



# CREATING LOCALIZED CIRCULAR ECONOMY SYSTEMS:

BY INTEGRATING WASTEPICKERS AND WOMEN  
SELF HELP GROUPS IN WASTE MANAGEMENT



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## Abstract

Urban India generates an overwhelming quantity of solid waste, and conventional centralized waste management systems have proven insufficient in managing its complexity. This paper presents a case for decentralised, inclusive waste systems by integrating women-led Self-Help Groups (SHGs) and wastepickers into municipal solid waste management frameworks. Based on research and pilot interventions conducted by Kushaagra Innovations Foundation (KIF), this article explores how SHGs and wastepickers, when provided with appropriate facilitation, training, and operational support, can create viable decentralised waste economies. The article also introduces the Saksham program as a replicable model rooted in the principles of convenience, sustainability, and empathy.

## Introduction

A circular economy is a sustainability-driven approach that aims to minimize waste and maximize resource efficiency by continuously repurposing materials instead of discarding them. Its core principles—reduce, reuse, and recycle—help create a closed-loop system where waste becomes a valuable resource. This approach enhances material recovery, promotes product lifecycle extension, and supports urban waste management through decentralized processing and industrial symbiosis.

In waste management, the quantity in terms of weight and volume is a challenge. Transportation of waste increases the carbon footprint of products and processes. Most cities in India spend crores of rupees per year just to collect and transport the waste. Therefore, decentralised solutions aimed at reducing the quantity of waste at source, recycling and processing at source will support a circular economy.

Wastepickers and Women Self-Help Groups (SHGs) can play a crucial role in this transformation by contributing to efficient waste segregation and recycling at source. By embedding circular practices into urban policies, municipalities can drive sustainable waste management while fostering economic stability for marginalized communities.

## Need for integration of wastepickers and local women Self Help Groups in waste management

In the current scenario waste pickers hold immense local intelligence, being an active part of the recycling chain. Waste pickers have grown from being at the 1st level of the value chain i.e., being involved in the collection of waste, to being at 3rd level of the value chain i.e., preprocessing and aggregators level. The Alliance of Indian Wastepickers estimates that there can be around 30 to 40 lakh wastepickers in India. Integrating the wastepickers into the mainstream waste management services of the Urban Local Bodies (ULB) is critical to meet the waste management challenges of the ULBs as well as provide a dignified livelihood option to the wastepickers.

There are several successful models across the country of women SHGs taking active roles in the city's waste management. Ambikapur in Chhattisgarh is a model where the women collect, transport, segregate, recycle, and process the waste, thus managing the whole waste management chain. In Bhadravati, in Maharashtra, is another town where the women SHGs play an active role in the waste management of the city.

In Pune, the SWaCH model of integration of wastepickers in the formal collection system of segregated waste in the city is



lauded and emulated in other cities worldwide.

Wastepickers and Self-Help Groups (SHGs) play a vital role in urban waste management, particularly in enhancing waste segregation and recycling efforts. By collecting, sorting, and channeling recyclable materials back into the production cycle, they significantly reduce the volume of waste that ends up in landfills. Their grassroots-level engagement ensures that waste is segregated at the source, which is crucial for effective recycling and composting. In India, SHGs played a critical role in the "Clean Kerala" mission and positively impacted waste segregation.

Their contribution also helps cities lower their dependency on landfills, which are often overburdened and environmentally hazardous. By diverting recyclable and organic waste from landfills, wastepickers and SHGs help reduce methane emissions, groundwater contamination, and land degradation, thereby supporting cleaner and more sustainable urban environments.

Creating sustainable businesses for various streams of waste is essential for ULBs to be able to manage their complete value chain of waste management. At the same time identifying the skilled workers who can sustainably support the value chain is also equally essential.

#### **Policy Support for Waste picker Integration in India**

The integration of wastepickers into formal waste management systems in India is being actively supported through key policy frameworks like the Swachh Bharat Mission (SBM) and the National Urban Livelihoods Mission (NULM).

Under the Swachh Bharat Mission – Urban (SBM-U), the focus is on achieving 100% scientific management of municipal solid waste. This includes promoting source segregation, door-to-door collection, and decentralized waste processing. A significant component of SBM is the formal inclusion of informal waste workers—such as wastepickers—into the municipal waste value chain.

By recognizing their role and providing them with identity cards, training, and safety gear, SBM helps improve their working conditions and dignity while enhancing the efficiency of waste management.

The National Urban Livelihoods Mission (NULM) complements SBM by focusing on the socio-economic empowerment of urban poor communities. Through Self-Help Groups (SHGs), skill development, and financial inclusion initiatives, NULM enables wastepickers to access stable employment, microcredit, and entrepreneurship opportunities. The convergence of SBM and NULM creates a supportive ecosystem where waste pickers are not only integrated into formal systems but also empowered to improve their livelihoods and social status.

These two missions need to be seen jointly to understand that SBM defines the opportunity for waste pickers, whereas the NULM defines the structure to utilize this opportunity. Together, these policies promote the formalization of waste pickers by offering structured roles in sanitation services, access to government welfare schemes, and opportunities for skill enhancement and income generation.

#### **Status of integration of waste pickers and SHGs in formal waste management**

KIF in 2023 conducted a research study to understand and explore the business models for integration of waste pickers and women SHGs in waste management services for 106 (B and C class) Urban Local Bodies in Maharashtra. This was to assess the on-ground adoption of the 2018 Policy decisions mentioned above. Some of the findings from the study were:

- The average number of wastepickers identified per ULB was 12, of which only 59% were integrated by the ULBs in some formal work as given below.
- 45% of ULBs have integrated wastepickers as a helper on waste collection vehicles. Some of them on a daily wage basis, however, it was observed that most of these

wastepickers are not paid, instead they have been given the right to collect scraps.

- 44% of the wastepickers were integrated on the Material Recovery Facility Centers for secondary segregation of dry waste, through contractor or by ULB.
- 11% of the wastepickers were engaged in composting projects of the ULB.
- In some ULBs wastepickers were integrated for the combination of the above.
- Very few ULBs, had involved women SHGs in waste management activities. The activities they were involved in were awareness generation, and in one ULB for street sweeping.

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Waste pickers sorting at Landfill

### Challenges Faced by Wastepickers and SHGs

Discussion with ULB officials and staff and data analysis shows that there is a gap in waste processing due to a lack of source segregation of waste and human resource unavailability. This can be bridged by integrating wastepickers for handling and processing of the waste. This also provides a scope for income sources for the Wastepickers. However, the significant point is whether waste picker or SHGs find the options provided financially lucrative and viable. Currently the models explored for waste picker and SHG integration are limited.

The Down-to-Earth magazine in its article- Integration or formalization of informal wastepickers: Beyond the binary, has similar finding, it states: cities often restrict access to waste, preferring a minimum wage model while retaining the rights to recyclables for themselves or private concessionaires in an attempt to generate revenue. While this approach may limit earnings from waste, a fixed salary with social benefits still offers a more secure livelihood at scale compared to the risk of complete job loss.

The factors that hampered the integration of local women in waste management activities was the social-cultural stigma associated with working in waste, absence of strong leadership and lack of clear opportunities. The factors that hamper and facilitate are given in the table below:

	Factors hampering the integration	Factor facilitating the integration
Group waste pickers	<ul style="list-style-type: none"> <li>• Low identification of wastepickers, due to inappropriate methods</li> <li>• Limited work opportunities available to integrate wastepickers</li> <li>• Inconducive working environment</li> <li>• Inadequate income from the activities</li> <li>• No provision of other benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of Organization/ NGO for facilitation</li> <li>• The higher number of wastepickers identified</li> <li>• The market for recycling in the city</li> </ul>
Women SHGs	<ul style="list-style-type: none"> <li>• Socio-cultural factors</li> <li>• Current functioning of SHGs</li> </ul>	<ul style="list-style-type: none"> <li>• Strong leadership and motivated SHGs</li> <li>• ULB identification of activities for SHG integration</li> </ul>
Waste picker SHGs	<ul style="list-style-type: none"> <li>• Willingness of wastepickers:</li> <li>• Opportunities for sustaining the SHGs</li> </ul>	<ul style="list-style-type: none"> <li>• Wastepickers database and willingness of ULB</li> </ul>

However, despite their essential contributions, wastepickers face numerous challenges. Social stigma and lack of formal recognition often marginalize them, limiting their access to social security, healthcare, and fair wages. Economic vulnerability is another major issue, as their income is typically unstable and dependent on fluctuating market prices for recyclables. Addressing these challenges through inclusive policies, skill development, and formal integration into municipal systems is key to empowering these workers and improving urban waste management outcomes.

### Saksham Program - Livelihood options for Circular economy

As part of the study KIF designed several business models in waste management

that would be suitable and income generating for the waste pickers and women SHGs, while also contribute towards a circular economy. These models can create an ecosystem of circularity in waste in each city and town.

We initiated these models in two towns, Lonavala and Rahuri under the Saksham program. The first step taken in each town was to identify the wastepickers and give them an identity. We identified over 80 wastepickers in Lonavala and 60 wastepickers in Rahuri, and facilitated with the govt officers to provide them identity cards. We conducted meetings with the women self help group members to create awareness regarding waste issues and to expose them to the various business and livelihood opportunities in the waste sector.

In Lonavala, women showed interest in the E waste recycling, and we trained them in the business model. To select the group that would operate an E- waste collection center in the city, a competition was organized between the interested groups, to collect the most E waste within a month. Over 200kgs of E waste was collected and channelized for recycling.

In Rahuri, the city requested assistance in citizen awareness, SHG members were thus engaged to do citizen awareness activities. Eight women are engaged to survey houses and spread awareness using various behaviour change communication tools.

Another ongoing project is in Rajgurunagar, where women SHGs have shown interest in making Incense sticks from flower waste and in running a RRR centre and Material Recovery Facility. Women are working towards segregating of the waste for appropriate processing and having a visibly clean city.



Photo 2: House to house survey at Rahuri

## Livelihood Opportunities in Waste management

Wastepickers can be integrated into formal waste management systems, by engaging them in collection transportation of waste and processing of waste. The critical factor is facilitating the process for the wastepickers through agencies working for their welfare. The NAMASTE scheme launched by the Department of Social Justice and Empowerment, GOI for Self-employment and rehabilitation of manual scavengers, last year included the wastepickers also as beneficiaries of the scheme. It targets the enumeration of all wastepickers in each ULB, providing them with Identity cards, linking them with social security and welfare schemes and providing safe, dignified and sustainable livelihoods. KIF is empaneled as an agency with the department to support the process and is conducting enumeration of wastepickers in two districts of Maharashtra and one district in Assam.

Women Self Help Groups can be engaged in various waste reduction and recycling business that can create a circular economy in the cities. The cloth upcycling model demonstrates how circular economy initiatives can reduce the cloth waste. With the textile waste generated daily, SHGs repurpose discarded fabrics into products like bags, quilts and cushion covers. This not only provides income but also builds skills in tailoring and enterprise management.

Flower waste recycling offers a culturally rooted and economically viable opportunity by converting floral waste from religious places and markets to reduce incense sticks. Operating RRR (Reduce, Reuse, Recycle) Centres by collecting recyclable and reusable items daily is another viable option. SHGs refurbish and resell goods, developing skills in repair, inventory, and customer service. Together, these models show how SHGs, with proper training and support, can turn waste into opportunity—gaining skills, income, and a stronger voice in their communities.



Photo 4: Waste picker survey – camp

### Capacity building of SHG on business models to support Circular Economy systems

To create the localized circular economy systems by integrating Women Self Help group in waste management requires capacity building of the women SHGs. The women SHGs have to be made aware of the livelihood opportunities and its environmental impact to generate interest and participation. SHGs are grassroots institutions with strong community ties, making them ideal for driving behavioral change and awareness. They can be mobilized for decentralized waste management through appropriate business trainings, facilitation and financial support. In the case of Open Defecation Free cities, SHGs have demonstrated that with training and education, they exceed the standards expected of private operators or contractors. As members of the community, they go beyond their contractual responsibilities.

The Swachh Bharat Mission Urban 2.0 (SBM-U 2.0) recognizes the critical role of SHGs, local NGOs, and Community-Based Organizations (CBOs) in waste management, and provides for capacity building of these groups. Further the convergence of SBM-U 2.0 with DAY-NULM and NAMASTE schemes enables SHGs to access structured employment and entrepreneurship opportunities in sanitation and waste management. The State of Maharashtra is actively promoting these models across the state to encourage recycling at source.

KIF as a knowledge partner, has developed the training modules for conducting these capacity building sessions in ULBs of Maharashtra. This training initiative aims to build a skilled workforce that supports waste-to-wealth models, thereby reinforcing the circular economy at the local level.

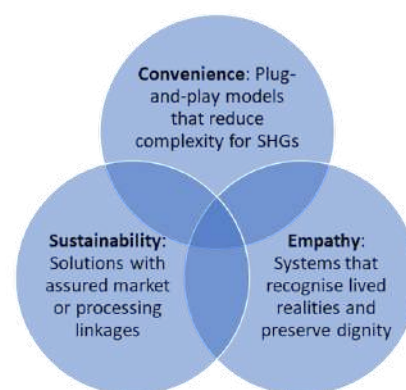
### Conclusion

For citizens to adopt practices that promote circular economy, convenient and viable options must be provided at the local level. Integrating the wastepickers and the women SHGs to provide these options creates a practical pathway for them, to participate in waste management systems while generating income and contributing to cleaner urban environments.

Decentralised waste systems are essential for both climate resilience and inclusive urban development. However, they require more than intent; they demand systemic design that builds on local capacity. The policy frameworks to support these are in place, and the next step is to demonstrate and create these models on the ground. Building the capacities of the wastepickers and women SHG members to create these circular ecosystems will contribute to both environmental sustainability and economic empowerment.

When SHGs are equipped with the right technical knowledge and provided with facilitation and financial support in the initial six months, the results are transformative. Such a model opens innumerable decentralised opportunities, enabling dignified green jobs, strengthening community ownership, and significantly reducing waste sent to landfills.

Kushaagra, through the Saksham program, is building this design on three pillars:



### References

- A Wastepickers means a person, or group of persons informally engaged in the collection and recovery of reusable and recyclable solid waste from the source of waste generation to earn their livelihood.
- Integration of wastepickers and informal waste collectors. Alliance of Indian wastepicker.
- Plastic warriors: a study on self-help group's contribution to economic, social value creation and sustainable development goals (SDGs) in Tamil Nadu, India M. Dominic Jayakumar and Aiswarya Ramasundaram Department of Human Resource Management, Loyola Institute of Business Administration, Chennai, India, and Arokiyadass Vanathayan School of Commerce, XIM university, Bhubaneswar, Harirajpur, India
- Empowering Marginalised Groups – Convergence Between SBM and Day-NULM, March 2018; MoHUA, GOI.
- The research was conducted as a project for MoHUA funded .
- Scheme Guidelines for inclusion of Wastepickers Component under NAMASTE, Dept of Social Justice and Empowerment, August 2024.
- IDR, Leverage SHGs to create livelihoods in urban sanitation, March 2021