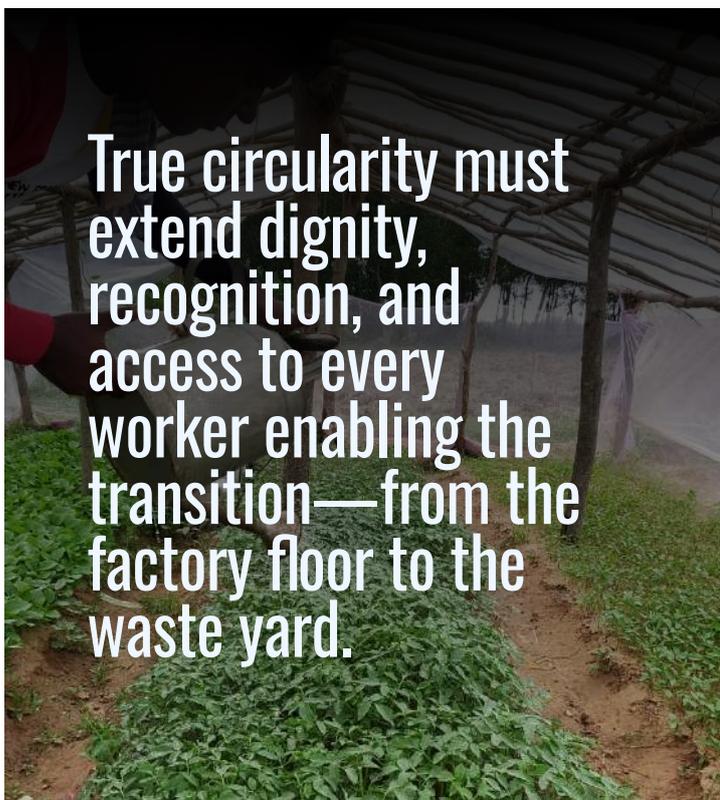
## Dindigul ESG Smart Village

An integrated model combining solar rooftops, rainwater harvesting, decentralised waste processing, and community governance.

This demonstrates how carbon reductions, water security, and circularity can be monetised in interconnected ways.

## Biomass Aggregation & Bio-Cremation

A company documented by IIM Bangalore created India's largest biomass aggregation network, converting crop residue into briquettes.



**True circularity must extend dignity, recognition, and access to every worker enabling the transition—from the factory floor to the waste yard.**



**Transition-readiness is not only about technology or finance—it is also about community trust, functional infrastructure, and social equity.**

These briquettes now fuel 90% of cremations in Pune and Asad, drastically reducing wood use and methane emissions.

## Schneider Electric's Supplier Decarbonisation Programme

Schneider is partnering with 1,000 suppliers, including MSMEs, to cut Scope 1 & 2 emissions by 50%—providing free toolkits, emission calculators, and expert guidance.

This corporate-led initiative shows how supply chains can carry MSMEs into the decarbonisation economy.

## Used Cooking Oil to Sustainable Aviation Fuel

A company collecting used cooking oil (UCO) since 2013 now supplies it as Sustainable Aviation Fuel (SAF), with its value rising dramatically as global airlines face decarbonisation mandates. This shows the “preciousness of waste” when supply chains and market linkages are strong.

The promise of carbon markets lies not in tonnes of carbon alone, but in the people whose lives can be strengthened by climate finance. When MSMEs, farmers, and waste workers are recognised as climate actors — not afterthoughts — carbon markets become tools for dignity, green livelihoods, and shared prosperity. An inclusive carbon ecosystem, built from the last tier upward, has the power to transform local climate action into real economic and social value for communities.



# ACTION BLUEPRINT

## 1 Build Local M&V Ecosystems

- Train local CSOs, FPOs, panchayats, and SHGs to serve as verified carbon data collectors.
- Create low-cost digital tools for energy-use logging, biomass measurement, and baseline validation.
- Adopt distributed verification models endorsed by voluntary carbon standards.

This brings down project development costs and makes carbon markets accessible to clusters rather than only large industries.

## 2 Aggregate Small Actors into Cluster Projects

- Use MSME clusters, agricultural FPOs, and village federations as carbon project aggregators.
- Bundle 500—5,000 households or enterprises into a single project to achieve scale.
- Promote Aggregator-as-a-Service models to handle documentation, crediting, and market linkage.

Aggregation is essential for making the economics of carbon projects viable at the grassroots.

## 3 Monetise Both “Avoidance” and “Removal” Activities

- **Avoidance:** LPG/biogas transitions, solar pumps, microgrids, efficient motors, improved cookstoves.
- **Removal:** biochar production, agroforestry, mangrove restoration, nature-based solutions.

This dual strategy helps maximise income streams and can be linked to community carbon funds.





## 4 Create Transparent Community

### Monetisation Mechanisms

- Establish village-level Carbon Benefit Registers showing how money is shared.
- Use blockchain-enabled smart contracts to ensure fair distribution.
- Recognise the need for simplicity and trust: communities must see immediate, tangible benefits.

This directly addresses concerns that intermediaries capture disproportionate value.

## 5 Promote Green Credits for Local Bodies & MSMEs

- Leverage the Green Credit Programme for activities like plantation, composting, water conservation, and waste recovery.
- Encourage ULBs and panchayats to generate green credits that can be purchased by corporations under ESG commitments.
- Support MSMEs to document green actions— solar adoption, waste reduction, energy efficiency upgrades.

Green credits provide a more accessible entry point than traditional carbon credits.

## 6 Blend Finance for Just Energy Transitions

- Use philanthropic capital for pilot projects and community mobilisation.
- Deploy concessional loans for infrastructure such as solar rooftops or microgrids.
- Leverage ESG budgets for first-mile engagement, with voluntary carbon markets enabling scale-up.

This ensures that carbon finance works with other financial instruments rather than replacing them.

## 7 Use Social Collateral & Community Creditworthiness Models

- Develop underwriting models based on collective performance of SHGs, producer groups, or MSME associations.
- Use digital platforms to track repayment behaviour, green actions, and social capital.
- Ensure that social collateral reduces risks for lenders and increases credit access for micro-enterprises.

This shifts the narrative from “poor collateral” to rich social capital, enabling green transitions.

# 3 THE COMMUNITY MATRIX – MEASURING IMPACT AT THE LAST TIER

A just transition is only as strong as the metrics used to measure it. Traditional ESG frameworks—both global and national—have historically centred on environment and governance indicators, leaving social realities insufficiently captured. Yet India’s labour force is overwhelmingly informal, and the “last tier”—MSMEs, waste workers, sanitation workers, home-based producers, and rural communities—remains largely invisible in mainstream reporting. International frameworks such as the Global Reporting Initiative (GRI) acknowledge the need for social indicators, but even these often fail to capture lived realities like caste-linked labour, heat stress, or informal employment dynamics.

Similarly, India’s Business Responsibility and Sustainability Report (BRSR), while progressive, is still not designed for the 90% informal workforce nor for MSMEs who supply to larger companies under fragmented contracting systems. This creates a persistent gap: businesses do not recognise last-tier actors as stakeholders, and communities lack the tools to assert their visibility. As the chapter emphasises, **community metrics are not a compliance formality**—they are feedback loops that inform interventions, enable accountability, and ensure that sustainability outcomes begin where they matter most.

## Why Now? The Urgency of Community-Driven Metrics

### 1. The Social Blind Spot Within ESG

Most ESG and sustainability disclosures privilege environmental performance—energy efficiency, emissions reporting, resource management—over social transformation. This mirrors global trends: analyses of ESG ratings consistently show low weighting for labour rights, supply

chain welfare, or social safeguards. As a result, companies often report inputs such as number of workers “trained,” while neglecting outcomes like safety improvements, wage shifts, or reductions in hazardous work. This bifurcation leaves the most vulnerable stakeholders invisible.

## 2. Climate Change & Worker Well-being as an Unmeasured Crisis

Extreme heat, flooding, vector diseases, and air pollution disproportionately affect informal waste workers, sanitation workers, and street vendors—yet these impacts are rarely integrated into ESG or BRSR reporting. Heatwatch’s research in Bengaluru found waste workers losing up to ₹1,500 per month due to heat stress-

related downtime, alongside rising medical expenses. As Apekshita Varshney from Heatwatch emphasised **“Extreme heat is severely impacting vulnerable waste workers. These challenges must be included in just transition and ESG frameworks. We must recognise waste workers as climate champions.”**

## 3. Dignity, Caste, and Systemic Exclusion

Waste, sanitation, and sewage work remain deeply tied to caste-based occupational hierarchies. Without metrics that explicitly track caste-disaggregated roles, hazardous tasks, or access to occupational mobility, ESG frameworks risk reinforcing the very inequities they claim to address. Sector Skill Councils’ move to rename “safai

karamcharis” to “Safai Mitras” reflects an emerging push for dignity, but metrics are required to convert symbolic shifts into structural change. Gender inequality amplifies this challenge - women dominate low-value segments of waste work and remain excluded from mechanised or higher-income roles.

## 4. Resource Mobilisation Through Measurable, Credible Data

Integrating community metrics with corporate and policy systems is essential not only for accountability but for **financing**. As **Prarthana Borah (Momentum India)** noted, credible metrics linked to climate action, energy transitions, or social improvements enable

communities to access schemes, philanthropic capital, and ESG budgets. Without measurable impact, communities and MSMEs remain locked out of emerging financing opportunities—including climate adaptation funds, municipal green bonds, and supply chain sustainability budgets.



# Panel Overview: Diverse Voices Shaping the Dialogue

The panel brought together practitioners, researchers, MSME representatives, fair-trade advocates, and supply chain transparency experts, each highlighting why community metrics are indispensable for last-tier centric transitions.

**Ishteyaque Ahmed (Regenerative Bihar)** highlighted the unique **pressures on farmers** “Sustainable sourcing pressures fall hardest on small food-processing MSMEs... without value-chain analysis, the burden shifts unfairly onto farmers.”

Drawing on her fair-trade experience, **Bhagyashree Joshi (Open Supply Hub)** emphasised visibility: “Businesses already collect worker data — gender, migrant status, livelihoods — but they do not **map community safety or environmental risks**.” She stressed that “community-level indicators can illuminate blind spots in supply chains.”

**Deekshitha (Heatwatch)** presented compelling evidence of **climate-linked health risks**: “Extreme heat is crippling waste workers — dehydration, kidney issues, ₹1,500 income loss each month.” She argued that heat metrics must be core

to just transition frameworks and worker protections “Metrics must reflect these realities—cooling access, medical costs, worker voice.”

**Abishek Jani (Fairtrade)** cautioned against **superficial reporting**: “Issues like child labour or discrimination require systems, not one-off numbers. Child labour or discrimination cannot be solved through one-time counts.”

**Pradeep (Partners in Change)** spoke to the **invisibility of the last tier**: “Tier 4 and 5 is nobody’s value chain, yet everybody’s - 90% informal, none on paper, all tied to caste.” He argued for metrics that explicitly track caste-based hazardous work and create pathways into dignified entrepreneurship.

**Aaditya Malhotra (Council on Energy, Environment and Water (CEEW))** underscored the **power of qualitative insights**: “Anecdotes reveal realities that KPIs miss — even terms like Safai Karamchari versus Safai Mitra show embedded caste bias.” He called for ‘North Star’ metrics such as living wages and zero accidents to guide community impact.



# SPOTLIGHT STORIES

## MSME Empowerment Through Financial Access

With facilitation support from PiC, **120+ MSMEs unlocked ₹4.2 crore** in schemes and subsidies, enabling upgrades in safety, solarisation, and workplace infrastructure. Today, **100% segregate waste** and over **70% have women-led ICCs**, demonstrating measurable improvements in workplace dignity and governance.

## Dignity Through Terminology and Entrepreneurship

Renaming Safai Karamcharis to **Safai Mitras** is part of a wider effort to address caste bias within essential services. Grants have supported sanitation workers transitioning into home-based enterprises, helping them exit hazardous caste-bound occupations.

## Business-Driven Social Safeguards in ESG Smart Village

In Dindigul, businesses have pledged to counter child marriage and child labour by disrupting local economic drivers such as photography shops, florists, priests, among others - **“closing the oxygen of the child marriage market ecosystem.”** This shows how enterprises can influence social norms beyond the workplace.

## Community-Led Data Mapping in Dindigul

Participatory social mapping identified dumping hotspots and contaminated water bodies, enabling targeted action. “The maps will be used by them. They will know when to collect data or what to collect.” This shifts data ownership to communities, enhancing sustainability.



# ACTION BLUEPRINT

## 1 Measure Livelihoods & Economic Mobility

Metrics must go beyond counting jobs to capture **wage improvements, income stability, access to market linkages, price realisation, and opportunities for entrepreneurship**. Tracking shifts towards living wages, reductions in wage theft, and increases in MSME profitability reveals whether supply chains are becoming more equitable. Such measures also help MSMEs unlock government schemes—like credit guarantees or cluster development funds—strengthening business viability and worker well-being.

## 2 Track Health, Safety, & Climate Resilience

Indicators should include heat-related illnesses, cooling access (shade, hydration points), PPE availability, accident rates, ESI/PF coverage, and burden of medical expenses. Community safety metrics—proximity to dumping grounds, exposure to toxins, water contamination—are essential for understanding environmental justice. As climate hazards intensify, tracking resilience measures (rainwater harvesting, flood-proofing, heat shelters) links ESG reporting with adaptation needs.

## 3 Embed Dignity, Inclusion, and Social Safeguards

Metrics must explicitly map caste-based segmentation of hazardous tasks, gender distribution in value chains, presence of Internal Complaints Committees (ICC), and availability of formal contracts. Tracking transitions from manual scavenging or unsafe waste work into safer, mechanised, or entrepreneurial roles helps measure dignity. Recognising waste pickers as **green workers** requires indicators capturing social recognition, certification, and access to public schemes.



Community metrics are not simply tools of measurement—they are instruments of recognition, redistribution, and repair. When communities generate, own, and act upon their data, impact measurement becomes a pathway for dignity, accountability, and shared prosperity. Anchoring ESG systems in last-tier realities ensures that India's just transition is not only environmentally ambitious but socially transformative—strengthening the lives, voices, and agency of those who have long remained invisible in value chains.

## 4 Strengthen Governance Through Participatory Decision-Making

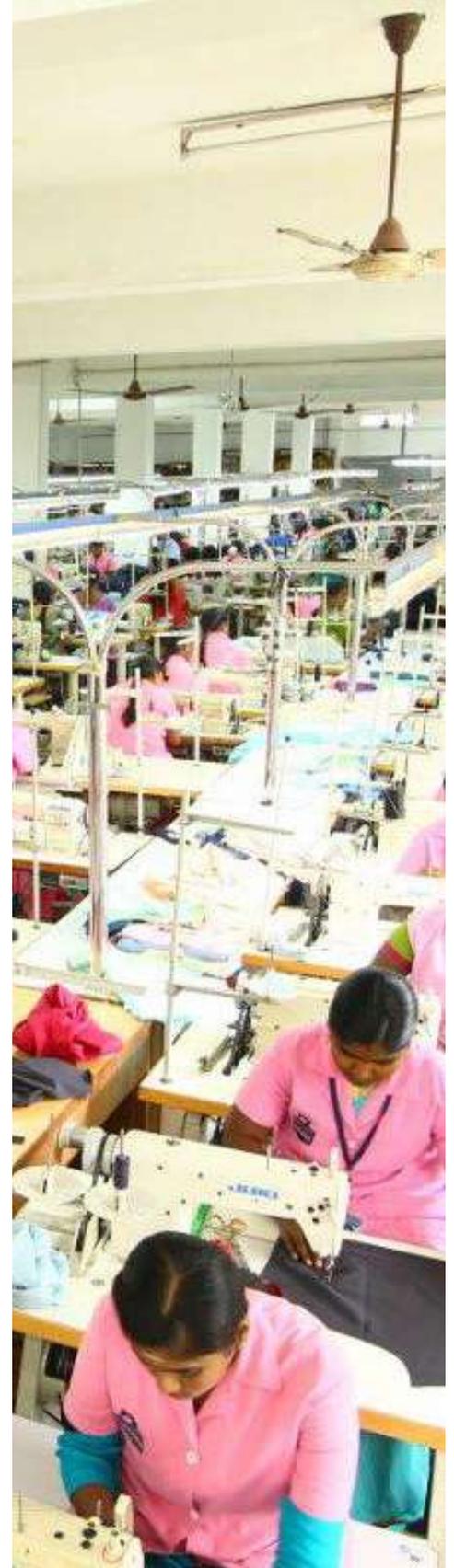
Metrics should assess **quality of stakeholder consultations**, representation of women and marginalised groups, and functioning of multi-stakeholder platforms with independent oversight. Governance indicators also include grievance redressal timeframes, transparency in procurement, and adherence to labour codes. Participatory social mapping ensures data is community-owned, not extractive, strengthening trust and accountability.

## 5 Integrate Community Metrics into Business & Policy Frameworks

Bridging the gap between corporate ESG reporting and ground realities requires adapting tools like **BRSR Lite** for MSMEs and embedding community indicators into supplier assessments. Corporates can use ESG budgets to co-finance last-mile improvements—cooling infrastructure, safety gear, childcare facilities, or green skills training. As **Meghna Talati (Amicus Capital)** noted, investment decisions are driven by data—meaning metrics must demonstrate clear business value.

## 6 Innovate in Data Collection & Community-Led Visualisation

AI-powered dashboards, IoT-enabled traceability systems, and mobile reporting tools can make community metrics dynamic and actionable. Visual social maps, used in the Dindigul ESG Smart Village pilot, help communities identify risks, track improvements, and monitor service delivery. Staged indicators (input → short-term → long-term outcomes) help measure progress over time, while platforms like Open Supply Hub offer international visibility for last-tier actors.





# 4 UNLOCKING FUNDS – FINANCING THE LAST MILE TRANSITION

The success of a just transition depends not only on technology and policy shifts but also on the ability of finance to reach the last tier—micro-enterprises, home-based workers, sanitation workers, small vendors, and informal labourers who constitute the backbone of India’s supply chains. Yet financial systems continue to overlook these actors. While India’s MSME sector comprises over 65 million enterprises, only 2.3% are considered creditworthy and less than 16% are integrated into formal finance systems. As a result, even well-intentioned sustainability or ESG efforts often “stop at labour contractors,” failing to reach micro-units and local vendors who operate in fragmented, informal ecosystems.

This chapter examines how innovative financing models—including blended capital, social collateral, guarantees, and results-based mechanisms—can unlock capital for micro-enterprises and workers typically excluded from the financial system. Research shows that improved financial access is directly correlated with better technological productivity, wage parity, labour productivity, and ESG performance in MSMEs. Finance, therefore, must be understood not merely as capital input but as a transformative enabler—strengthening governance, building community resilience, and enhancing trust across supply chains.

## Why Now? The Urgency of Financial Inclusion

### A Massive and Persistent Credit Gap

India’s MSME sector faces a staggering **₹20–25 lakh crore credit gap** (USD 242–303 billion), disproportionately affecting micro-enterprises and informal actors (<10 workers), who lack collateral, documentation, and credit histories. This gap persists despite government programs, digital lending, and fintech growth. Without corrective action, the last tier risks being excluded from climate finance, green transitions, and ESG-linked funding.

### Capital Rarely Reaches the Bottom of the Chain

Even when large financial instruments—like guarantees, pension funds, or blended finance vehicles—are mobilised for SDGs, funds frequently “wind up at higher tiers.” Complex financial architectures and intermediaries mean the last mile remains disconnected from institutional capital flows. This challenge mirrors global critiques of impact investing, where benefits often bypass informal workers and micro-enterprises.

### Climate Risk Compounds Financial Exclusion

Transitioning to clean energy, adopting resilient infrastructure, or implementing climate-risk mitigation strategies requires significant capital and long payback periods—conditions that deter lenders. Studies show that adaptive infrastructure often faces **high upfront costs** and **uncertain returns**. MSMEs, already operating with thin margins, are often unable to shoulder this risk without concessional finance.

### Private Capital Requires Data and Measurable Outcomes

Investors increasingly demand **results-based, evidence-driven** financing. As **Meghna Talati (Amicus Capital)** noted in the dialogue: “It is important to focus on collecting data on objective metrics that are decision - useful and defensible.” This reinforces the need for robust, last-mile metrics—without which supply chains, MSMEs, and workers cannot access ESG-linked investments or corporate sustainability budgets.”

# Panel Overview

The panel brought together practitioners, researchers, MSME representatives, fair-trade advocates, and supply chain transparency experts, each highlighting why community metrics are indispensable for last-tier centric transitions.

Emphasising that financing last-mile enterprises requires basic data readiness, which remains a **systemic gap for most MSMEs**, **Dr. Anandajit Goswami (Ashoka Centre for a People-centric Energy Transition (ACPET))** said “Access to finance and ESG performance reinforce one another - without data, micro-enterprises cannot even enter the carbon market conversation.”

“We flip the lending narrative—our loans focus on borrowers’ needs, using social capital instead of physical collateral.” - **Rasha Lala (Rangde)**. She explained how **peer-to-peer social collateral models** enable micro-entrepreneurs, especially waste workers and women, to access credit typically denied by formal banks.

Arguing for patient, long-horizon financing and impact-linked investment structures, **Meghna Talati (Amicus Capital)** emphasised “Sectors like waste management, with return horizons of 15 - 18 years, require patient capital, which may be difficult for private capital. This timeframe means that capital structuring needs to be creative.”

“We reduce risk by offering guarantees: if the investment fails, we repay the losses. This attracts pension funds and large private investors into SDGs.” - **Laurent Le Danois (European Union)**. He underscored the importance of **risk-mitigation vehicles** to unlock large-scale capital.

“Large buyers must be compelled to invest in the social component of their supply chains—ESG budgets, not just CSR, should drive change.” - **Prarthana Borah (Momentum India)** She stressed that **reducing Scope 3 emissions requires intentional funding for first-mile actors**.



We reduce risk by offering guarantees: if the investment fails, we repay the losses. This attracts pension funds and large private investors into SDGs.



# SPOTLIGHT STORIES

## UNLOCKING FUNDS FOR MSMEs

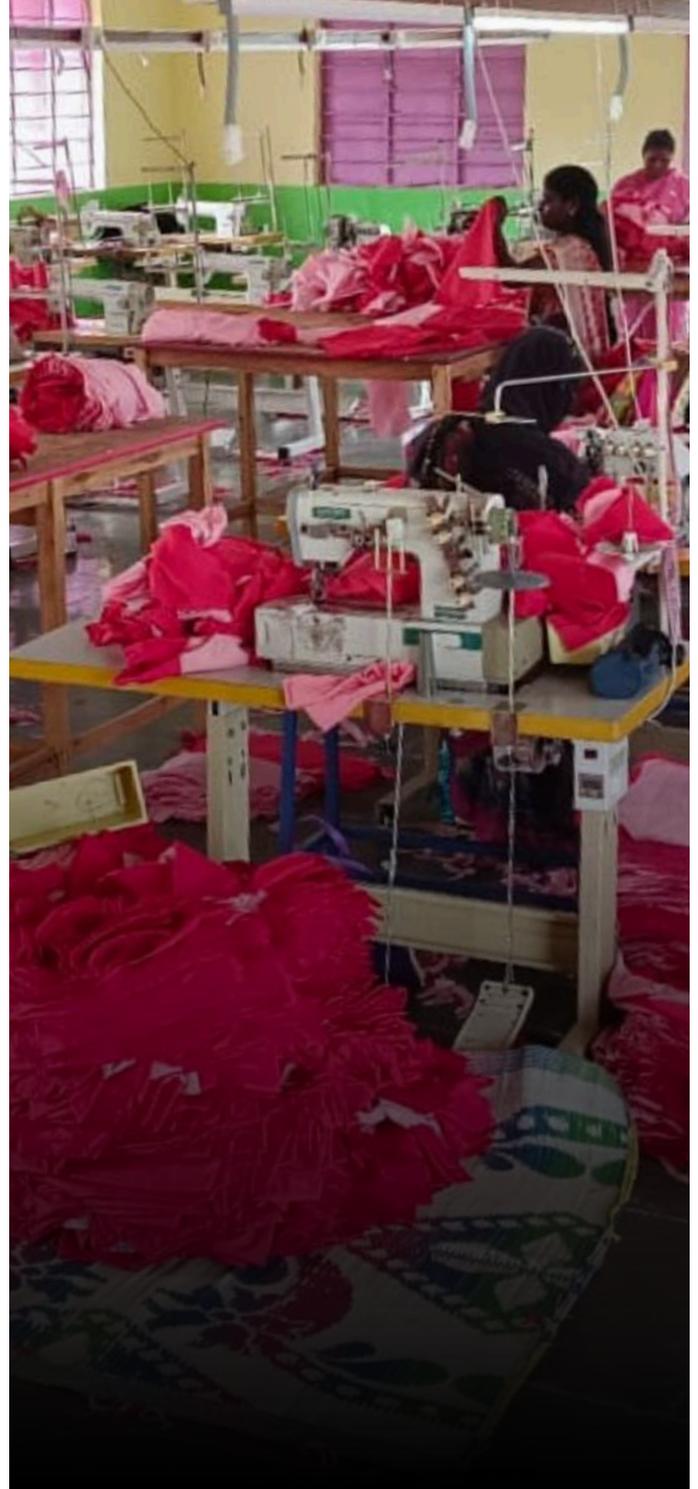
With strategic facilitation, over **120 MSMEs** accessed **₹4.2 crore** in subsidies and government schemes, enabling improved labour conditions, safety infrastructure, and access to new technologies.

## FINANCING TRANSLATES INTO ESG GAINS

Improved financing allowed MSMEs dependent on piece-rate labour to invest in better working conditions and adopt clean energy transitions—solarising their units and reducing cost burdens.

## COLLECTIVE CAPACITY BUILDING FOR FINANCIAL ACCESS

Collaboration between MSME associations, District Industry Centres, and local administration ensured that **micro-enterprises received the first benefit** from government schemes and ecosystem funding. This collective effort strengthened gender governance systems—evidenced by the establishment of **women-led Internal Complaints Committees (ICCs)**.



Finance is not merely capital—it is the bridge that determines whether India's transition is inclusive or exclusive. When blended finance, social collateral, patient capital, and technology converge at the last tier, they unlock new pathways for micro-enterprises and informal workers to participate in—and benefit from—the green economy. An equitable financial ecosystem ensures that just transition does not end at policy or corporate declarations but becomes a lived reality for those long excluded from formal finance and sustainability investments.

# ACTION BLUEPRINT

## 1 Deploy Blended Finance to De-Risk Early-Stage Projects

Philanthropic or CSR funds can support early mobilisation, community engagement, and basic infrastructure—especially in waste, circularity, and local energy systems. Once the foundation is established, commercial capital can scale the model without overburdening micro-entrepreneurs with upfront costs. Delinking **infrastructure costs** (covered through blending) from **credit costs** (borne by borrowers) reduces financial burden on micro-enterprises.

## 2 Bring in Patient Capital for Slow-Maturity Sectors

Waste management, circularity, and community-led climate initiatives require longer business cycles, making short-term investment incompatible with real needs. Patient capital with 15–18 year horizons creates breathing room for enterprises to build stable revenue, impact, and governance systems.

## 3 Use Guarantees to Mobilise Institutional Capital

Guarantee-based instruments, like those used by the EU, can unlock pension funds, insurance funds, and commercial capital for community projects by reducing risk. Such guarantees allow capital to flow into high-impact but under-financed sectors—waste management, MSME solarisation, and community infrastructure.

## 4 Expand Social Collateral and Cluster-Based Underwriting

Borrowers who lack collateral can be underwritten through **community performance**, SHG repayment histories, and cluster-level guarantees. These alternative underwriting models create new credit pathways for women-owned businesses, waste workers, and first-time entrepreneurs.

## 5 Integrate Technology into Credibility and Traceability

Digital tools such as blockchain records, IoT meters, and mobile data logs strengthen the reliability of credit assessments for micro-enterprises by capturing operational data—production, waste reduction, repayment behaviour, and circularity metrics. These technologies demonstrate repayment capacity, sustainability performance, and operational transparency—building lender confidence.

## 6 Mobilise Targeted ESG Budgets for Supply Chain Social Action

Large companies can deploy their ESG budgets to support first-mile improvements—such as worker safety, clean energy transitions, and gender-sensitive infrastructure—directly benefiting suppliers. This aligns with global pressures to reduce Scope 3 emissions and strengthens the resilience of supply chains.

## 7 Unlock Government Schemes & Strengthen Local Institutions

District Industry Centres (DICs), MSME departments, and state-level agencies must proactively facilitate awareness and uptake of subsidies, guarantees, and concessional loans. Strengthening these institutions ensures that public funds reach the last tier efficiently and systematically.

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Collaborating Partners

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