ITC Enduring Value

Impact Practice by CSRBOX

Impact Assessment Report

Mission Sunehra Kal Decentralised Solid Waste Management Programme

MARCH 2025

Contents

List of Tables 3
List of Figures 3
1. Project Background and Overview 4
2. Programme Components 5
3. Objective and Scope of Work 6
4. Research Methodology 7
4.1. Assessment Frameworks 7
5. Programme Sampling 8
5.1. Quantitative Sampling 8
5.2. Qualitative Sampling 8
5 Key Findings of the Impact Assessment 9
5.1. Environmental Aspects 9
5.1.1. Reduction in Waste Generation 9
5.1.2. Waste Diversion from Landfills 10
5.1.3. Green House Gas Emissions 12
5.2. Social Aspects 13
5.2.1. Awareness and Participation 13
5.2.2. Health Impacts and Improvements in Living Conditions 15
5.2.3. Equity and Dignity in Service Provision 15
5.2.4. Gender Distribution amongst Primary Stakeholders 16
5.3. Economic Aspects 16
5.3.1. Gender Inclusivity and Women Empowerment 16
6 Social Return on Investments 18
7 Recommendations for the Programme 21

List of Tables

Table 1: Quantitative Sampling for all 3 locations 8
Table 2: Qualitative Sampling for all 3 locations 8
Table 3: Waste disposal methods followed by the Treatment and Control Groups across locations..... 10
Table 4: Waste diversion rates before and after the intervention across the locations 12
Table 5: Carbon emissions avoided by weight and by cost across all the locations 12
Table 6: Respondents' rating of their awareness regarding waste segregation and composting 14
Table 7: SROI Indicators and Financial Proxies for all 3 locations 18

List of Figures

Figure 1: Programme Components 5
Figure 2: Research Methodology 7
Figure 3: Respondents' perception on reduction in waste generation post-intervention..... 9
Figure 4: Comparison of households practicing composting in the Treatment Group (pre- & post-intervention) and Control Group 11
Figure 5: Households' participation in the community-led waste management efforts across locations..... 13
Figure 6: Comparison of residents' perception of the importance of waste management systems for their respective villages..... 14
Figure 7: Benefits accrued from the SWM as perceived by the respondents..... 15
Figure 8: Gender distribution in waste management efforts amongst the households 16

1. Project Background and Overview

ITC, a leading private sector company in India, operates across various sectors, including Fast Moving Consumer Goods, Hotels, Paperboards and Packaging, Agri Business, and Information Technology. ITC prioritises contributions to economic, social, and environmental sustainability through its CSR initiatives, aiming to enhance societal well-being.

ITC focuses on contributing enduring value along all dimensions of the triple bottom line and contributing meaningfully to sustainable development and inclusive growth. ITC's presence across the three sectors of the economy enables the Company to make a larger contribution to the creation of sustainable livelihoods and building resilience among communities in its catchment areas.

In continuous efforts to meet ITC's overarching commitment to create significant and sustainable societal value for its stakeholders, ITC's Social Investments Programmes are implemented under the banner of ITC Mission Sunehra Kal (MSK) with a Two Horizon approach to address the twin challenges of securing sustainable livelihoods today and tomorrow.

Horizon-I focuses on Water Stewardship, Biodiversity Conservation, Climate Smart Agriculture, Livelihood Diversification through Social Forestry and Animal Husbandry programmes.

Horizon-II: Encompasses Education, Skilling for Youth, Public Health (including Maternal & Child Health and Nutrition, Sanitation and Waste Management), and Women Empowerment, aiming to strengthen social infrastructure and improve the well-being of disadvantaged communities.

A key component of MSK is ITC's Decentralised Solid Waste Management (SWM) Programme, which plays a pivotal role in environmental stewardship while creating economic opportunities for local communities. This initiative aligns with national priorities, such as the Swachh Bharat Mission. It is integrated into ITC's broader commitment to sustainability, reducing landfill waste, encouraging circular economy practices, and improving waste segregation at source. The current report captures the highlights of the impact assessment done in the districts of Guntur (Andhra Pradesh), Mysuru (Karnataka) and Pune (Maharashtra).

2. Programme Components

The Decentralised Waste Management initiative consists of several key components designed to ensure sustainability, scalability, and effectiveness:

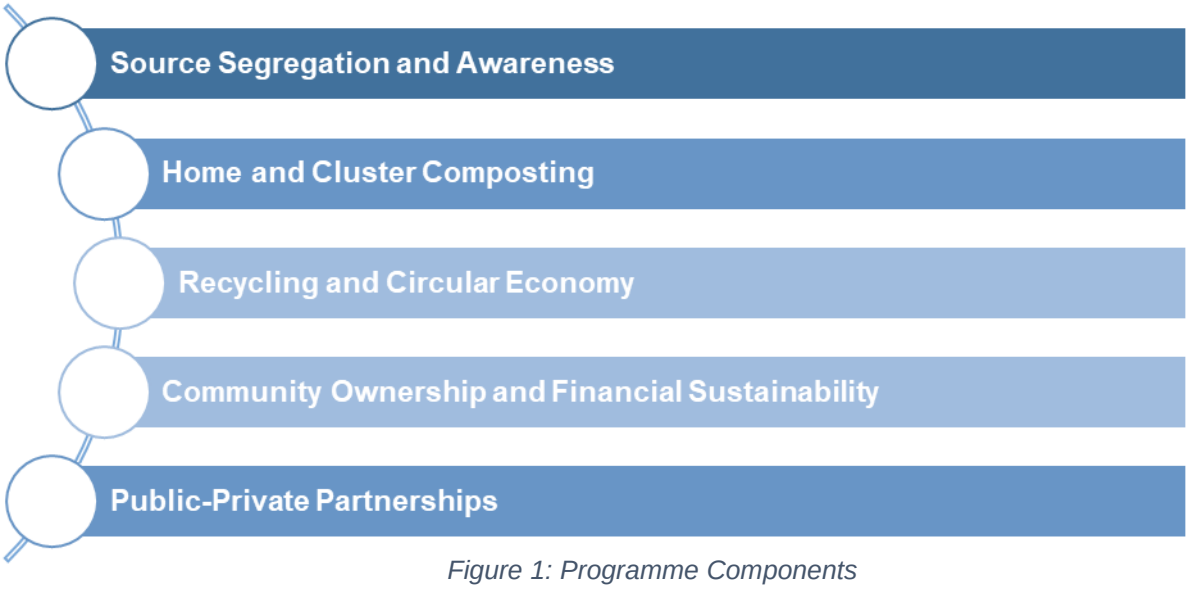

Figure 1: Programme Components

3. Objective and Scope of Work

The primary objective of this assessment undertaken by CSRBOX is to evaluate the success of the programmes in terms of implementation, coverage, and achievement of intended outcomes and impacts. The findings below will also help in informed decision making in terms of effective programme implementation

Assess the project outcomes based on the OECD-DAC and the KAB framework parameters of Knowledge, Attitude and Behaviour.

Garner feedback and responses – both qualitative and quantitative – from various stakeholders associated with the project about the performance and the processes involved

Review secondary literature and hold key stakeholder discussions and develop an understanding of the projects.

Finalise key evaluation indicators and develop quantitative & qualitative data collection tools that could be used for periodical impact assessments for each of the programme locations.

Finalise the approach and methodology, sampling plan (qualitative and quantitative), questionnaires for survey post stakeholder consultations (ITC's CSR team and Implementation agency)

Analyse quantitative and qualitative data using appropriate tools and techniques and present findings and recommendations for the programme.

Figure 2: Objective and scope of work

4. Research Methodology

The research study adopts a mixed methodology by utilising both quantitative and qualitative tools for data collection. Quantitative tools consist of structured questionnaires administered to the Treatment and Control groups. On the other hand, qualitative tools include In-Depth Interviews (IDI's), Key Informant Interviews (KII's) and Focus Group Discussions (FGD's), providing in-depth insights and contextual understanding of the programme.

Figure 2: Research Methodology

The beneficiary questionnaire is administered to the key programme beneficiaries (treatment group) to gauge the impact of the programme on key programme objectives, while the control questionnaire is administered to those, who are demographically similar to the beneficiary population but have not received any programme-based assistance. The key impact indicators are then gauged at two levels, and they are:

- Comparison of the programme impact indicators with the pre-intervention levels.
- Comparison of the programme impact indicators with the control group

.

4.1. Assessment Frameworks

OECD DAC Framework: In order to determine the effectiveness, efficiency, impact created and sustainability of the project, the evaluation will use the OECD-DAC Framework. The OECD Development Assistance Committee (DAC) Network on Development Evaluation[1] has defined six evaluation criteria – **relevance, coherence, effectiveness, efficiency, impact** and **sustainability**. These criteria provide a normative framework used to determine the merit or worth of an intervention (policy, strategy, programme, project or activity). Using the OECD DAC framework, the evaluation assessed the programme's contribution to the results while keeping in mind the multiplicity of factors that may be affecting the overall outcome.

[1] OECD DAC - Applying Evaluation Criteria Thoughtfully

5. Programme Sampling

A simple random sampling approach is followed to ensure the sample's representativeness, encompassing beneficiaries across all socio-economic strata.

5.1. Quantitative Sampling

The quantitative study assessed the impact of the decentralised solid waste management programme across Guntur (Andhra Pradesh), Mysore (Karnataka), and Pune (Maharashtra), using a structured treatment-control comparison with a 95% confidence level (CL) and a 5% margin of error (MOE). Data was collected through on-field surveys to ensure first hand responses, enabling a robust evaluation of the programme's effectiveness.

Table 1: Quantitative Sampling for all 3 locations

Location	Total Households	Treatment Group	Control Group
Guntur	1,66,500	403	39
Mysore	2,11,000	425	61
Pune	20,143	384	40
Total	3,97,643	1,212	140

5.2. Qualitative Sampling

The sampling plan for qualitative surveys, including In-Depth Interviews (IDIs) and Key Informant Interviews (KIIs), and Focus Group Discussions (FGDs) encompasses key stakeholders directly involved in the project's implementation.

Table 2: Qualitative Sampling for all 3 locations

Stakeholders	Qualitative Tool	Guntur	Mysore	Pune
Waste Collectors	FGD/IDI	2	2	2
SWM / Mohalla Committee members	KII	2	3	3
Panchayat Raj Institutions (PRIs)	IDI/KII	2	3	2
Scrap Dealers	IDI	-	1	2
Self Help Group (SHG) Members	IDI	-	2	-
Bulk Waste Generators	KII	2	-	-
Waste Aggregators	KII	2	-	-
Temple Authority/Staff (Green Temple Initiative)	IDI	-	1	2
Implementation Partner	KII	1	1	1
Total		**11**	**13**	**12**

5 Key Findings of the Impact Assessment

This section presents an in-depth evaluation of the intervention's impact across three critical dimensions: **environmental**, **social**, and **economic**. Analysed collectively, these dimensions offer a holistic perspective on the initiative's effectiveness, its resonance within the community, and its potential for long-term sustainability and scalability.

5.1. Environmental Aspects

The Solid Waste Management (SWM) programme offers numerous environmental benefits by reducing dependency on landfills and minimising open dumping and burning, which are common in rural setup. It promotes household-level segregation, composting, and decentralised waste processing, thereby significantly reducing greenhouse gas emissions such as methane. The use of organic compost enhances soil fertility and reduces reliance on chemical fertilisers, contributing to sustainable agriculture. Additionally, the programme helps prevent plastic pollution, and limits soil and air pollution caused by improper waste disposal practices like burning and open dumping. Together, these practices support cleaner, healthier, and more sustainable rural ecosystems.

5.1.1. Reduction in Waste Generation

Reducing waste generation offers multiple environmental and economic benefits, including conservation of natural resources and cost savings in waste management. It also encourages more sustainable consumption patterns and supports circular economy practices, leading to improved long-term ecological and community health outcomes.

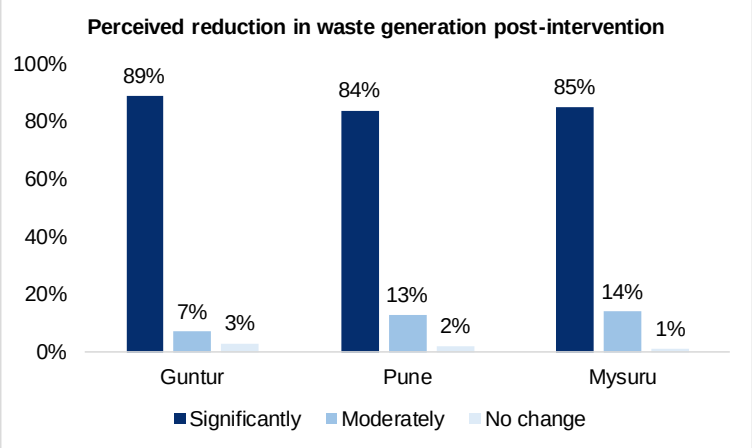

Figure 3: Respondents' perception on reduction in waste generation post-intervention

As an outcome of the door-to-door awareness sessions, respondents were asked to share their views on whether they observed a reduction in waste generation after gaining knowledge through these awareness activities.

The residents—**across all locations** (as depicted in Figure 4) have perceived that there is a **significant reduction in waste generation** at household level **post-intervention**—underscoring the efficiency of the implemented waste management strategies. The strategic utilisation of resources has played a pivotal role in this success. Providing the households with appropriate bins and bags has facilitated effective waste segregation at the source, reducing the volume of waste sent for open dumping. Concurrent awareness campaigns, employing materials such as pamphlets and wall paintings, have educated residents on sustainable waste practices, fostering community engagement. Ensuring the safety of waste collectors through the distribution of gloves and masks has not only protected their health but also enhanced their operational efficiency. Collectively, these measures have optimised resource allocation, leading to a notable reduction in waste generation and promoting environmental sustainability within rural communities.

5.1.2. Waste Diversion from Landfills

This subsection presents the waste diversion behaviour following the intervention, with a focus on improved disposal practices and increased adoption of household-level composting.

Table 3: Waste disposal methods followed by the Treatment and Control Groups across locations

	Door-to-door waste collection			Improper disposal (illegal dumping/burning)		
	Pre-TG	**Post-TG**	**CG**	**Pre-TG**	**Post-TG**	**CG**
Guntur	91%	96%	46%	9%	4%	54%
Pune	36%	85%	3%	64%	15%	97%
Mysuru	33%	95%	0%	67%	5%	100%

**Pre – TG (Treatment Group Pre – Intervention), Post – TG (Treatment Group Post – Intervention) and CG (Control Group)*

In Guntur (AP), Government initiated a SWM programme from 2016 to 2018 and during this period, door to door waste collection was practiced. The programme came to a halt for over a year and after that, ITC's MSK team discussed with Government and signed an agreement with Zilla Panchayat in September 2019 for 3 years and re-initiatied the SWM programme which included: door to door awareness, waste collection, segregation and waste management to reduce landfills.

Following the implementation of SWM, there has been a significant transformation in waste disposal practices among residents, highlighting the substantial impact of structured waste management initiatives. This transformation stems from empowered community institutions—such as resident-led Village Health and Sanitation Committee in Mysuru, Sanitation or Mohalla Committees in Guntur and Mohalla Committees in Pune, collaborating with Gram Panchayats—which have improved planning, optimised resource allocation, and deepened civic engagement. The intervention ensured that each Gram Panchayat (GP) had dedicated waste collectors, well-structured collection routes, and increased resident awareness regarding the significance of proper waste disposal. The results reflect a notable impact of the programme in terms of both raising awareness among community residents and fostering positive behavioural change. **Qualitative interactions** with key stakeholders, such as Self-Help Group (SHG) members directly involved in the collection, handling, and processing of household waste, further confirm a substantial shift when compared to the early stages of the initiative. Over a period of two years, significant and commendable progress has been observed.

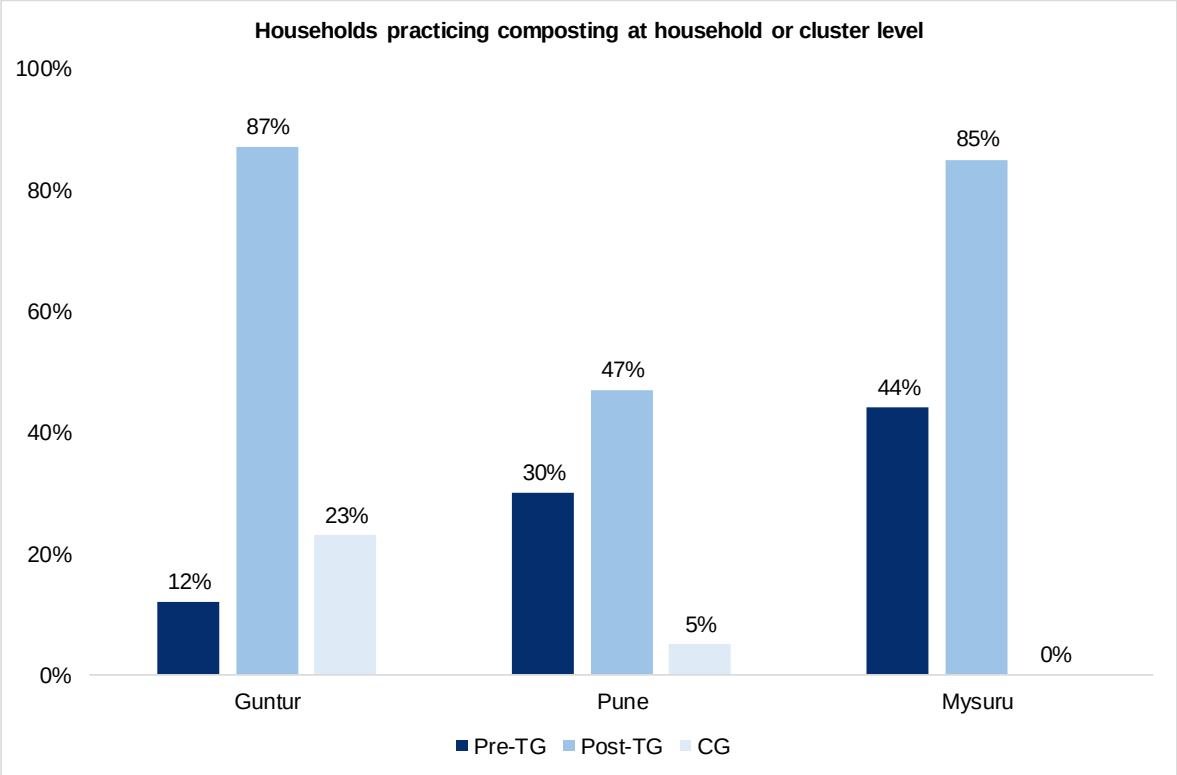

Figure 4: Comparison of households practicing composting in the Treatment Group (pre- & post-intervention) and Control Group

Another key practice that contributes to enhancing the waste diversion rate is **composting at the household or cluster level**, which enables waste to be processed closer to its source. This significantly reduces the volume of waste being dumped at landfills and supports a more decentralised and sustainable waste management system.

From the Figure 5, we can understand that after the intervention, 87% of households have adopted composting practices (household and cluster) in Guntur, marking a significant shift toward sustainable waste management. This widespread adoption has not only reduced the volume of waste being openly dumped, but has also contributed to **wealth generation** at the household level. By converting organic waste into compost, households are now able to produce nutrient-rich manure, which can be used to enhance agricultural productivity or sold as a value-added product, providing an additional source of income. Post intervention 85% households have adopted composting practices (household and cluster) in Mysuru. This progress marks a significant **shift in waste management practices**. Previously, only agricultural households were engaged in composting agricultural waste, but now, the practice has expanded to include household organic waste and from the non-agricultural households as well. In Pune, full-scale adoption of composting remains an aspirational target; however, current practices demonstrate a positive transition towards sustainable waste management, with 47% households practicing composting (household and cluster) after intervention.

Overall, the initiative has fostered a **circular economy approach**, ensuring that biodegradable waste is efficiently **repurposed** rather than contributing to environmental degradation. The success of this intervention highlights the impact of targeted awareness programmes and infrastructure support in promoting sustainable community-driven waste solutions.

Table 4: Waste diversion rates before and after the intervention across the locations

Waste Diversion Rates	Pre-intervention	Post-intervention
Guntur	44%	91%
Pune	30%	52%
Mysuru	58%	85%

Waste Diversion Rate is a critical sustainability indicator that measures the percentage of waste diverted from landfills through processes like recycling, composting, reuse or energy recovery. A **higher diversion rate reflects more effective waste management**, reduces environmental pollution, conserves landfill space, lowers greenhouse gas emissions, and promotes circular economy practices by keeping resources in use for longer.

Table 4 shows a significant improvement in waste diversion rates across all locations post-intervention, with Guntur achieving the highest jump from 44% to 91%. This reflects effective implementation strategies—contributing to reduced landfill burden and promoting a more circular and environmentally responsible waste management system.

5.1.3. Green House Gas Emissions

As per India's GHG Inventory (2020), published in the **Biennial Update Report-4 (BUR-4, 2024)** submitted to the UNFCCC as mandated by the 16th Conference of Parties, the **waste sector ranks as the fourth-largest contributor** to the country's total greenhouse gas emissions[2]. This underscores the urgency of evaluating emission reductions achieved through this decentralised waste management initiative. Assessing these reductions is vital to understanding the programme's **effectiveness in mitigating environmental impact** and its contribution towards India's broader climate goals.

The programme causes a reduction in greenhouse gas (GHG) emissions—particularly methane and carbon dioxide—mainly due to increase in composting closer to the source (minimal emissions from composting is negligible). Based on primary survey findings, the proportion of households **adopting composting practices following the intervention** was applied to the total number of programme-covered households to estimate the absolute number of active composting households. Leveraging location-specific data on average daily organic waste generation, the **annual volume of organic waste diverted from landfills** was calculated. This diverted volume was then multiplied by standard emission factors associated with landfill decomposition to estimate the quantity of carbon dioxide and methane emissions avoided. The resulting figure was converted into tonnes of CO_2-equivalent and subsequently monetised using the **Social Cost of Carbon** (USD 87 per tonne), thereby quantifying the economic value of the environmental and public health benefits achieved through reduced emissions.

Table 5: Carbon emissions avoided by weight and by cost across all the locations

	Carbon emissions avoided annually (in tonnes)	Cost of carbon emissions avoided annually (₹)
Guntur	~ 1,044 tonnes	₹80,43,504
Pune	~188 tonnes	₹14,44,786
Mysuru	~ 1,121 tonnes	₹86,31,593

[2] An article by National Institute of Urban Affairs

5.2. Social Aspects

The success of SWM lies in strong community participation, including women-led SHG involvement. It enhances livelihoods, fosters behavioural change, and promotes inclusivity. By reducing health risks and instilling civic responsibility, SWM contributes to cleaner surroundings and stronger social cohesion, creating a more resilient and empowered rural community. These social aspects are critical as they ensure long-term sustainability, community ownership, and collective accountability, which are key to the consistent and effective functioning of the decentralised waste management system.

5.2.1. Awareness and Participation

Awareness-raising and community participation are crucial for the success of SWM, as they directly align with the principles of the SDGs, particularly the emphasis on inclusivity, accountability, and local ownership. As highlighted in the SDG discourse[3], informed citizens are better equipped to hold institutions accountable and participate meaningfully in governance processes. When communities are aware of waste segregation practices, environmental impacts, and their roles within the system, they are more likely to adopt sustainable behaviours, reduce waste generation, and ensure proper disposal. Moreover, engaging marginalised and vulnerable groups ensures that the waste management system is equitable and participatory, fostering long-term sustainability and behavioural change essential for a cleaner and healthier rural environment.

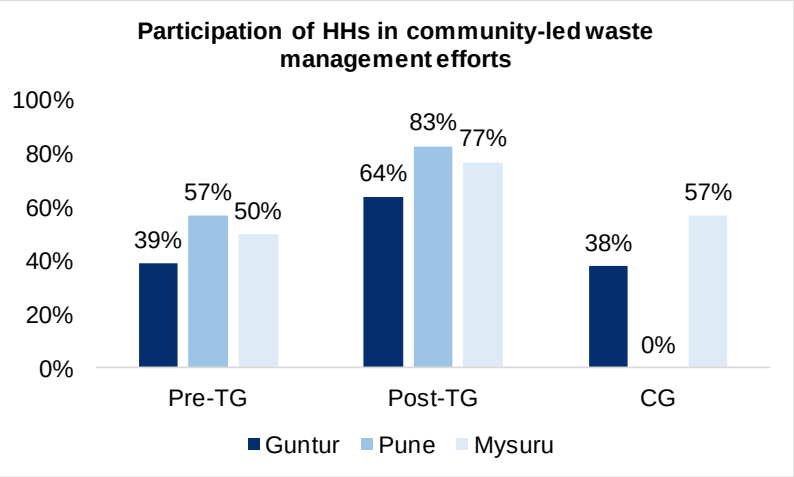

Figure 5: Households' participation in the community-led waste management efforts across locations

A significant increase in participation was observed across all three locations compared to pre-intervention levels, even though Gram Panchayats previously took certain efforts under initiatives like the Swachh Bharat Mission (SBM).

This improvement post-intervention can largely be attributed to the proactive efforts of the Mohalla Committees, which played a crucial role in mobilising communities and fostering a sense of collective responsibility towards waste management. Mohalla Committees effectively engaged residents through a combination of outreach strategies, including regular community meetings, informative wall paintings, public announcements via loudspeakers, pamphlet distribution, and wall stickers reinforcing key messages. These localised and culturally relevant methods ensured that waste management awareness reached a broader audience, leading to increased engagement in community well-being, promoted sustainable behaviours and induced shared accountability. By acting as a bridge between local governance structures and the community, Mohalla Committees not only facilitated behavioural change but also strengthened grassroots involvement in sustainable waste management practices, ultimately demonstrating their effectiveness in driving long-term community-led initiatives.

[3] SDG Accountability

Table 6: Respondents' rating of their awareness regarding waste segregation and composting

HHs who rated 'highly aware' & 'exceptionally aware' of waste-segregation & composting	Pre-TG	Post-TG	CG
Guntur	5%	92%	62%
Pune	9%	76%	0%
Mysuru	9%	71%	23%

Qualitative interactions validated these findings where community members acknowledged that previously there was limited understanding of waste segregation and composting. With the programme's guidance, they are now actively engaged in composting practices. Moreover, households are encouraged to adopt kitchen gardening, serving as an additional benefit that aligns with the broader objective of fostering long-term sustainability through the SWM system. In contrast, there is a significant gap in awareness which is further reflected in the absence of behavioural change, as minimal households in the control group reported practising composting. The findings underscore the importance of time as a critical factor in fostering sustained behavioural change. While there may have been some increase in awareness, translating knowledge into lasting attitudinal and behavioural shifts requires consistent and long-term engagement.

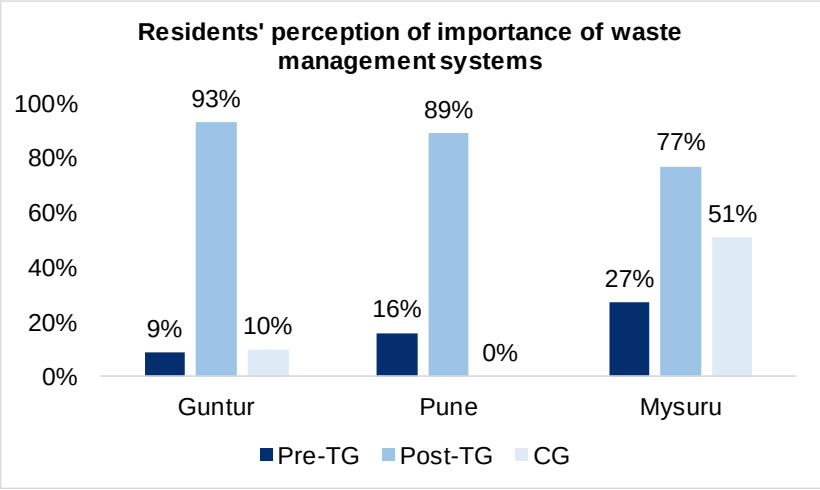

Figure 6: Comparison of residents' perception of the importance of waste management systems for their respective villages

The data presented in Figure 7 demonstrates that the awareness initiatives have effectively altered residents' perceptions regarding the critical importance of waste management systems for their villages. While the programme has already succeeded in fostering awareness and participation, sustaining these values requires continued engagement and reinforcement. Addressing potential barriers—such as lack of time, competing priorities, or limited access to necessary resources—will be crucial in ensuring that sustainable waste management practices become deeply ingrained in community behaviour. By focusing on this transition, the programme can further strengthen its sustainability indicator, ensuring the impact remains long-lasting and evolves into a self-sustaining, community-driven effort.

The stark difference between treatment and control villages further reinforces the effectiveness of sustained, community-driven programmes in fostering long-term behavioural change.

5.2.2. Health Impacts and Improvements in Living Conditions

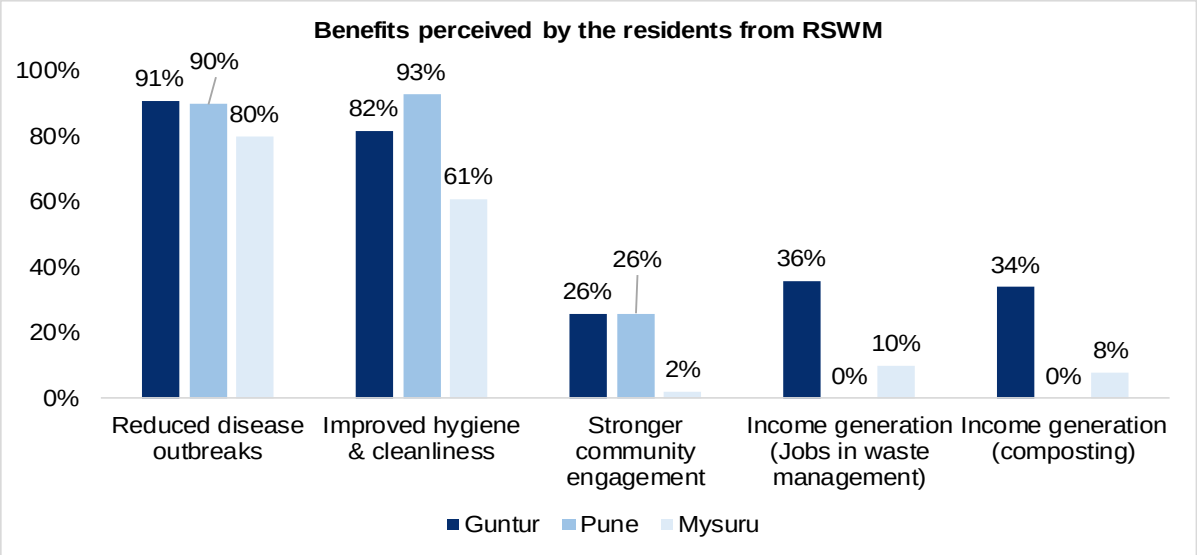

Figure 7: Benefits accrued from the SWM as perceived by the respondents

Improper waste disposal leads to serious health risks, including respiratory infections, diarrhoeal diseases, vector-borne illnesses, and injuries from sharp or hazardous materials. According to **World Health Organisation (WHO)**, improperly managed waste contaminates water, soil, and air, increasing exposure to pathogens and toxic substances, **particularly affecting children, waste workers, and low-income communities disproportionately**[4].

Figure 8 represents responses of the residents regarding the benefits realised after the SWM intervention in their locality.

The most important benefit, as perceived by residents, was a **reduction in disease outbreaks**, followed by **cleaner and hygienic surroundings**. However, **community participation** remains a concern, especially in Mysuru. While over 75% of respondents in each location said they personally took part in cleanliness efforts, many felt that others in their community were not equally involved. This may be partly because the door-to-door awareness sessions only reach the family members who are at home during the door-to-door awareness sessions. As a result, key messages may not reach everyone in the household.

There is a need for sustained community-level engagement to bring more individuals into the fold of the system by highlighting the long-term advantages of its implementation. While the programme has generated employment opportunities in the waste management sector (except in Pune), prevailing attitudes towards this line of work and those employed in it remain negative to a certain extent, which in turn hampers community engagement. In contrast, several waste management workers expressed a sense of pride and fulfilment in contributing to a cleaner village despite facing social stigma and derogatory remarks from certain members of the community.

5.2.3. Equity and Dignity in Service Provision

The expansion of door-to-door awareness sessions and waste collection services in Guntur, Pune, and Mysuru marks a significant step towards **equitable and inclusive waste management**, ensuring all residents—regardless of background—have equal access to services and information. This universal approach has already begun to normalise waste

[4] WHO: Guidance on Solid Waste and Health

management as a shared responsibility, fostering broader participation and gradually shifting perceptions. While challenges remain, the programme's foundational strengths—coupled with targeted improvements—hold immense potential to drive deeper social transformation.

For instance, in Mysuru, some Self-Help Group (SHG) members still hesitate to engage in waste management work due to lingering societal associations with caste-based roles. With continued **community sensitisation**, **dignity-centred training**, and **visible leadership from local champions**, such barriers can further erode. The growing participation of diverse groups, alongside the pride expressed by existing waste workers in their contributions, reflects a **slow but steady cultural shift**.

The programme's success lies in its **ability to pair service delivery with social empowerment**. By strengthening awareness campaigns to highlight the environmental and economic value of waste management—and **celebrating frontline workers as community leaders**—the initiative can accelerate this positive change. The journey towards equitable and stigma-free waste systems is underway, and with these intentional steps, the vision of dignity for all participants is within reach.

5.2.4. Gender Distribution amongst Primary Stakeholders

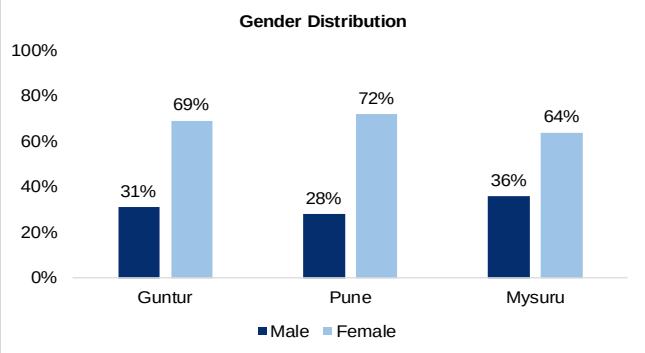

Figure 8: Gender distribution in waste management efforts amongst the households

The gender distribution data indicates a notably **higher participation of women in community-led waste management initiatives**. Women have emerged as primary change agents, particularly in driving practices like segregation, composting, and peer awareness. However, the relatively lower involvement of men highlights the need to consciously engage and include them in awareness, collection, and processing efforts. This will ensure a more inclusive and balanced approach, strengthen household-level compliance, and enhance the overall sustainability of solid waste management.

5.3. Economic Aspects

The economic aspects of SWM are vital as they promote local employment, reduce public health expenditure, and encourage cost savings through composting and recycling. Revenue from user fees and sale of recyclables enhances Gram Panchayat's efforts towards sustainability. A strong economic model ensures long-term viability, scalability, and independence from external financial support.

5.3.1. Gender Inclusivity and Women Empowerment

Historically, women have been paradoxically positioned in waste management systems—while traditionally responsible for household waste, they remain marginalised in formal sector roles, often confined to low-paying, informal work like waste picking. Meanwhile, men dominate higher-income positions such as truck driving, scrap dealing, and recyclable trading, reinforcing a gendered occupational divide that excludes women from fair wages, social security, and decision-making power when waste systems are formalised[5].

[5] UNEP: Why gender dynamics matter in waste management

The SWM initiative is disrupting this imbalance by systematically integrating women into the formal waste economy. By actively recruiting and training women—particularly from Self-Help Groups (SHGs)—for roles in waste collection, segregation, and supervision, SWM has created pathways for **economic and social empowerment**. Women now have access to employment opportunities and social security benefits, transitioning from vulnerable informal labour to stable, recognised employment.

Beyond economic gains, SWM has fostered women's leadership in governance, with **experienced SHG members ascending to roles in SWMCs**, ensuring their voices shape policy. Community engagement initiatives, such as door-to-door awareness campaigns, have further **elevated women's social standing, positioning them as change agents** in their communities.

This holistic approach has not only **dismantled traditional gender hierarchies** in waste management but also demonstrated how **institutional inclusion can transform systemic inequities**. SWM's model proves that formalisation, when designed with **gender intentionality**, can advance both equitable livelihoods and more effective waste systems.

6 Social Return on Investments

Social Return on Investment (SROI) is a comprehensive framework for **measuring and accounting for social, environmental, and economic value** beyond traditional financial metrics[6]. It assesses how activities create positive change by assigning **monetary values to social and environmental outcomes**. SROI helps in reducing inequality, minimising environmental degradation, and improving well-being by incorporating broader costs and benefits into decision-making. *For example, an **SROI ratio of 3:1** signifies that an investment of **₹1 generates ₹3 of social value**. More than just a financial measure, SROI provides a narrative of change through qualitative, quantitative, and financial insights.*

The indicators used capture the social, economic, and environmental outcomes of improved waste management practices. These include reduced **healthcare expenditure due to fewer disease outbreaks, cost savings from the use of home-produced compost as a substitute for chemical fertilisers, income generation through waste management-related livelihood opportunities, and the environmental benefit of avoided carbon emissions from reduced landfill disposal.** Each indicator is supported by proxy estimations derived from primary or secondary data sources. The calculation of Social Return on Investment (SROI) incorporates these quantified benefits while also factoring in deadweight—such as the impact of existing public health services and households already practising composting before the intervention—to ensure that only the net additional value created by the intervention is considered. This approach helps in accurately estimating the true social value generated.

Table 7: SROI Indicators and Financial Proxies for all 3 locations

Indicators	Rationale	Proxy Estimation	Source
Savings in healthcare expenditure due to decreased incidence of disease outbreaks	Reduced healthcare expenditure due to a decline in illness incidence resulting from improved waste management practices	The average out-of-pocket expenditure on doctor consultations among individuals (residents susceptible to diseases due to old age) who reported a decline in disease outbreaks following the intervention	Primary research
Cost savings through the utilization of home-produced compost as a substitute for chemical fertilisers	With a growing number of households adopting home or cluster composting, the need for purchasing fertilisers has decreased, as compost produced through the pit-composting technique serves as an effective substitute	Market value (Maximum Retail Price) of compost as a product in the concerned locations	Primary research

[6] A Guide to SROI by The SROI Network

Indicators	Rationale	Proxy Estimation	Source
Cost of avoided carbon emissions resulting from the reduction of wet waste disposal in landfills	The widespread adoption of composting has significantly reduced the volume of wet waste reaching landfills, resulting in lower carbon emissions and minimizing its impact on global warming	Social Cost of Carbon (SCC) i.e., the estimated economic cost of emitting one tonne of CO_2 (or CO_2 equivalent,) into the atmosphere	Secondary study
Income-generation for Self-Help Group (SHG) members through enhanced livelihood opportunities (specific to Mysuru)	Owing to the strengthened waste management system, SHG members were recruited for waste processing-related responsibilities (waste collection & transportation, dissemination of D2D trainings to HHs, waste handling in 'shed', SWMC membership for managing the operations etc.) leading to income generation	Average monthly remuneration disbursed by the Gram Panchayat to an SHG member engaged in waste management work	Primary research
Deadweight 1 Public health schemes and services existing in the GPs	A robust public health system in rural areas, such as Public Healthcare Units providing free medical treatment, contributes to lowering out-of-pocket healthcare expenditures	The reduction in average medical expenses resulting from an efficient public health system in the concerned locations	Secondary study
Deadweight 2 Households that were practising composting before the intervention	Households that were already engaged in composting before the intervention could experience economic benefits through reduced spending on chemical fertilisers. Additionally, their existing practice also contributes to environmental sustainability by lowering carbon emissions	The decrease in average expenditure on fertilisers and the reduction in the social cost of carbon per tonne of avoided emissions	Primary research

Table 8: Social Return On Investments (SROI) across locations

Social Return on Investments (SROI)			
	Guntur (Andhra Pradesh)	**Pune (Maharashtra)**	**Mysuru (Karnataka**
Discount Rate[7]	5.5%	5.5%	5.5%
Total Input Cost	₹85.07 lakhs	₹17.11 lakhs	₹82.11 lakhs
Total Net Impact	₹4.59 crores	₹98.43 lakhs	₹5.91 crores
Net Present Value (NPV)	₹4.36 crores	₹93.30 lakhs	₹5.60 crores
SROI	**5.11**	**5.45**	**6.82**
Inference from the SROI score	Every ₹1 invested in the programme generated a social value of ₹5.11 in Guntur	Every ₹1 invested in the programme generated a social value of ₹5.45 in Pune	Every ₹1 invested in the programme generated a social value of ₹6.82 in Mysuru

[7] Discount rate considered for the purpose of SROI calculation is the average of inflation rates over the last three financial years (data sourced from IMF's official website)

7 Recommendations for the Programme

Table 9: Recommendation according to the current scenario assesses through the study

Sl. No.	Current Scenario	Recommendations
1	Awareness sessions reached only a few household members; knowledge is not always shared within families	• **Strengthen the IEC tools**: Promote **secondary dissemination** within households (e.g. visual take-home materials, role-play demos for children and adults, reminder charts). • Integrate the door stickers used in Mysuru, with **colour-coded system**—green stickers with bold messaging to **recognise households that consistently follow good waste management practices**. Visible acknowledgement can serve as both a **motivational tool** and a **behavioural nudge** to encourage continued adherence and inspire others within the community.
2	More community-based ownership in treatment areas	• Strengthen community-based monitoring by establishing GP-level **waste monitoring groups**. This can be effectively achieved by engaging locally educated youth and college students as **trained fellows rather than informal volunteers**. • This approach not only enhances programme accountability and data-driven monitoring but also **fosters youth leadership**, stakeholder buy-in and community ownership.
3	Absence of efficient and safe disposal mechanisms for hazardous domestic waste, particularly sanitary pads.	• Install simple, eco-friendly incinerators near Anganwadis, schools, or GP offices to enable safe disposal of sanitary pads. These should be managed by trained SHG members or sanitation workers with clear usage guidelines. • Include a separate bag or container during door-to-door waste collection rounds specifically for hazardous waste like sanitary pads, with proper handling and final disposal protocols in place.
4	Weak markets for segregated wastes; Only waste with market value enters the value chain, while non-saleable waste is often neglected at all levels, ending up in landfills or burnt.	• Establish formal connections between GPs and **district-level or regional recyclers/scrap dealers** to ensure regular pick-up and fair pricing for segregated dry waste (plastic, paper, metal, etc.). Creating a **centralised storage or aggregation point** in each GP can improve the viability for bulk transactions. This option however, needs a thorough feasibility study. • Support **skill-building initiatives to train SHG members and youth in upcycling waste** into useful or decorative items (e.g. cloth bags from old textiles, plastic bottle planters), which can be sold in local markets, fairs, or schools.

CSRBOX®

Doing Good in a **Better** Way

CSRBOX & NGOBOX

A-404-405, SWATI TRINITY

Applewood Township, SP Ring Road,

Shela Ahmedabad, Gujarat 380058