

Impact Assessment Report

Develop Responsible Outlook for Plastic (D.R.O.P) Project

KIA India



Disclaimer

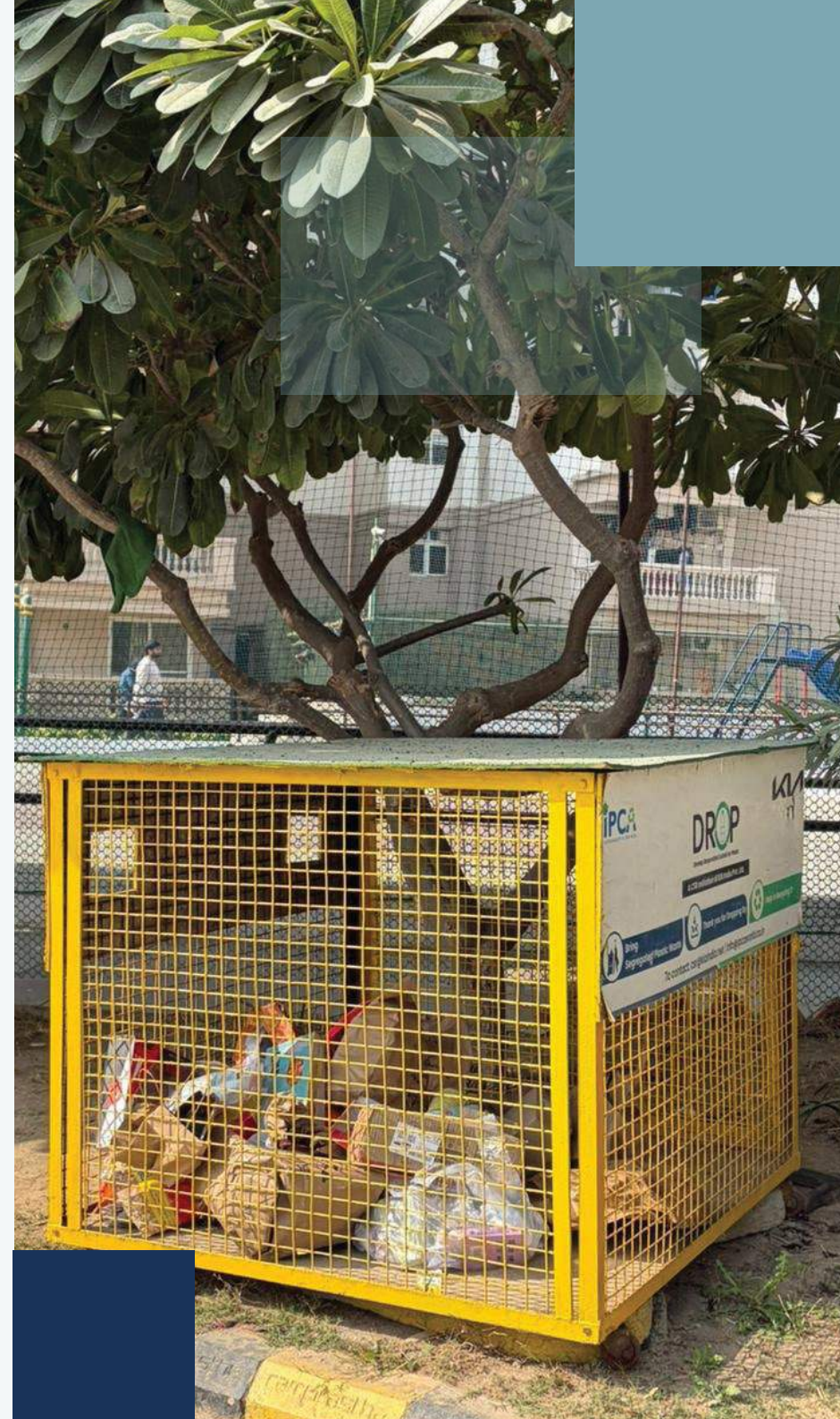
- This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX) and Kia India to undertake the Impact Assessment of their Corporate Social Responsibility (CSR) project implemented.
- This impact assessment adheres to the Companies (Corporate Social Responsibility Policy) Amendment Rules, 2021, notification dated 22nd January 2021.
- This report shall be disclosed to those authorised in its entirety, without removing the disclaimer. CSRBOX has not performed an audit and does not express an opinion or any other form of assurance. Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the leadership team of the Kia India project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been verified for authenticity, CSRBOX has taken due care to receive information from sources generally considered to be reliable.
- In preparing this report, CSRBOX has used and relied on data, material gathered through the Internet, research reports, and discussions with personnel within CSRBOX, as well as personnel in related industries.

With Specifics to Impact Assessment, CSRBOX:

- Has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by Kia India.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same.
- CSRBOX must emphasise that the realisation of the benefits/improvements accruing out of the recommendations set out within this report (based on secondary sources) is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realisation of the projected benefits.
- The premise of an impact assessment is the objective of the project, along with output and outcome indicators pre-set by the programme design and implementation team. CSRBOX's impact assessment framework was designed and executed in alignment with those objectives and indicators.

Contents

List of Abbreviations	04
Executive Summary	05
Chapter 1: Background and Overview	07
Chapter 2: Design and Approach for Impact Assessment	13
Chapter 3: Impact Findings	16
Chapter 4: Social Return on Investment (SROI)	34
Chapter 5: Impact Findings	37



List of Abbreviations

Abbreviation	Details
BRSR	Business Responsibility and Sustainability Report
BWGs	Bulk Waste Generators
CSR	Corporate Social Responsibility
DROP	Develop a Responsible Outlook for Plastic
ESG	Environment Social Governance
FGD	Focus Group Discussions
IC	Intangible Cost
IDI	In-Depth Interview
IEC	Information, Education and Communication
IPCA	Indian Pollution Control Association
KII	Key Informant Interview
MCG	Municipal Corporation of Gurugram
MRF	Material Recovery Facilities
MT	Metric Tonnes
NGO	Non-Governmental Organisation
NPV	Net Present Value
RWA	Resident Welfare Association
SDG	Sustainable Development Goals
SEBI	Securities and Exchange Board of India

Executive Summary

Kia India is committed to long-term sustainable development, focusing on environmental stewardship and community empowerment. A cornerstone of this commitment is **Project D.R.O.P**, a comprehensive circular economy initiative designed to tackle plastic pollution through systematic collection, recycling, and behavioural change

Project Highlights

Locations: Gurugram, Bengaluru, Mumbai, Vizag, Vijayawada

Main Stakeholders: RWAs, Commercial Establishments, Educational Institutions



Activities: Awareness and Behaviour Change

Key Highlights: Street plays, Plog walks, 3R campaign



Activities: Plastic Waste Collection

Key Highlights: 500 DROP bins installed, 2600 MT of D2D collection



Activities: Stakeholder Partnerships

Key Highlights: Municipal bodies, Recyclers



Activities: Capacity Building

Key Highlights: Housekeeping staffs, Waste handling and segregation



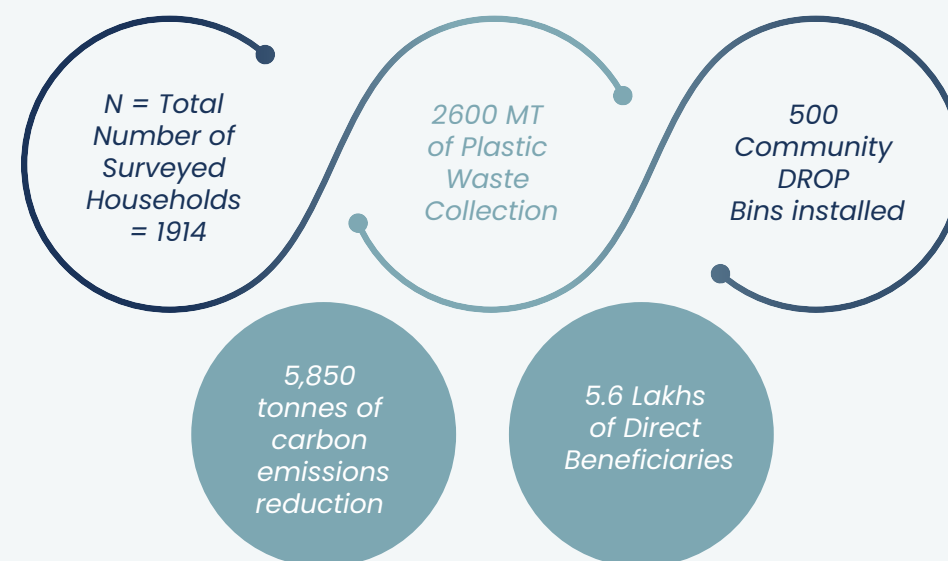
Activities: Awards and Recognitions

Key Highlights: Recycled plastic goodies as appreciation to RWAs

Study Aspects and Dynamics

Aspect	Details
Study design	- Pre-post - Recall-based comparison
Methodology	- Primary research - Secondary research
Data Collection type	- Quantitative – Household surveys - Qualitative – IDIs/FGDs
Secondary review	- Project reports - Implementation documents - Literature
Evaluation Framework	OECD-DAC pillars, including: - Relevance - Coherence - Effectiveness - Efficiency - Impact - Sustainability
Sample	- Quantitative Surveys – Total 1914 (with Households) - Qualitative Surveys – Total 36 (Community Leaders, Domestic Helpers, BWGs, Educational Institutions, Municipalities)
SROI	₹1 investment ₹23.14 social value generated - Total project cost: ₹2.63 crore - Net Present Value (NPV): ₹60.92 crore

Major Outcomes	Key Highlights
Cleaner Ecosystem	66% (794 Households) observed a reduction in open dumping spots post-project
Infrastructure Adoption	90% (1723 households) use community DROP bins for plastic waste disposal
Source Segregation	55% (1030 households) began plastic waste segregation post-project
Plastic Waste Management	94% (1799 households) observed improved plastic waste management post-project





Chapter 1

Background and Overview

This section provides an overview of Kia India, its programme objectives, and its interventions.

1.1 About Kia India and its CSR Initiatives

Kia India’s CSR events encompass a wide spectrum of social and environmental initiatives designed to **enhance community wellbeing, foster sustainable practices, and build inclusive growth across Indian communities**. The programme reflects Kia India’s commitment to delivering meaningful, ground-level impact beyond its core automotive business.

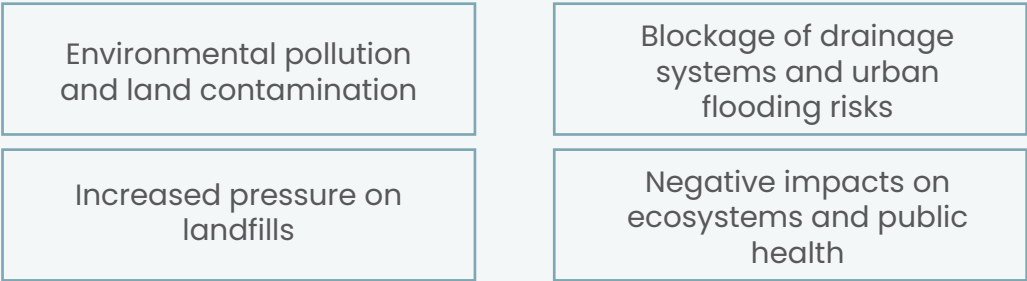
The drive of Kia India for positive changes hinges on the following initiatives:

Project	Description
Project D.R.O.P (Develop Responsible Outlook for Plastic)	Kia’s flagship initiative promotes source segregation, collection, and recycling of plastic waste through community engagement across key cities, reinforcing its commitment to environmental sustainability.
Project Uphaar	A large-scale fruit tree plantation programme supporting marginalised farmers and climate resilience.
Eye Care on Wheels	Mobile healthcare services provide vision screening and cataract surgeries in rural districts.
Buckle Up’ Road Safety Initiative	School-based road safety awareness campaigns.
Good Neighbour Projects	Infrastructure support, such as check dams and water tanks, for rural sustainability.
Educational Infrastructure Support	Development of schools, libraries and learning facilities
Medical Equipment Donations	Strengthening healthcare facilities through critical equipment support.

1.2 Need for the Project:

Background / Problem Context

Plastic waste has emerged as one of the most pressing environmental challenges in India due to rapid urbanisation, increased consumption, and limited waste management infrastructure. A significant proportion of plastic waste remains unsegregated, uncollected, or improperly disposed of, leading to:



Existing Challenges

Despite existing regulations, several systemic and behavioural gaps continue to affect plastic waste management:

- Lack of consistent source segregation at the household and institutional levels
- Limited awareness and behavioural adoption of proper waste disposal practices
- Inadequate and unstructured plastic waste collection systems
- Weak linkages with formal recycling and recovery channels

Background / Problem Context

There was a clear need for a community-driven, structured, and transparent intervention that could:

- Promote awareness and behavioural change around plastic waste segregation
- Strengthen collection and aggregation systems
- Improve recycling and recovery mechanisms
- Build sustainable systems that create long-term environmental and social benefits

Project Response

Project D.R.O.P (Develop Responsible Outlook for Plastic) was conceptualised to address these gaps through:



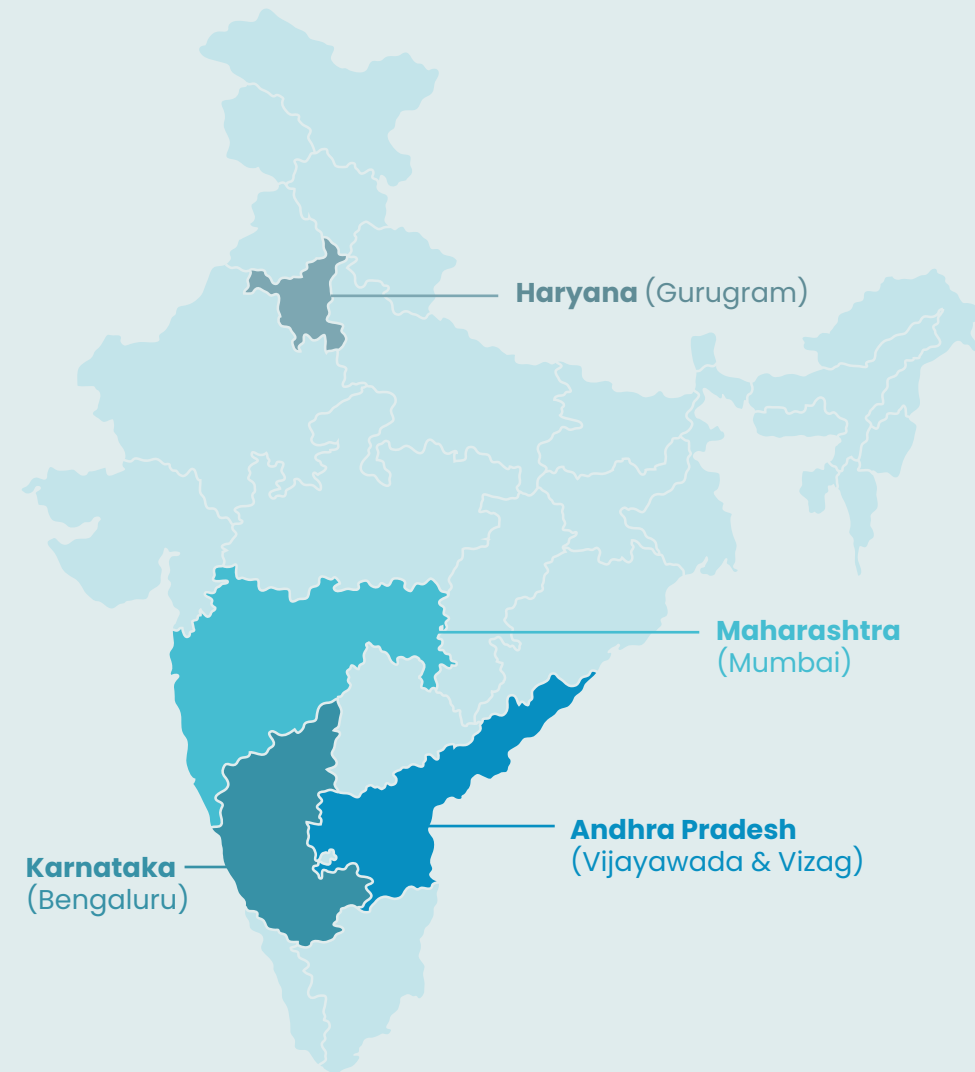
1.3 About the Project

Kia India launched Project D.R.O.P. (Develop Responsible Outlook for Plastic) as a nationwide CSR initiative to address the growing challenge of plastic pollution in urban India. The project was executed in partnership with the **Indian Pollution Control Association (IPCA)**. It was designed as an **integrated plastic waste management** and behaviour change programme that reduces plastic leakage into landfills and water bodies by promoting responsible use, source segregation, and recycling through a circular economy approach.



Figure 1: DROP bins installed for self-disposal of plastic waste (left) and Project DROP waste collection vehicle for door-to-door plastic waste collection (right)

1.3.1 Project Geography



Locations: Gurugram, Bengaluru, Mumbai, Vizag, Vijayawada

Main Stakeholders: RWAs, Commercial Establishments, Educational Institutions



Activities: Awareness and Behaviour Change

Key Highlights: Street plays, Plog walks, 3R campaign



Activities: Stakeholder Partnerships

Key Highlights: Municipal bodies, Recyclers



Activities: Awards and Recognitions

Key Highlights: Recycled plastic goodies as appreciation to RWAs



Activities: Plastic Waste Collection

Key Highlights: 500 DROP bins installed, 2600 MT of D2D collection



Activities: Capacity Building

Key Highlights: Housekeeping staffs, Waste handling and segregation

5850 tonnes of
CO₂-equivalent
GHG emissions reduced

2600 MT of Plastic
Waste Collection

500 Community DROP
Bins installed

5.6 Lakhs of Direct
Beneficiaries

500 Awareness and Training Sessions Hosted

1.4 Theory of Change

Activities	Outputs	Outcomes	Impact
Mobilising • RWAs • Schools • Markets • Corporates • Municipal Authorities	• 500 locations formally engaged • Structured plastic waste management activities.	• Local institutions and Stronger institutional collaboration • Shared responsibility.	• Community-driven systems • Long-term waste reduction.
• Conducting awareness activities	• Awareness materials disseminated • 500 engagement activities conducted	• Improved segregation practices • Responsible waste behaviour.	• Sustained behavioural change • Cleaner community environments.
• Training domestic helpers and waste workers	• 500 structured training sessions conducted.	• Improved segregation efficiency • Safe handling practices.	• Professionalised waste workforce • reliable waste systems.
• Installing DROP Boxes • Door-to- door collection	• 500 bins installed • 2600 MT of plastic collected and channelised.	• Reduced waste leakage • Improved participation in segregated disposal.	• Reduced plastic pollution • Cleaner public spaces
• Recycling • Co-processing at MRFs	• All collected plastic is sorted and processed • Recycling/co-processing facilities	• Higher diversion from landfills • Improved material recovery.	• Reduced carbon footprint • Strengthened circular economy practices
• Recycling • Co-processing at MRFs	• Closing ceremonies • Stakeholder dialogues	• Increased motivation • Long-term commitment • Responsible waste behaviour	• Strengthened community ownership • Sustainability of outcomes.



Chapter 2

Design and Approach for Impact Assessment

This section outlines the study objectives, framework and methodologies employed while conducting the assessment. It details the data collection methods and sampling techniques utilised to gather comprehensive insights into plastic waste generation, collection practices, and community perceptions.

2.1 Objectives of the Study

Kia India collaborated with CSRBOX to conduct a thorough Impact Assessment of the D.R.O.P (Develop Responsible Outlook for Plastic) Project. The study aimed to achieve the following objectives:

Assess project outcomes using the OECD-DAC framework (relevance, effectiveness, efficiency, coherence, impact, and sustainability).

Evaluate the Social Return on Investment (SROI) of the project.

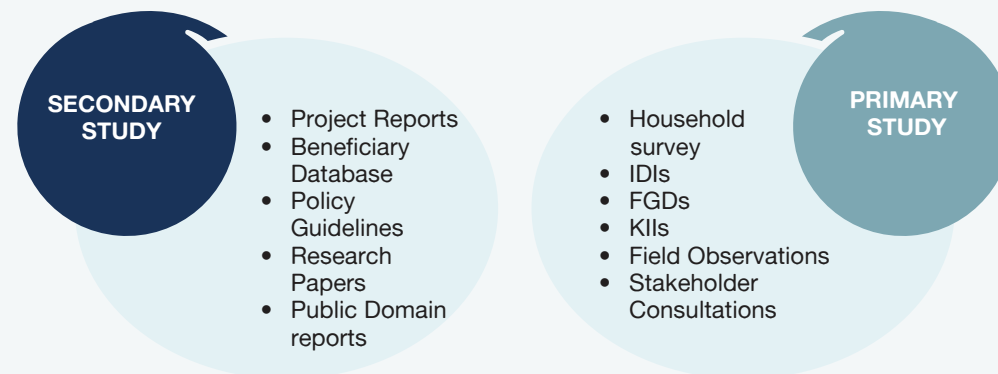
Collect qualitative and quantitative feedback from stakeholders on project performance and processes.

Gather information on experiences and challenges faced by the partner NGO during implementation.

Document impactful human-interest stories from project beneficiaries.

Provide recommendations based on the study's findings.

2.2 Approach, Evaluation and Assessment Framework



The evaluation adopted a learning-focused and results-oriented framework to assess programme performance. A pre-post evaluation approach was applied, relying on beneficiaries' recall to compare conditions before and after the intervention, thereby assessing contribution rather than full attribution of outcomes.

The study followed a two-pronged methodology, combining secondary research with primary data collection through quantitative and qualitative methods, including In- Depth Interviews (IDIs) and Focus Group Discussions (FGDs). Project reports, implementation documents and relevant literature were reviewed to triangulate findings. The assessment was guided by the OECD-DAC framework, evaluating the programme against the criteria of Relevance, Coherence, Effectiveness, Efficiency, Impact and Sustainability.

2.1 Objectives of the Study

2.3.1 Quantitative Sampling

Project Geography	RWA Universe	RWAs Sample		Household Sample		Rationale	Mode of Data Collection
		Target	Achieved	Target	Achieved		
Gurugram	500 RWAs Spread across 5 Project Locations	60	60	360	364	60% of RWAs, i.e., 300 RWAs, were covered as a sample across all 5 project locations, resulting in an average survey sample of at least 360 households per location.	On-Field
Mumbai		60	60	360	370		
Bangalore		60	60	360	392		
Vijayawada		60	60	360	402		
Vizag		60	60	360	386		
Total		300	300	1800	1914		

2.3.1 Quantitative Sampling

Stakeholders	Qualitative Tool	Mode of Data Collection	Number of Interactions	
			Target	Achieved
Community Leaders (RWA Presidents, actively engaged Community)	IDIs	On Field	10	10
RWA Domestic Helpers/Housekeeping Staffs	FGDs		5	5
DROP Vehicle Drivers	FGDs		5	5
Bulk Waste Generators (Shops, Offices, Hotels, Restaurants, etc.)	IDIs		5	5
Schools/University (Students and Headmaster)	FGDs/IDIs		5	5
City Municipal Corporation Officials/ Sanitation Inspectors	KII		5	5
IPCA Project Management Team	KII		1	1
Total			36	36

Chapter 3

Impact Findings



The following section presents key findings from the project's impact assessment, drawing on quantitative and qualitative data collected from primary and secondary stakeholders. The analysis reflects changes observed across beneficiary profiles, awareness levels, behavioural practices, and systemic improvements attributable to the intervention. Findings are interpreted in alignment with the OECD-DAC evaluation framework to assess the project’s relevance, effectiveness, efficiency, and broader impact.

3.1 Beneficiary Profile

The beneficiary profile provides an overview of the demographic and residential characteristics of households engaged under Project DROP, offering context for interpreting programme outcomes. It measures the extent to which the communities could equitably access the benefits of the intervention, irrespective of their age, gender, income, etc.



Age Profile

Highlight
63% beneficiaries (1206 households) were aged 18–40 years

Inference
Predominantly working-age population

Impact
Inter generational participation in plastic waste management practices.



Educational Profile

Highlight
65% of respondents (1244 households) are graduates or higher

Inference
Highly Educational Residential Population

Impact
Well-articulated perspectives



Gender Profile

Highlight
61% Men (1167 households) making up a larger share

Inference
Balanced female representation

Impact
Women's engagement in household-level waste segregation



Duration of Residence

Highlight
77% (1474 households) are long-term residents

Inference
Stable Residential Population

Impact
Baseline for measuring awareness, behavior change, & community waste participation.

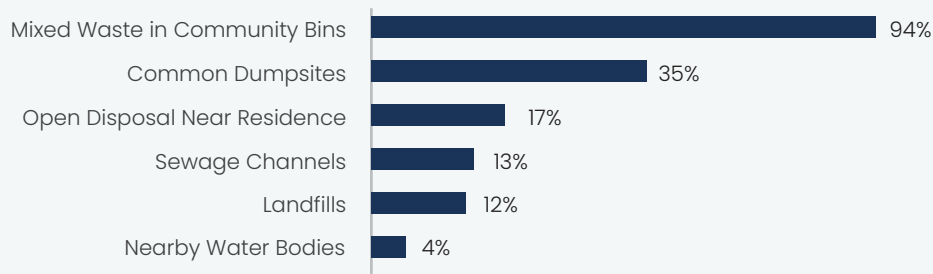


Figure 2: Resident self-disposing plastic waste in community DROP bins installed through the project (Top) and Survey interaction with the resident (Bottom)

3.2 Relevance

The following section focuses on the relevance and necessity of the intervention, detailing other factors that highlight the need for support. The examination of these factors helps in understanding the impact of the project.

Modes of Self Disposal of Plastic Waste Before the Project (n = 446)



N = 446 = Number of surveyed households using self-disposal as the mode for disposing plastic waste among the total 1914 households before the project

Highlights

The top 2 modes of pre-project plastic waste disposal modes were:

- Waste Mixing (94%) – 419 Households
- Dumping (35%) – 156 Households

Inference

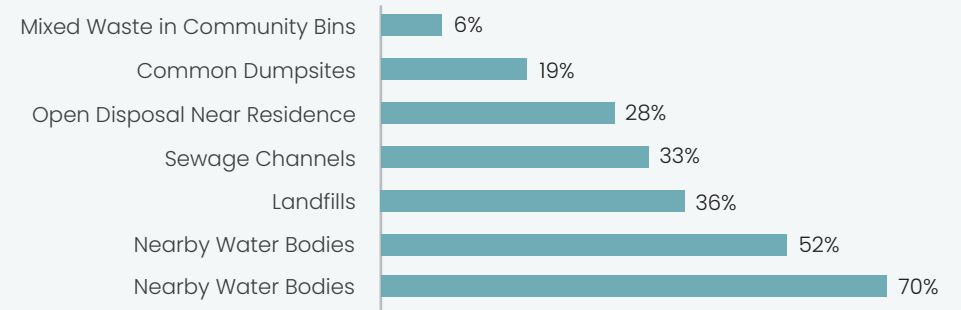
- Lack of organised plastic waste management infrastructure
- Structural gaps in plastic waste management

Impact

- Reduction of unorganised plastic waste disposal
- Door-to-Door plastic waste collection through installed community bins

Pre-Project Gaps in Waste Disposal Systems

Waste Disposal Related Challenges Before the Project (n= 1914)



N = 1914 = Total number of surveyed households

Highlights

The top 3 pre-project plastic waste disposal challenges were:

- Absence of Door-to-Door Collection Service (70%) – 1340 Households
- Absence of Municipal Collection Vehicles (52%) – 995 Households
- Absence of Community Disposal Bins (36%) – 689 Households

Inference

- Lack of organised plastic waste management infrastructure
- Structural gaps in plastic waste management

Impact

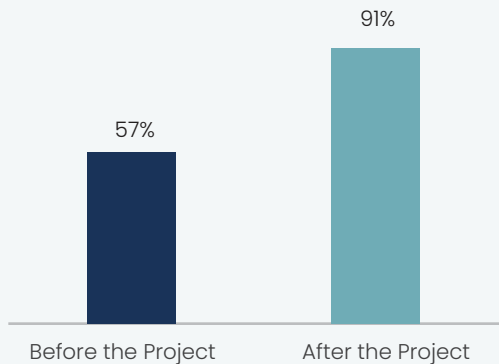
- Reduction of unorganised plastic waste disposal
- Door-to-Door plastic waste collection through installed community bins and Project DROP Vehicles

3.3 Effectiveness

The project's effectiveness measures the extent to which objectives have been achieved and identifies the supporting processes and systems that influence the achievement of these objectives.

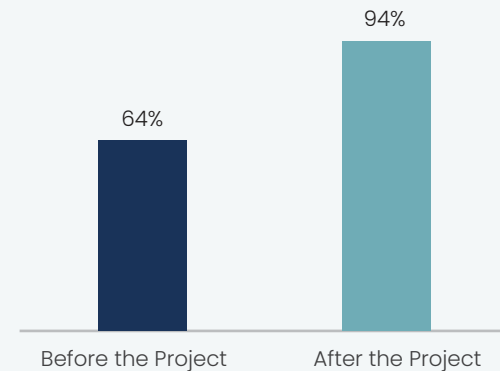
Improved Awareness of Plastic Waste Types & waste segregation

Improved Awareness about Types of Plastic Waste (n = 1914)



N=1914
Total number of surveyed households

Improved Plastic Waste Segregation Awareness (n = 1914)



N=1914
Total number of surveyed households

Highlights

- 34% improvement in the awareness of types of plastic waste
- 57% (1091 households) pre-project -> 91% (1742 households) post-project
- 30% improvement in the awareness of plastic waste segregation
- 64% (1225 households) pre-project -> 94% (1799 households) post-project

Inference

- Practical training effectively bridged the gap between conceptual knowledge and household-level action

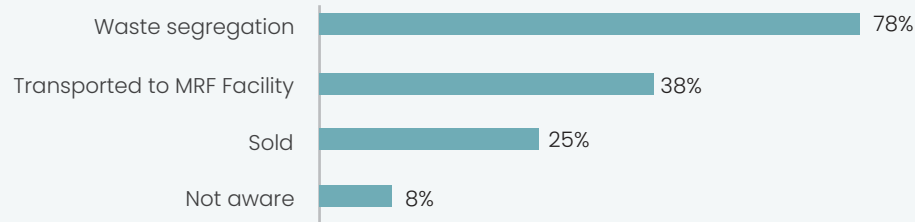
Impact

- Prominent visibility of D.R.O.P. bins
- Effective coordination between community leaders, security personnel, and waste collectors

Conclusion/Recommendation

- Regular monitoring of the coordination between community leaders, security personnel and waste collectors.

Perceived Awareness about Plastic Waste Post Collection (n = 1914)



N = 1914 = Total number of surveyed households

Highlights

Top 3 Plastic Waste Post Collection Process Awareness –

- High awareness of plastic waste segregation (78% – 1,493 households)
- Moderate awareness of transportation to MRF facilities (38% – 727 households)
- Lower awareness of recycling/sale pathways (25% – 479 households)

Inference

- Strong understanding of primary segregation practices
- Limited awareness of downstream plastic waste management

Impact

- High source-level segregation efficiency
- Partial linkage to the formal recycling value chain processes

Conclusion/Recommendation

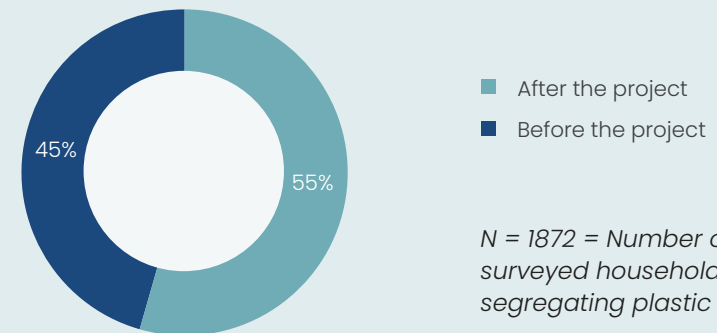
- Strengthen awareness on the end-to-end plastic waste value chain, especially MRF processes and recycling pathways

“People used to think that if everyone is throwing waste in an open area, it’s okay to dump plastic in an open area too. Slowly it kept piling up and became a regular dumping spot. Once proper collection and segregation started, that mindset began to change.”

– Community Leader

Improved Plastic Waste Segregation Practice at Home

Plastic Waste Segregation at Home (n = 1872)



N = 1872 = Number of surveyed households segregating plastic waste

Highlights

- Increase in households practising segregation post project (55% – 1,030 households)

Inference

- Noticeable improvement driven by project interventions
- Behaviour change supported by peer influence and service availability

Impact

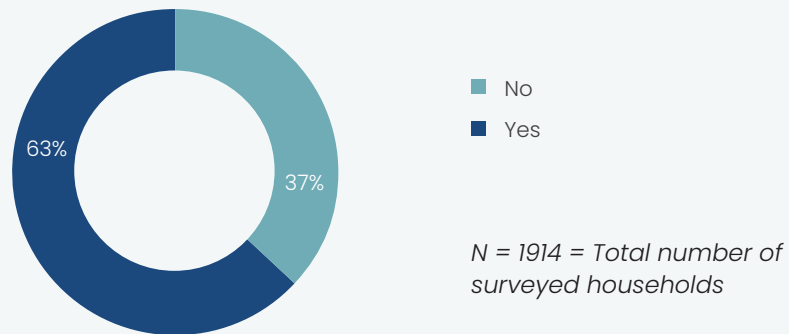
- Establishment of plastic waste segregation as a common community practice
- Strengthened household-level waste management behaviour

Conclusion/Recommendation

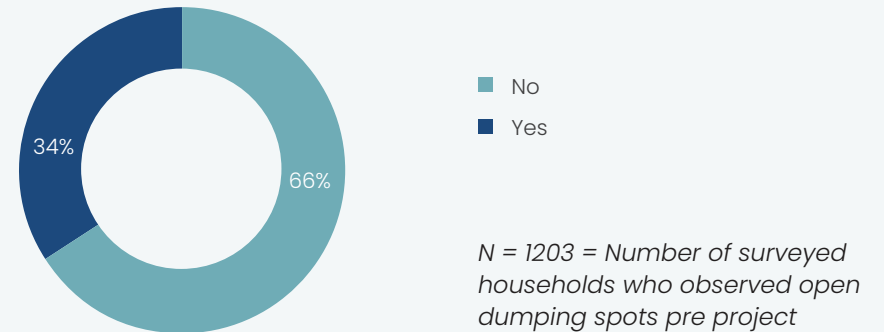
- Sustain efforts through continued awareness and consistent collection services to achieve full coverage.

Reduction in Plastic Open Dumping Spots

Open Dumping Spots before the Project (n = 1914)



Open dumping spots after the project (n=1203)



Highlights

- Households reporting open dumping reduced from 63% (1,206 households) to 34% (409 households)

Inference

- Significant decline in plastic open dumping due to improved collection infrastructure
- Positive shift towards organised plastic waste disposal practices

Conclusion/Recommendation

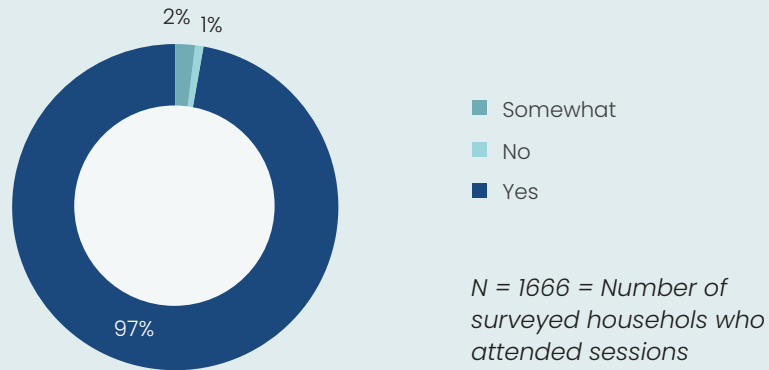
- Expand community bin coverage and optimise placement based on population and area needs

Impact

- Reduction in environmental and public health risks
- Strengthened community-level plastic waste management systems
- Created a ripple effect on reducing plastic dumping in landfills

Usefulness of Training Sessions

Usefulness of Training Sessions (n=1666)



Highlights

- Majority found training sessions useful (97% – 1,616 households)

Inference

- Training sessions were highly effective in driving awareness
- Strong acceptance of community-based engagement approaches processes

Impact

- Enhanced adoption of proper plastic waste management practices
- Increased community participation in plastic waste segregation and disposal
- High door-to-door engagement, community meetings and schools/colleges awareness

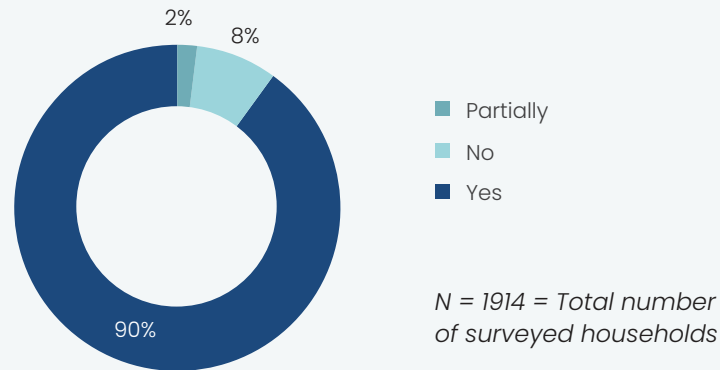
Conclusion/Recommendation

- Scale up training efforts, especially in schools and colleges, with more activity-based learning approaches

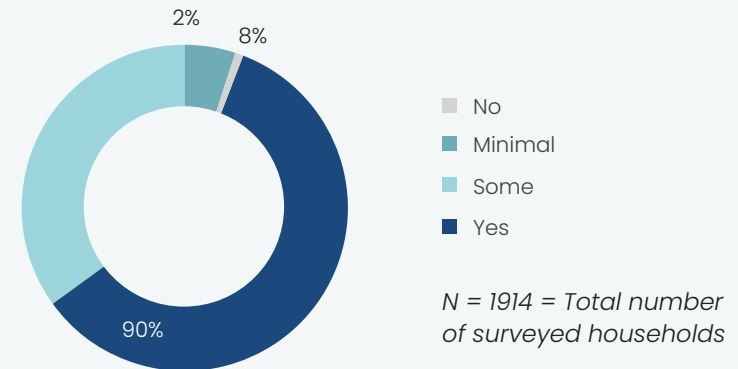


Effectiveness of the Project in Addressing Challenges and Improving Plastic Waste Management

Challenges resolved after the project (n=1914)



Observed improvement in plastic waste management (n = 1914)



Highlights

- Among the challenges listed by beneficiaries, such as absence of door-to-door plastic waste collection, municipal vehicles and community DROP bins for disposing plastic waste, 90% (1723 households) reported resolution of plastic waste management challenges
- 59% (1129 households) observed significant improvement, while 35% (670 households) reported moderate progress in plastic waste management practices

Inference

- Addressed systemic gaps and behavioural barriers
- Successful adoption of improved plastic waste management practices

Impact

- Enhanced efficiency and reliability of plastic waste management systems at the community level
- Positive behavioural shift towards structured plastic waste disposal
- Reduced dependency on informal practices

Conclusion/Recommendation

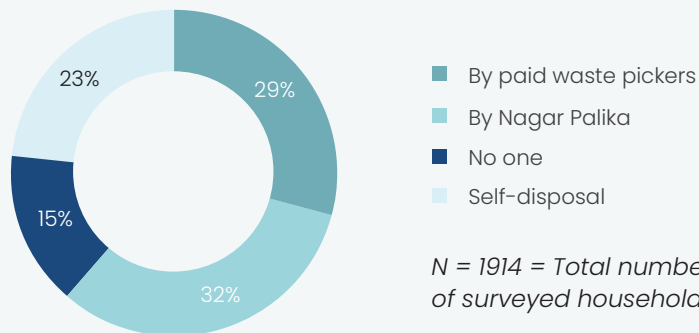
- Sustain efforts through continuous monitoring and reinforcement of behaviour change initiatives
- Strengthen last-mile plastic waste management infrastructure to address residual gaps among remaining households

3.4 Efficiency

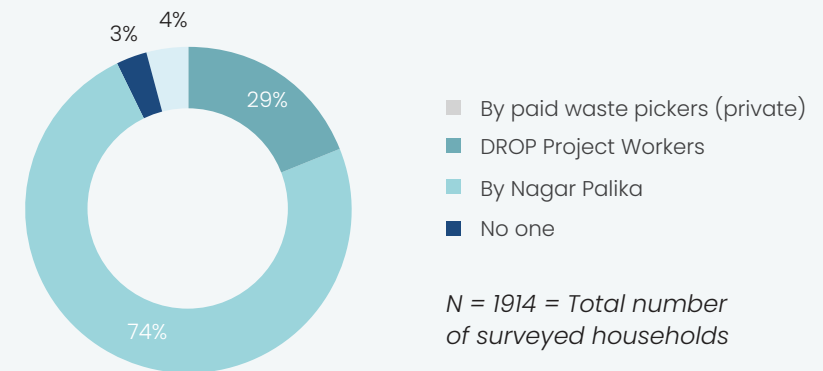
This section defines the extent to which efficient methods and services were delivered as part of the project intervention to achieve the results of outcomes and impacts.

Shift from Unorganised to Organised Plastic Waste Collection

Plastic Waste Collection Scenario Before the Project (n = 1914)



Plastic Waste Collection Scenario After the Project (n = 1914)



Highlights

- Reliance on DROP project workers is high, 74% (1416 households), becoming the primary collection mechanism

Inference

- Clear transition from fragmented, multi-source collection to a centralised and structured system
- Increased reliance on project-led services reflects improved trust and service reliability

Impact

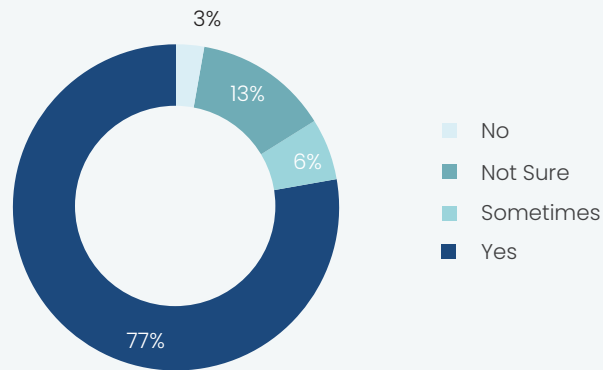
- Improved consistency and predictability in plastic waste collection at the household level
- Reduced informal and unsafe disposal practices due to strengthened formal collection channels

Conclusion/Recommendation

- Institutionalise and scale the project-led collection model for long-term sustainability
- Integrate with municipal systems to ensure continuity and reduce parallel dependency risks

Use of Protective Gear by Waste Collectors

Protective Gears Worn by Waste Collectors (n=1914)



N = 1914 = Total number of surveyed households

Highlights

- 77% (1474 households) reported observing waste collectors using protective gear

Inference

- High adoption reflects effective awareness and distribution efforts, though consistency remains a concern
- Uncertainty and partial usage suggest gaps in monitoring and standardisation of safety practices

Impact

- Improved occupational safety and reduced health risks among waste collectors
- Enhanced community confidence in formal waste management systems

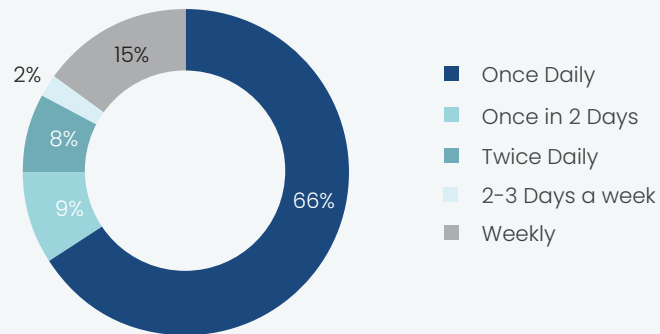
Conclusion/Recommendation

- Strengthen enforcement and regular monitoring of protective gear usage
- Provide standardised, user-friendly safety kits and continuous training to ensure consistent adoption



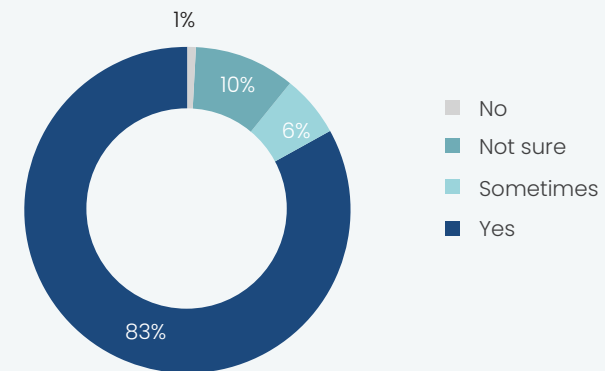
Improved Awareness of Plastic Waste Types & Waste Segregation

Frequency of Plastic Waste Collection (n = 1914)



N = 1914 = Total number of surveyed households

Closed DROP Vehicles Post Collection (n = 1914)



N = 1914 = Total number of surveyed households

Highlights

- 66% (1263 households) receive daily plastic waste collection, indicating strong service regularity
- 83% (1588 households) reported use of closed DROP vehicles, ensuring improved transportation practices

Inference

- Improved operational efficiency and route planning
- Shift towards more hygienic and standardised waste handling

Impact

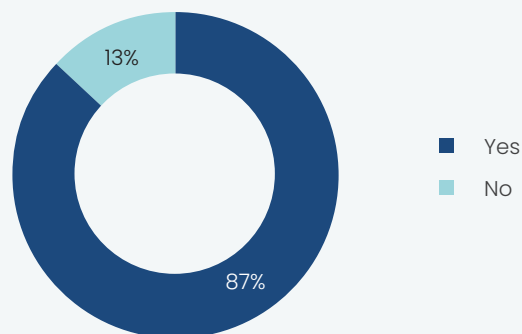
- Enhanced reliability and cleanliness in waste collection and transportation systems
- Reduced environmental exposure and spillage during waste transit

Conclusion/Recommendation

- Address remaining service gaps to ensure universal daily collection coverage
- Strengthen monitoring to ensure consistent use of closed vehicles across all routes

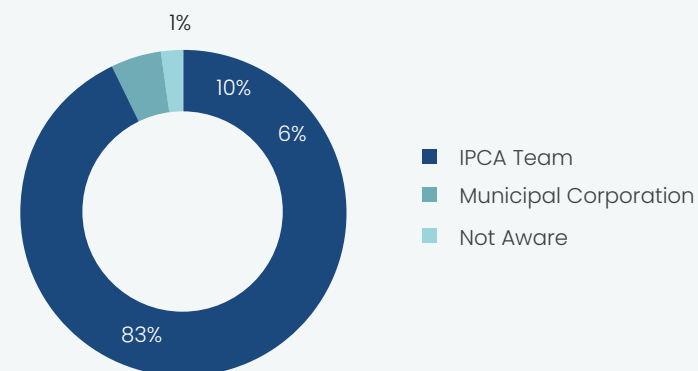
Project-Led Training and Awareness Outreach on Plastic Waste Management

Training sessions on Plastic Waste Management (n=1914)



N = 1914 = Total number of surveyed households

Organisers of Training Session (n=1666)



N = 1666 = Number of surveyed households who attended the training sessions

Highlights

- 87% (1665 households) reporting participation in plastic waste management sessions through the project
- 93% (1549 households) identified the IPCA team as the primary organiser of the sessions

Inference

- Strong outreach achieved through project-led training initiatives, indicating effective community mobilisation
- Dominance of IPCA-led sessions reflects centralised implementation with limited municipal co-facilitation

Impact

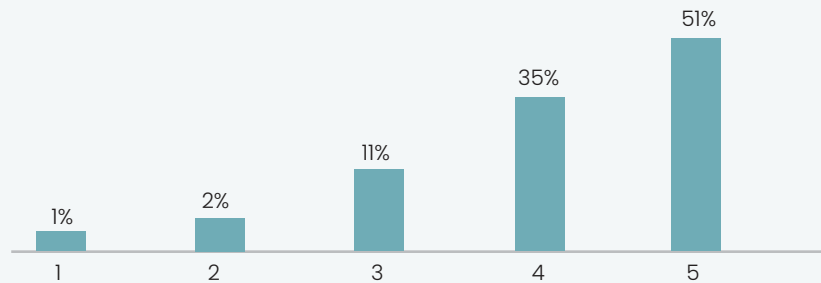
- Enhanced awareness and knowledge dissemination at the household level on plastic waste management practices
- Strengthened the visibility and credibility of project implementers within the community

Conclusion/Recommendation

- Institutionalise training efforts through increased collaboration with municipal bodies to ensure shared ownership
- Expand co-delivery models to enhance sustainability and integration with formal waste management systems

Perceived Impact on Sustainable Practices

Project rating on sustainable practices (n = 1914)



N = 1914 = Total number of surveyed households

Highlights

- On a scale of 5, a strong positive rating was observed, with 51% (976 households) rating 5 and 35% (670 households) assigning scores 4
- Weighted average score stands at 4.33 out of 5

Inference

- Beneficiaries perceive the project as highly effective in promoting sustainable waste management practices
- High satisfaction reflects consistent service delivery and visible improvements at the community level processes

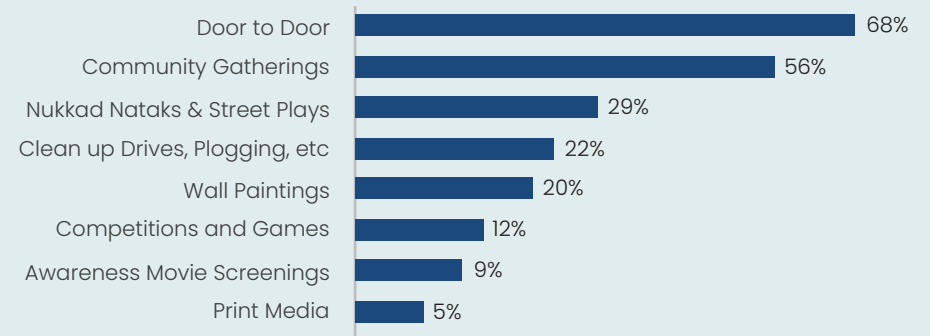
Impact

- Increased adoption of sustainable practices at the household level
- Improved cleanliness and strengthened plastic waste management outcomes across neighbourhoods

Conclusion/ Recommendation

- Sustain service quality and engagement to maintain high satisfaction levels
- Leverage positive perception to deepen behavioural change and scale best practices across new areas.

Mode of Training (n=1666)



N = 1666 = Number of surveyed households who attended the training sessions

Highlights

The top 2 modes of engagement for awareness sessions were -

- Door-to-door outreach (68% - 1133 households) and community gatherings (56% - 933 households) emerged as the most utilised training channels

Inference

- Preference for direct, interpersonal engagement observed indicates higher effectiveness of face-to-face communication and awareness sessions
- Moderate use of interactive methods (nukkad nataks, clean-up drives) suggests a supplementary role in reinforcing messaging

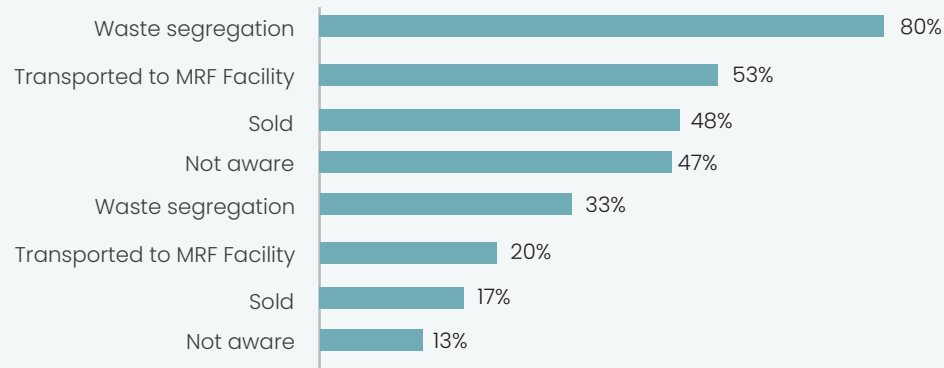
Impact

- Improved clarity on plastic waste segregation practices through personalised and community-based interactions
- Enhanced community participation driven by engaging and accessible training formats

Conclusion/ Recommendation

- Prioritise and scale door-to-door and community-led engagement models for sustained impact
- Integrate creative outreach methods strategically to reinforce behavioural change and widen reach.

Topics Covered in Training Sessions (n=1666)



N = 1666 = Number of surveyed households who attended the training sessions

Highlights

The topics that were predominantly covered were -

- Impacts of littering (80% - 1333 households), followed by source segregation (53% - 883 households) and plastic waste categories (48% - 800 households)

Inference

- Strong emphasis on awareness-building and behavioural responsibility over technical waste management knowledge
- Relatively lower coverage of recycling pathways and regulations indicates a gap in advanced understanding processes

Impact

- Increased environmental awareness and motivation towards responsible plastic waste practices at the household level
- Limited technical depth may constrain optimal segregation and disposal behaviours

Conclusion/Recommendation

- Strengthen focus on technical aspects such as recyclability and waste pathways in training modules
- Incorporate practical demonstrations to deepen understanding and improve implementation of segregation practices



Figure 4: Survey interactions with Resident (Top) and BWG (Bottom)

3.5 Coherence

The Coherence section of the report checks the alignment of the programme with other interventions in the country, i.e., with similar programmes which were being run by other institutions.

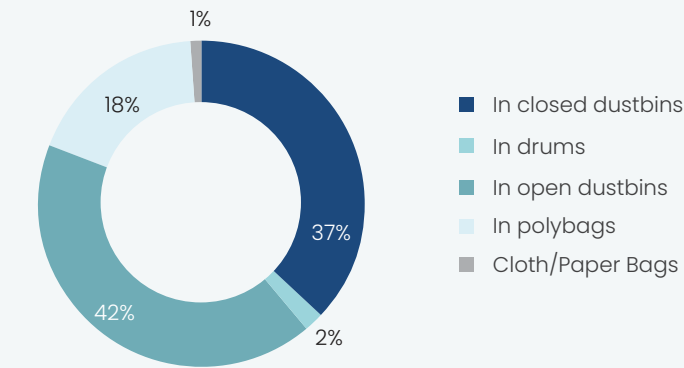
Alignment with SDG Goal	Alignment with National Priorities
1NO POVERTY 3GOOD HEALTH AND WELL-BEING 6CLEAN WATER AND SANITATION 11SUSTAINABLE CITIES AND COMMUNITIES 12RESPONSIBLE CONSUMPTION AND PRODUCTION 13CLIMATE ACTION	

The project advances multiple **Sustainable Development Goals (SDGs)** and **National Priorities** by integrating job creation, public health improvements, and circular economy practices through innovative plastic waste management.

3.6 Sustainability

This section addresses the extent to which the benefits of the intervention are likely to be sustained and continue over time.

Modes of Plastic Waste Management at Home
(n = 1914)



N = 1914 = Total number of surveyed households

Highlights

The 2 predominantly plastic waste storage methods at home were

- Open dustbins (42% – 804 households) and closed dustbins (37% – 708 households)

Inference

- Preference for open and closed bins indicates partial adoption of structured plastic waste storage, with gaps in safe containment
- Continued use of polybags suggests convenience-driven behaviour and space constraints

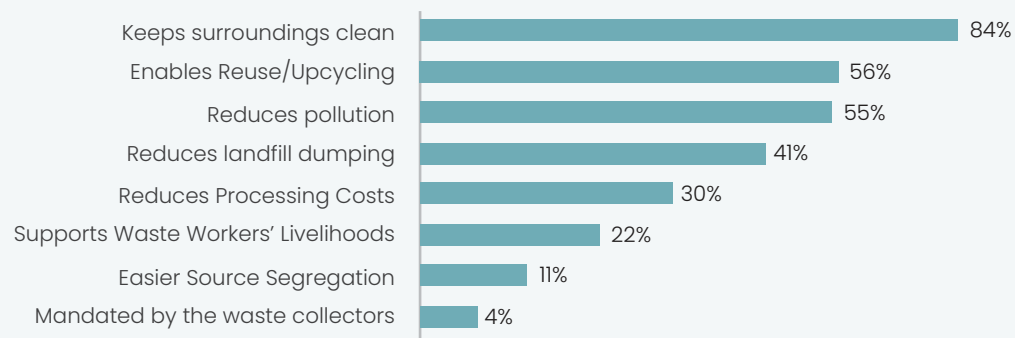
Impact

- Inconsistent storage practices may limit the effectiveness of plastic waste segregation at the source
- Risk of spillage and contamination persists due to reliance on open and informal storage methods

Conclusion/Recommendation

- Promote standardised, covered storage solutions to improve safe household plastic waste handling
- Encourage behaviour change towards consistent use of closed bins through targeted awareness

Perceived Need of Plastic Waste Segregation (n = 1872)



N = 1872 = Number of surveyed households who are segregating plastic waste

Highlights

Top 3 Needs: Plastic Waste Segregation -

- Clean surroundings (84% - 1,573 households) is the primary driver for segregation
- Reuse/upcycling (56% - 1,048 households) and pollution reduction (55% - 1,030 households) are key secondary motivations

Conclusion/Recommendation

- Anchor communication on cleanliness benefits while gradually linking to broader environmental outcomes
- Strengthen messaging on ease and institutional support to improve sustained compliance

Inference

- Segregation behaviour is largely driven by immediate, visible benefits rather than long-term environmental concerns
- Lower emphasis on mandates (4%) and ease (11%) indicates limited influence of external enforcement and perceived effort reduction

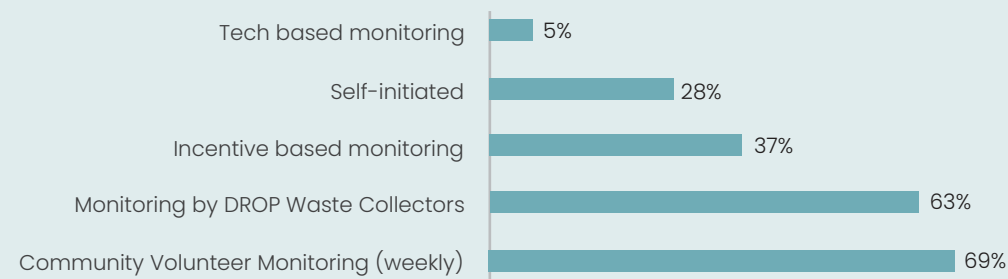
Impact

- Strong focus on cleanliness supports sustained adoption of segregation practices at the household level
- Limited recognition of systemic and economic benefits may restrict deeper behavioural commitment

"After we started segregating plastic, the locality looks cleaner and there is less waste scattered around. That is the main reason we follow it."

- Community Leader

Perceived Modes of Plastic Waste Segregation Monitoring (n = 1914)



N = 1914 = Total number of surveyed households

Highlights

The top 2 major monitoring mechanisms perceived by the beneficiaries are-

- Community volunteer monitoring (69% - 1,321 households) and D.R.O.P. waste collectors (63% - 1,206 households) are the leading monitoring mechanisms

Inference

- Strong reliance on community and frontline workers indicates trust in local, human-led monitoring systems
- Low adoption of technology suggests limited awareness, access, or perceived relevance

Impact

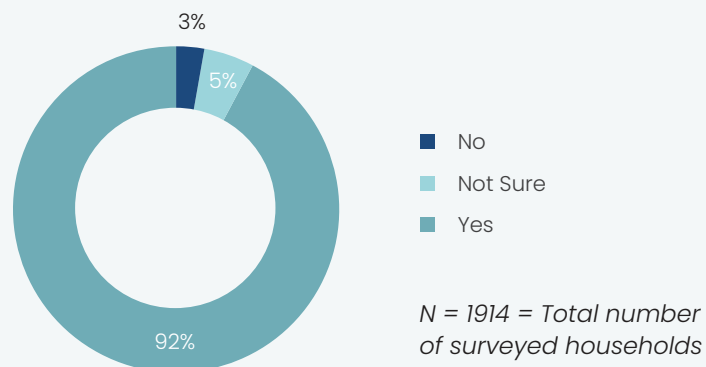
- Community-driven monitoring strengthens accountability and consistent segregation practices
- Underutilisation of technology may limit the efficiency and scalability of monitoring efforts

Conclusion/Recommendation

- Strengthen and formalise community and collector-led monitoring frameworks for sustained impact
- Gradually integrate simple, accessible technology solutions to enhance monitoring efficiency

Demand for Continued Training and Awareness

Need for More Training Sessions (n=1914)



Highlights

- An overwhelming majority (92% – 1,761 households) expressed a need for more training sessions
-

Inference

- Strong demand indicates high community willingness for continued engagement and learning
- Training is perceived as an ongoing need rather than a one-time intervention

Impact

- High readiness for capacity-building can support sustained improvement in plastic waste management practices
- Continued training can reinforce behaviour change and deepen understanding of segregation

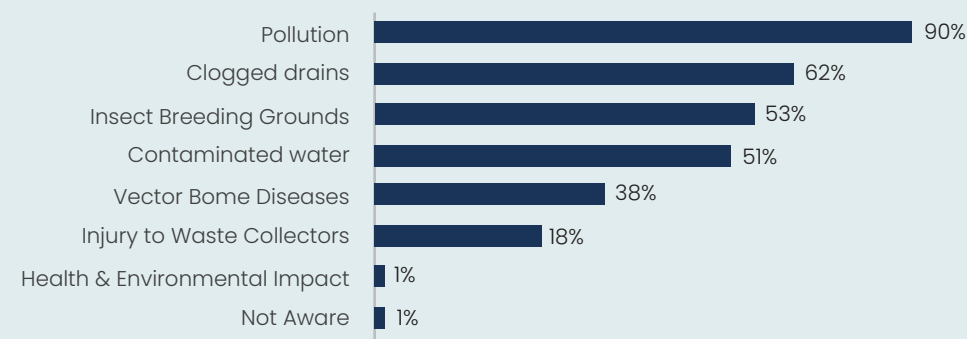
Conclusion/Recommendation

- Scale up regular, structured training sessions to meet strong community demand
- Design continuous learning modules to sustain long-term behaviour change

3.7 Impact

This section meticulously examines the indirect, secondary, and prospective impact arising from the project.

Perceived Need of Plastic Waste Segregation (n = 1872)



N = 1914 = Total number of surveyed households

Highlights

- Highest perceived hazard was from plastic pollution (90% – 1,723 households)
- Major hazards identified: clogged drains (62% – 1,187 households) and insect breeding (53% – 1,014 households)
- Over half recognise water contamination risks (51% – 976 households)

Inference

- Strong understanding of environmental and sanitation-related hazards
- Awareness is largely driven by visible local impacts

Impact

- Increased likelihood of responsible waste disposal behaviour
- Improved community sensitivity towards health and environmental risks

Conclusion/Recommendation

- Reinforce behaviour change by linking segregation practices with health risk prevention and community well-being



Theme: Perceived Environmental Improvements

Impact

- Reduced scattered plastic waste
- Increased use of DROP bins and organised collection
- Cleaner and more orderly spaces
- Improved collection points with less spillage
- Better handling via centralised lifting and covered vehicles

"The sessions helped us understand plastic types, correct segregation practices, and what happens to the waste after collection. It made the whole process much clearer for us."

- Community Leader



Theme: Behavioural and Practice-Level Changes

Impact

- Greater awareness of plastic segregation
- More consistent storage of plastic waste
- Shift to routine segregation practices
- Reduced mixing with wet waste
- Improved household cooperation during collection

"After the training sessions, residents understood better how to separate plastic. In the beginning, many were confused about plastic types, but now segregation has improved and collection has become smoother."

- Community Leader



Theme: Community-Level and Sustainability Signals

Impact

- Increased collective responsibility
- Cleaner surroundings reinforcing behaviour
- Higher compliance due to visible systems
- Better coordination with collection staff
- Strengthened trust and sustained practices



Chapter 4

Social Return on Investment (SROI)

Social Return on Investment (SROI) is both a process and a method used to quantify the social impact of projects, programmes, and policies. It provides funders with insight into the monetary value of the social and environmental benefits generated by the initiative. Going beyond standard financial measures of economic return, SROI captures both social and financial value. Here, the value has been computed based on the actual outcomes of the project. The data has been sourced from the primary survey and secondary references.

Indicator	Rationale	Proxy Estimation	Source
Annual Cost Savings on Diseases	The project's door-to-door plastic waste collection and management significantly reduced beneficiaries' healthcare expenses arising from inadequate plastic waste management.	Average annual healthcare costs incurred by beneficiaries prior to the project were due to poor plastic waste management.	Primary Research
Reduction in Carbon Emissions*	Reduction in carbon emissions resulting from the project's door-to-door plastic waste collection and management.	Social cost associated with the reduction in carbon emissions from the total plastic waste managed under the project.	Secondary Research
Cost Savings by Municipal Corporations for Removal of Plastic Waste	Cost savings incurred by Municipal Corporations in plastic waste management and removal through the project's door-to-door collection system.	Costs incurred by Municipal Corporations for plastic waste management and collection.	Secondary Research
Cost Recovery through Plastic Reselling by MRFs	Reuse and resale of plastic waste collected and processed through project-established MRF centres.	Average market rates for the sale of processed plastic waste from MRF centres.	Secondary Research

**The project enabled a reduction of 5,850 tonnes of carbon emissions through the management of 2,600 metric tonnes of plastic waste.*

Social Return on Investment			
Year	FY 2022–2023	FY 2023–2024	FY 2024–2025
Inflation Rate in India (IMF, 2024) ¹	6.70%	5.40%	4.40%
Discounted Rate Considered	5.50%		
Total Input Cost	₹ 2,63,23,384		
Total Net Impact	₹ 64,27,25,284.9		
Net Present Value (NPV)	₹ 60,92,18,279.57		
SROI	23.14		

INR 23.14 social value generated on investment of INR 1

The D.R.O.P Project’s plastic waste management initiative has achieved an estimated Social Return on Investment (**SROI**) of **23.14**, indicating that for every ₹1 invested, the project generates ₹23.14 in social, environmental, and economic value.

The primary drivers of this strong SROI include the project’s exclusive focus on plastic waste management, the development of structured plastic-specific value chains, and its targeted approach to addressing a critical gap in waste management systems where dedicated interventions for plastic are often limited. Additionally, the project’s emphasis on efficient recovery, processing, and safe disposal mechanisms contributes significantly to long-term value creation.

These factors provide the D.R.O.P Project with a distinct advantage over conventional waste management initiatives, which typically focus on mixed waste streams and standard segregation and processing practices. By concentrating on plastic waste (a category that poses persistent environmental and public health challenges) the project is able to generate enhanced environmental benefits and stronger circular economy linkages.

Based on the assessment findings and the calculated SROI, the D.R.O.P Project can be regarded as a high-impact intervention, effectively addressing the challenges and the loopholes of plastic waste management which were essentially lagging through government or public provisions. Hence the project is effectively delivering substantial social, economic, and environmental value.

¹World Economic Outlook (October 2024) – Inflation rate, average consumer prices



Chapter 5

Impact Stories

“From Piles to Predictability” – Households Shift to Organised Plastic Waste Management

Before the DROP project, managing plastic waste was uncertain for a group of residents and their families. With no fixed collection system, plastic often accumulated at home or was disposed of along with mixed waste.

“Earlier, we didn’t know who would take plastic waste or when,” they recalled. “Sometimes it stayed for days.”

The introduction of regular door-to-door collection by DROP workers brought immediate clarity.

“Now the same people come regularly, and we know exactly what to give them,” they said. “The homes feel cleaner.”

Segregation gradually became routine, driven mainly by convenience and perceived cleanliness rather than enforcement. Despite limited space, the households found it easier to manage plastic waste once collection became reliable. Paying a small user fee was also widely accepted once service consistency improved.

For this group of residents, the project transformed plastic waste management from an irregular chore into a simple daily practice, showing how dependable last-mile services can enable sustained household-level behaviour change.



“More Than Just Collection” – Waste Collectors’ Experience with DROP

Before the DROP project, the work for waste collectors was irregular and poorly defined. Collection routes changed frequently, households were unsure about segregation, and plastic waste was often mixed or dumped openly.

“Earlier, people didn’t separate plastic. Sometimes they wouldn’t give waste at all,” they said. “There was confusion on both sides.”

With the introduction of the DROP system, the waste collectors received a fixed collection area, clear instructions, and basic protective gear. Households were trained on segregation, making daily collection smoother and less time-consuming.

The visibility of uniforms, masks, and gloves also changed how residents interacted with them. The waste collectors noted that people were more cooperative and recognised their role as part of an organised service rather than informal labour.





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