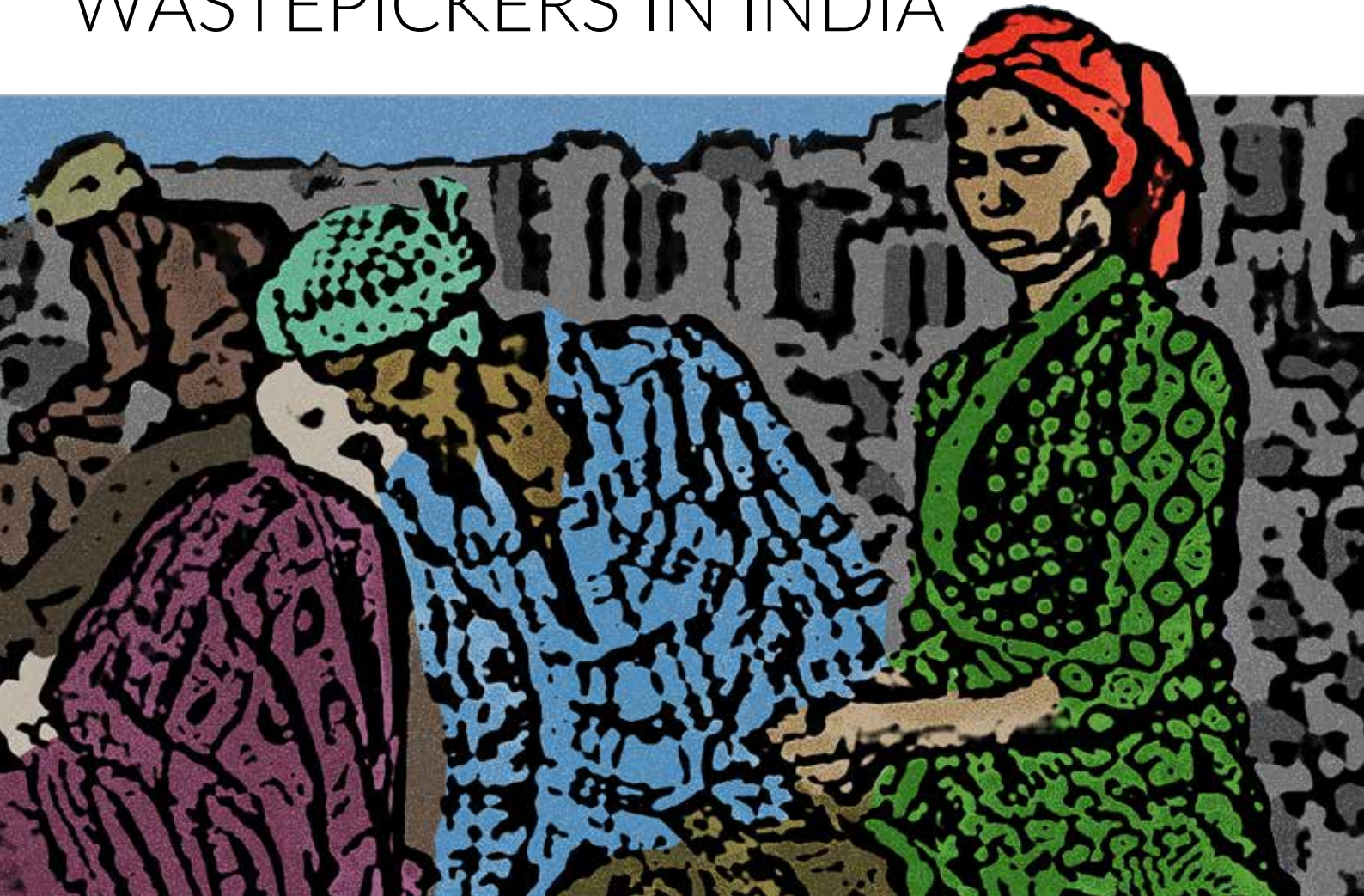


# SANTULAN

PATH TO EQUALITY FOR WOMEN  
WASTEPICKERS IN INDIA



DECEMBER 2022

# SANTULAN

PATH TO EQUALITY FOR WOMEN  
WASTEPICKERS IN INDIA

## About Chintan Environmental Research and Action Group

We are a registered non-profit organization dedicated to achieving inclusive, sustainable, and equitable growth for all. Our objective is to make consumption more responsible and less taxing on the environment and the underprivileged. We conduct research, advocate for, and assist various stakeholders in transitioning from a linear to a circular economy and away from unsustainable consumerism. We combat air pollution by conducting research, strengthening vulnerable populations—the poor, the marginalized, children, and women—will remain at the forefront of our attention. capacity, and making science and policy more accessible to the public. In all our efforts,



Lead Authors

Shruti Sinha  
Bharati Chaturvedi

Supporting Author

Harshita

Field Researchers

Harshita  
Bhuyashee Rajkumari

Acknowledgements

Special thanks to Frametrics Consulting Pvt. Ltd., Aman Luthra, Amit Kumar, Abhishek Singh, Apoorvi Chaturvedi and Rajat Charanthariyal for their research support and inputs. We also thank Balmukund Kumar and Saranjit Kaur and Shuaib Raza for their support in connecting us with the participants of the study.

The report is a participation between Chintan Environmental Research and Action Group and The Incubation Network, a project by Second Muse and The Circulate Initiative under its Equality in Plastics Circularity initiative. The geographical location of the study is in Delhi, the capital city of India.

© Copyright 2023, Chintan Environmental Research and Action Group  
238 Sidhartha Enclave, New Delhi-110014  
Tel: +91 11 46574172  
Email: info@chintan-india.org  
Website: www.chintan-india.org

Please feel free to use the information here to promote environmental, economic, and social justice. We urge you to quote this report when you use the information in it and inform us if possible.

Contents

List of Tables	iv
List of Figures	iv
Glossary	vi
Executive Summary	vii
CHAPTER 1	
Introduction	1
CHAPTER 2	
About the Study	5
CHAPTER 3	
Results	11
CHAPTER 4	
Conclusions and Recommendations	41
List of References Used	45
APPENDIX A	
Social Network Analysis Survey Instrument	47
APPENDIX B	
Master Survey Instrument	49
APPENDIX C	
Record Sheet Analysis	57
References	59

List of Tables

Table 1:	Purchase and Collection Sheet	58
Table 2:	Sales Sheet	58

List of Figures

Figure 1:	Locations we worked in, on a map of the National Capital Territory of Delhi	6
Figure 2:	Pyramid of the informal waste recycling system	7
Figure 3:	Age of Participants	11
Figure 4:	Marital Status of Participants	12
Figure 5:	Family Size	12
Figure 6:	Dependent Members in the Household (MRF women vs. Control Group women)	13
Figure 7:	Family members engaged in Waste Picking (MRF vs. Control Group)	13
Figure 8:	Family connection help (Men vs. Women)	14
Figure 9:	Migration to Delhi (MRF vs Control)	15
Figure 10:	Total Household income earned last month (Control Group Women vs MRF Women)	15
Figure 11:	Earning Members in the Household (Men vs. Women)	16
Figure 12:	Earning Members in The Household (Control Group women vs MRF women)	16
Figure 13:	Engagement in Wastework (Men vs. Women)	17
Figure 14:	Gender-wise Waste work Activities Engagement	18
Figure 15:	Categories of waste other than Plastics	19
Figure 16:	Distribution of the types of waste sold by Romila	19
Figure 17:	Distribution of the types of waste sold by Mahesh	20
Figure 18:	Waste material profitability (Men vs Women)	20
Figure 19:	Earnings From Plastic Waste (men vs women)	21
Figure 20:	Earnings From Plastic Waste (MRF women vs Control Group Women)	21
Figure 21:	Distribution of Income from Waste Against Quantity – Romila	23
Figure 22:	Distribution of Income from Waste Against Quantity – Mahesh	23
Figure 23:	Monthly Expenses	24
Figure 24:	Debt Liability	26
Figure 25:	Monthly Debt Repayment Distribution	26
Figure 26:	Taken loan from any person you have a business relationship with (Control Group vs. MRF)	27
Figure 27:	Household Savings Ability	27
Figure 28:	Household Saving Each Month (Control Group women vs MRF women)	28
Figure 29:	Earnings Vs Savings – women's	28
Figure 28:	Household Saving Each Month (Control Group women vs MRF women)	28

Figure 29:	Earnings Vs Savings – women's	28
Figure 28:	Household Saving Each Month (Control Group women vs MRF women)	28
Figure 29:	Earnings Vs Savings – women's	28
Figure 30:	Mode of Saving Personal Income.	29
Figure 31:	Mode of Commute for Work	29
Figure 32:	Time taken in one-way commute (MRF women vs Control Group women)	30
Figure 33:	Time of Arrival at Work	30
Figure 34:	Everyday Working Hours (MRF Vs Control)	31
Figure 35:	Purpose of Mid-Day Break	31
Figure 36:	Employ Labour for Assistance (men vs women)	32
Figure 37:	Formal Training for waste-work (MRF vs Control)	33
Figure 38:	Stakeholders to whom the Participants are selling their waste (Men vs Women)	34
Figure 39:	Stakeholders to whom the Participants are selling their waste (MRF women vs Control Group Women)	34
Figure 40:	Reason to Sell (Men vs Women)	35
Figure 41:	Reason to Sell (MRF women vs Control Group women)	36
Figure 42:	Space for Waste	36
Figure 43:	Difficulties Due to Lack of Space For Segregation (men vs women)	37
Figure 44:	Government Policy Changes Demanded by wastepickers (men vs women)	37

Glossary

Santulan:	Balance/Equilibrium
OECD:	Organization for Economic Co-operation and Development
ULB:	Urban Local Body
EPR:	Extended Producer Responsibility
Godown Owner:	Waste Aggregator, Buyer
Dhalao:	Walled waste bins
MRF:	Material Recovery Facility
NDMC:	New Delhi Municipal Council
MCD-S/SDMC:	Municipal Corporation of Delhi (South Zone)
PET:	Polyethylene Terephthalate
PP:	Polypropylene
LDPE:	Low-density Polyethylene
HDPE:	High-Density Polyethylene
HM-HDPE:	High Molecular – High-Density Polyethylene
Guddi Plastic:	Mixed Plastic
FGDs:	Focused Group Discussions
Pheri wali/wala:	Small itinerant wastepicker





## Executive Summary

**W**omen wastepickers are doubly disadvantaged. Not only are they at a disadvantage due the informal nature of their work and status as a low-income group, but they also face gender-based discrimination. In the informal waste sector this takes various forms. One, women lack access to high value wastes (like PET plastics) as compared to men. two, the lack of space for work exposes them to threats of sexual and gender- based violence. Finally, their role as caregivers for the family only doubles their workload and impacts their working hours.

Chintan Environmental Research and Action Group partnered with the Incubation Network, Singapore, to conduct research with wastepickers working in Delhi. The goal was to understand gendered aspects of managing waste, with focus on plastic waste.

Based in Delhi, the research explored the following:

- What kinds of waste work do women engage in as compared to men?
- Does access to waste, particularly plastics, differ based on gender?
- How do women earn, spend, and save as compared to men?
- How do women run their business as compared to men?
- What are the perceived occupational risks for women as compared to men?
- Do familial and social networks help in leveraging better incomes and voices?
- What are the gendered outcomes for formally allocated space to work?
- What are the optimal working conditions for wastepicker women?

The study spanned over 8 months covering 24 participants in total in the municipal zones of New Delhi Municipal Council (NDMC) and Municipal Corporation of Delhi- South (MCD-S). Four wastepickers (2 males, 2 females) who worked in government acquired micro-material recovery facilities as ‘main participants.’ The list is as follows:

#	Participants	Sex	Area
1	5 Wastepickers	F	NDMC
2	5 Wastepickers	M	NDMC
3	5 Wastepickers	M	MCD-S
4	5 Wastepickers	F	MCD-S

AMONG THE WASTE WORKERS,  
11 PERCENT MORE WOMEN INVEST  
IN THEIR CHILDREN’S EDUCATION  
AS COMPARED TO MEN

A control group of 20 wastepickers were identified in the areas – 10 men and 10 women. They were further segregated by area, 5 women working in MCD-S and 5 women in NDMC. Similar segregation was done for men. What made these wastepickers different from the MRF participants was that they were not operating MRFs officially allocated by the municipalities.

They key conclusions of the report are as follows:

- 1. Decentralised waste management is key to women's participation:** Eighty percent of women take up to 30 minutes to reach their workplace, and seventy-five percent of women choose to travel on foot to their workplace as compared to forty-two percent of men. While none of the men reports taking breaks from work to carry out caregiving activities at home, 67 percent of women take breaks from work for meeting at their children's school, cooking food and other such family exigencies. Thus, workplaces that are closer to the women's homes are key to their participation.
- 2. Space for work is key to improving incomes for women:** The study finds that a hundred percent of the MRF women participants earn a household income above ₹ 25,000 per month, whereas sixty percent of the control group women earn below ₹ 15,000. None of the control group women have a household income above ₹ 20,000. It was also found that a hundred percent of the MRF women earn above ₹ 2,000 per week for plastics, whereas eighty percent of the control group women earn below ₹ 2000 per week. Thus, a positive correlation is seen between having space (such as micro-MRF or a dry waste collection centre) and improved incomes
- 3. Women have less debt, are better savers and invest in their children's education:** Even while the informal sector is highly dependent on loans, it was found that twelve percent fewer women have debt liability as compared to men. Further, while only 33 percent of men saved money, 75 percent of women saved money. Finally, even though a minor proportion of the wastepicker population invests in their children's education, 11 percent more women invest in the same as compared to men. 100 percent of the MRF women invest in their children's education. Thus, women's participation can help fight poverty, improve financial resilience among low-income communities and create a better future for children.
- 4. Women have less access to high-value plastics as compared to men:** While seventy-five percent of wastepickers reported that plastics bring them the most profit, an in-depth analysis found that women have less access to high-value plastics like PET (forty-two percent) as compared to men (fifty percent). While a 100 percent of the women procure over 10 kilograms of PET daily, only 30 percent of the control group women procure the same. Thus, a gender gap remains in access to high-value plastics, which can consequently impact incomes.

- 5. The threat perception of physical harm during work is high amongst women:** Seventy-five percent of women reported physical harassment as a potential threat at work, seventy percent reported sexual harassment as a threat and fifty-eight percent were fearful of harassment from officials. Thus, the current work environment is viewed as physically unsafe by women.
- 6. Kinship ties are a resource for better work in the informal waste sector:** Social networks are key to the kind of work and income wastepickers acquire in the informal sector. 83 percent of control group participants and 67 percent of MRF group participants reported that their family connections, friends, and acquaintances helped them acquire work. Some wastepickers reported that among acquaintances, civil society organizations working with wastepickers were important players in them getting work.
- 7. Cultural Barriers to Gender Equality are prevalent even if economic barriers are removed:** As was seen in the case of Romila, the NDMC MRF participant, she was a victim of gender-based violence and sexual rumour mongering from certain male members in the community due to insecurity over the space she had acquired for work. This reflects that even as women achieve economic equality and agency, cultural barriers still prevent complete safety and inclusion.



# 1 Introduction



POLICY DOES RECOGNISE THE ROLE  
OF INFORMAL WASTEPICKERS.  
IN REALITY, THEY ARE FAR FROM  
BEING INCLUDED

In her book, 'Invisible Women: Exposing Data Bias in a World Designed for Men'<sup>1</sup>, Caroline Criado Perez writes that the absence of gendered data isn't with an intent of malice, nor is it completely deliberate. The gender data gap, instead, is simply a product of "not thinking". In other words, for centuries when we have thought of 'human', we have thought of 'man'. Even if not deliberate, these gaps aren't harmless. They come with consequences whose brunt is borne by women and other gender minorities.

Instead, when data is collected and disaggregated based on gender it opens possibilities for equity and inclusion in policies, workplaces and households which can in turn improve productivity. The Council for Foreign Relations, for instance, finds that closing the gender gap in the workforce can add USD 28 trillion to the global GDP by 2025.<sup>2</sup>

The first step to eliminating the gender gap is to eliminate the gender data gap. Data is key to change and data has the answers. To take an oversimplified example, in order to identify why women do not join the workforce, data which tells us what impedes women from joining the workforce is a precursor. Data can nudge a new avenue of thinking for policymakers, and solutions are sought to remove and reduce the impediments. Even in the process of reducing impediments, data informs every step- be it the availability of solutions or the feasibility of budgeting and implementing the same.

This study is an effort exactly in this regard. It thinks deeply about gender and showcases data with women at its centre. The objective is to reduce adverse consequences caused by the data gaps on women and improve positive outcomes.

## INFORMAL WASTE SECTOR IN INDIA

Even though rendered invisible, waste management and recycling in India is dominated by informal workers. The OECD defines the 'informal sector' as consisting of units that produce goods and services which generate income and livelihood for the persons doing the same. The informal sector is characterised by small-scale production and low-level organisation. Labour relations are based on casual employment, kinship ties, and personal and social bonds. Formal guarantees and contracts do not bind the process.



In India, legislations like the Solid Waste Management Rules and the Plastic Waste Management Rules make the urban local bodies or municipal administrations responsible for providing the infrastructure and running the operations of waste management. The Rules also recognize the critical role of informal wastepickers and mandate their inclusion in the formal waste management process via the ULBs. However, their inclusion is far from reality based on various factors- capacity constraints faced by the ULBs, stigma against wastepickers, and their migrant status in Delhi. For instance, a 2018 study by Chintan found that most wastepickers in Delhi are from Assam, West Bengal, and Bihar.

As a result, an informal and parallel economy of waste work runs in Delhi and in India, at large- with an estimated 15 lakh + wastepickers. In Delhi, wastepickers collect 15-20 percent of the city's waste and almost all possible recyclable material is recycled.<sup>3</sup>

Their role is critical to keeping the city clean, and yet their lives and stories remain invisible to most. Apart from being economically vulnerable (for instance because of the 2008 recession, 41 percent of wastepicker families in Delhi stopped buying milk), they are also easily displaced. As private companies took charge of the collection and transportation of waste with the municipality, 50 percent of the informal workers were rendered irrelevant and illegal.<sup>4</sup>

Overall, their position as informal wastepickers remains volatile, despite their inclusion being mandated by the law.

## WOMEN IN THE INFORMAL WASTE SECTOR

Having discussed the particularly vulnerable position of informal wastepickers, it is important to introduce the concept of intersectionality to the rationale of this study. Intersectionality- as a term and concept was popularised by Kimberle Crenshaw in her 1991 article 'Mapping the Margins'.<sup>5</sup> Even though feminist scholars and activists of colour had been pushing to broaden the horizon of feminism since the 1970s, Crenshaw's article in 1991 nudged a change in the feminist narrative. Intersectionality further nuances the position of women in society and explains that some women are discriminated against more and differently than other women. In this regard, for instance, wastepickers are already marginalised due to their profession and informality and being a gender minority only doubles the discrimination.

But how are informal wastepickers women doubly disadvantaged? One way is that women are kept from the highest-value recyclables and are limited to the less remunerative aspects of waste work.<sup>6</sup> For instance, Chintan's work with wastepickers over the years has revealed that men perform the more outward-facing work of waste collection and trade, while women are limited to the work of segregation, often within their household. This will be discussed in further detail as the report progresses.

Another aspect of discrimination emanates from traditional gender roles. Women's role as mothers and caregivers prevents mobility and freedom to focus on their work as compared to men. The study will reveal in the later chapters that while men take breaks predominantly to go for lunch, women must take breaks for family emergencies and child-rearing.

Women are also not safe at their workplaces- for instance, the lack of space to work with safe restroom facilities can be a setback to their work. One of the longest and biggest tasks by the waste-picking community has been for safe spaces to work. For instance, a 2021 report by Chintan shows that 74 percent of wastepickers in Delhi work in unsheltered spaces exposing them to extreme weather conditions, road crashes or animal bites.<sup>7</sup> For women safety concerns also include fear of sexual and physical harassment.

Yet another way women are discriminated against is that they are often not in leadership or authoritative positions in the community.<sup>8</sup> Even if they are, and as the study will reveal, they are not completely immune from bearing the consequences of misogyny and gendered policing.

Given these factors, it seems that women wastepickers are at a disadvantage as compared to their men counterparts, which in turn also impacts their incomes.

The report, therefore, is an attempt at understanding the experience and the potential of women in waste recycling, primarily plastic waste.



## 2 About the Study



TO UNDERSTAND HOW GENDER  
FACTORS INTO THE BUSINESS  
OF WASTEPICKING, A STUDY OF  
SOCIAL NETWORK THEY EMPLOY  
AT WORK IS A MUST

**T**he goal of the study is to understand gendered data about informal wastepicking and segregating plastic waste. The objective was to use the data to help improve working conditions and leverage equity for wastepicker women. The research explored:

- What kinds of waste work do women engage in as compared to men?
- Does access to waste, particularly plastics, differ based on gender?
- How do women earn, spend, and save as compared to men?
- How do women run their business as compared to men?
- What are the perceived occupational risks for women as compared to men?
- Do familial and social networks help in leveraging better incomes and voices?
- What are the gendered outcomes for formally allocated space to work?
- What are the optimal working conditions for wastepicker women?

The report is a participation between Chintan Environmental Research and Action Group and The Incubation Network, a project by Second Muse and The Circulate Initiative under its Equality in Plastics Circularity initiative. The geographical location of the study is in Delhi, the capital city of India.

### METHODOLOGY OF THE STUDY

This research included both quantitative and qualitative instruments to derive data. The study spanned 8 months (April 2022-November 2022) and the data was collected via surveys, book-keeping records, and social network analysis including in-depth interviews and focused group discussions. Extensive field notes acquired through observation added nuance to the research. Nudges such as capacity building on financial and social security, as well as legal rights, and monetary incentives (providing fire buckets, dustbins etc.), also informed the research.

### Population and Sampling Process

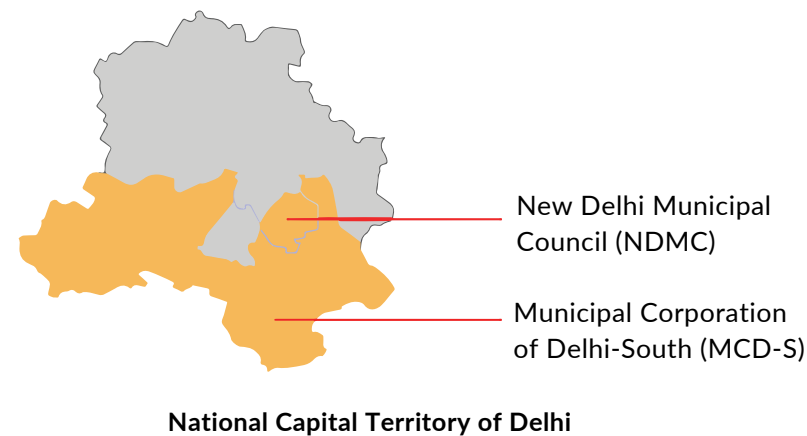
The participants in the study were divided into two groups – the micro-Material Recovery Facility (MRF)<sup>9</sup> worker group and the Control Group. The MRF group belongs to a facility where non-compostable solid waste can be temporarily stored by the local government or any other entity mentioned in rule 2 of The Solid Waste Management Rules, 2016. This waste can also be stored by any person or agency authorised by these entities. The purpose of this storage is to allow for the segregation, sorting, and recovery of recyclables from



various components of the waste by authorised informal sector wastepickers, informal recyclers, or other workers engaged by the local government or mentioned entity.

This process occurs before the waste is taken for processing or disposal. The MRF (worker) group consisted of four wastepickers working at a Material Recovery Facility (MRF) each. These are dhalaos or walled waste bins spread across the city which were retrofitted by the urban local bodies (ULBs) into micro-MRFs. These are under the jurisdiction of ULBs. Four micro-MRFs, which were subcontracted to Chintan were identified and upgraded to mini-MRFs. Each MRF was run by a wastepicker who formed a part of the study.

**Figure 1:** Locations we worked in, on a map of the National Capital Territory of Delhi



The four MRF group participants worked in areas under the jurisdiction of two municipalities: the Municipal Corporation of Delhi-South (MCD-S), and the New Delhi Municipal Council (NDMC).

While MCD-S is a subdivision of the Municipal Corporation of Delhi, an autonomous state body, the NDMC is operated by the Union Government of India. The participants were distributed equally in both areas: 1 woman wastepicker in each municipality, and 1 man wastepicker in the same manner.<sup>10</sup>

A control group of 20 wastepickers were identified in the areas – 10 men and 10 women. They were further segregated by area, 5 women working in MCD-S and 5 women in NDMC. Similar segregation was done for men. What made these wastepickers different from the MRF participants was that they were not operating MRFs officially allocated by the municipalities.

#	Name	Sex	Area	Name for the report
1	Romila	F	NDMC	NDMC Participant 1
2	Mahesh	M	NDMC	NDMC Participant 2
3	Kanti	F	MCD – South/ SDMC	SDMC Participant 2
4	Rafeeq	M	MCD – South/ SDMC	SDMC Participant 2

**Selection Process**

**MRF Participants:** These were wastepickers who had either recently been allotted an MRF by the municipality via Chintan (in the case of NDMC). In the case of MCD-S, these participants were identified as the *dhalaos* who were allotted to Chintan at the start of the study.

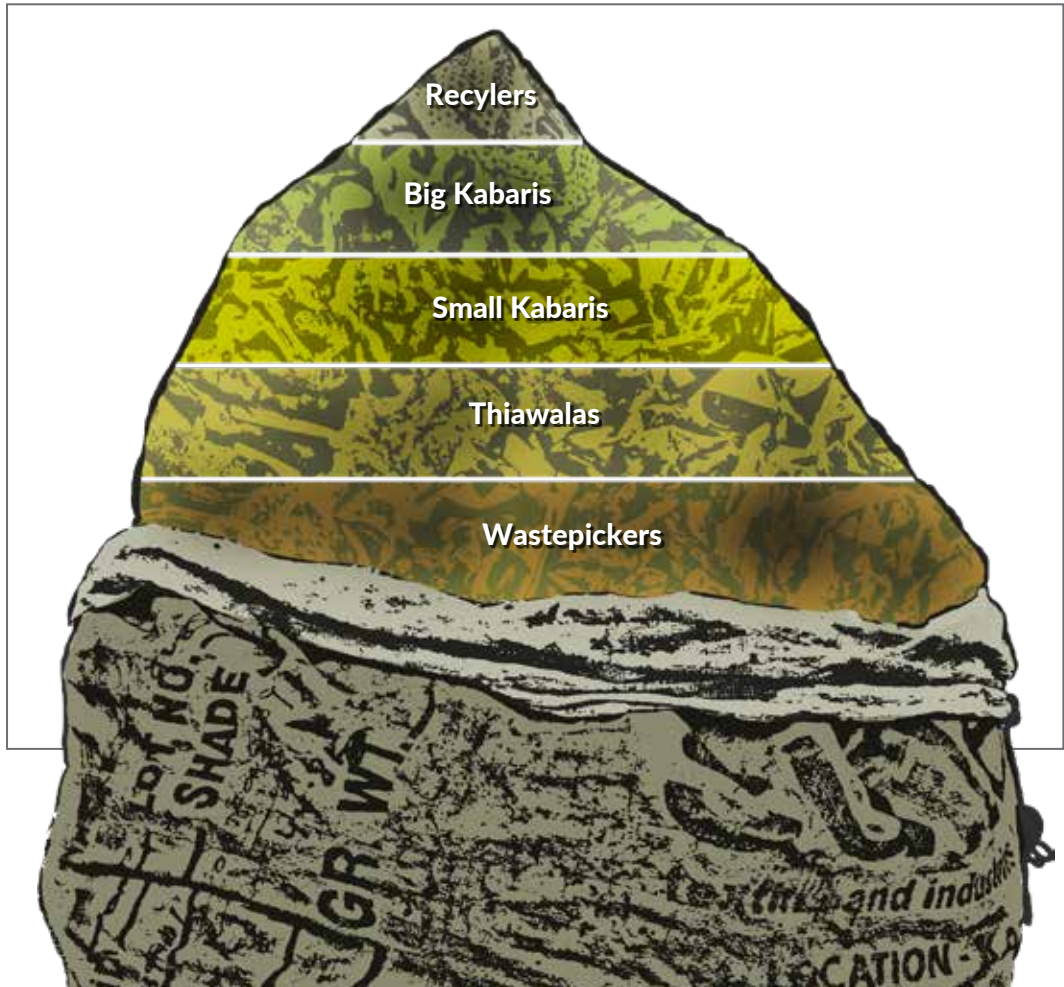
Availability of the MRF itself became the biggest determinant in the selection of participants as procuring spaces to work from the government for informal wastepickers is one of the biggest and most tedious challenges for those who advocate for the inclusion of wastepickers.

**Control Group:** The control group participants were selected randomly from wastepicker clusters in both municipal areas. The only thing borne in mind was that they were not operating in MRFs allocated by the municipality. Based on the objective of the study, it was ensured that an equal number of men and women were included.

**Profile of the Participants**

Waste management in India is largely carried out informally. It is estimated that India has some 15 lakh+ wastepickers. Solid waste management is particularly dependent on informal labour, which can be classified based on the stage of the recycling process. A report by the Chintan has classified the informal recyclers corresponding to the stage of recycling they contribute. The figure below represents the pyramid of the waste recycling system in India.

**Figure 2:** Pyramid of the informal waste recycling system<sup>11</sup>





The participants in this study represent the population of Stage 1 recyclers in Delhi. These recyclers are the primary buyers and collectors of waste. They range from wastepickers who collect from roadside dustbins, and households to landfills. They may even be itinerant waste traders. The MRF group participants may fall under the category of itinerant waste buyers while the control group consists of a mixture of wastepickers and itinerant waste buyers who may own a vehicle to transport waste.

## SURVEY

The survey was the first instrument used in the research. The process of designing, piloting, and conducting the survey spanned from April to July 2022. All 24 participants were included in the process.

The master survey consisted of 10 sections and 70 questions. It covered themes like expenditures, savings, debt, working hours, commute, types of waste collected and traded, employee relationships, occupational hazards, working conditions and training and assistance. Each survey took 30 to 45 minutes to complete. The surveys were conducted at the participants' places of work.

## RECORD SHEETS – BOOK-KEEPING

Data was collected in the form of record sheets which may be understood as a method of bookkeeping. These record sheets were devised to keep a weekly record of

- a) The Quantum of waste collected, segregated, and traded
- b) Expenses incurred for acquiring, transporting, and storing waste
- c) Income earned from selling segregated waste
- d) Recording different categories and subcategories of waste traded, especially plastics
- e) Recording the activities undertaken by the wastepickers

The aim was to understand gender differences in access to waste and income from trading waste. This exercise was conducted with the MRF group.

The record sheet which was introduced as an intervention was designed in collaboration and consultation with the wastepickers. This process was used to understand the capacities of wastepickers and build capacity wherever needed.

The record sheet data were collected over the months of August and September 2022 and wastepickers were trained in filling up the same. The participants also received support from the researcher who visited to support them and verify their data on a weekly basis.

## SOCIAL NETWORK ANALYSIS AND MAPPING

One of the key features of informal work is its dependence on social relationships. Labour and occupational relationships are determined by kinship and personal and social relationships instead of formal contracts or guarantees.<sup>12</sup>

For a deeper understanding of how gender factored into the business of waste recycling among the informal community, a study of the social networks of the wastepickers used at work was imperative.

The Social Network Analysis and Mapping were conducted in two ways: in-depth interviews and focused group discussions (FDGs).

The in-depth interviews were conducted in September with the MRF group. From the control group, 3 people were identified from each of the two municipalities of which 50 percent were women and 50 percent were men. The questionnaire focused on who introduced them to the waste picking, the relationships that they built in the process of buying and selling waste, whether they had been trained and upskilled in the profession etc. The data was then visualised on social network maps.

The focused group discussions were held in two phases. In the first phase, the selected participants were invited and encouraged to bring someone they buy or sell their waste.

The second phase of focused group discussion was held to provide a safe space for women participants to speak about their restrictions in the mobility of conducting business. Only the women participants who attended the first phase of the focused group discussion were invited.

## LIMITATIONS OF THE STUDY

Conducting research of this kind with people working in the informal sector comes with its own set of challenges. The key challenge was the small scale of the study. This is an initial study and can be expanded to cover more geographies and people.

The record sheet focused on going in-depth into the kinds of waste purchased by the MRF Group and the income generated from it. To a person conducting business, this data would be considered confidential. As NDMC participants had known and worked with Chintan for many years, they were willing to share the data. They were also willing to be trained in the new format of filling in the data and saw it as a positive intervention.

Consequently, the data received from them is rich and insightful. On the other hand, when the record sheet was introduced to the MCD-S participants, they were not keen on sharing the data.

Kanti eventually agreed to share her data through trust building and support shown to her in upgrading her workspace. (MCD-S female MRF participant)

However, her male counterpart Rafeeq stopped sharing data halfway. He expressed discomfort in sharing information with women researchers.

This indicates that time for trust building and training, especially when seeking confidential data for research, should be incorporated in timelines.



MALE WASTE WORKERS MOSTLY  
TAKE MID-DAY BREAK TO HAVE  
LUNCH , WHILE WOMEN COOK  
FOOD OR ATTEND CHILD'S SCHOOL  
MEETING OR FAMILY EMERGENCY

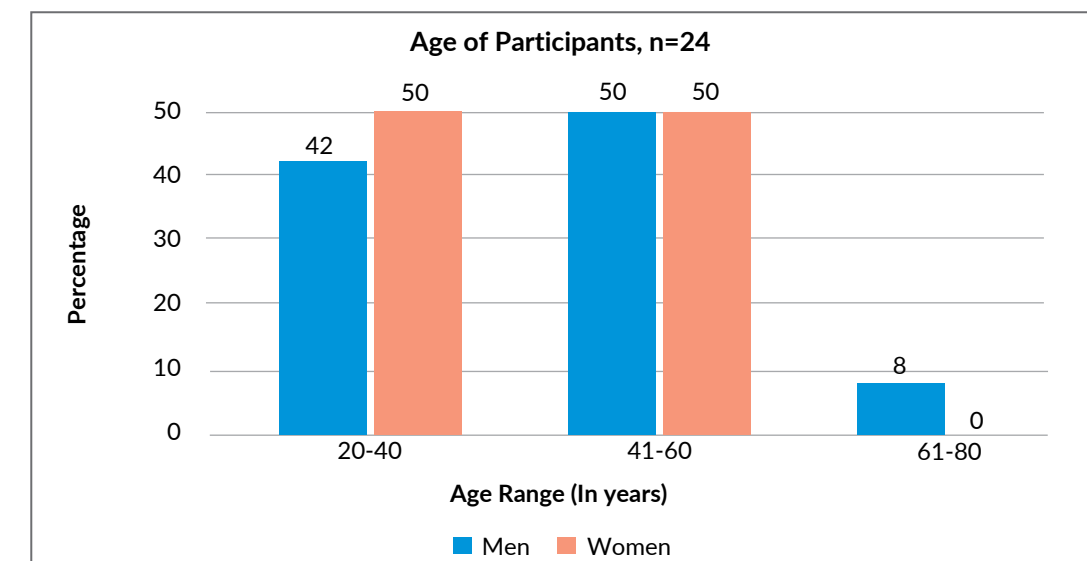
# 3 Results

## SOCIAL DYNAMICS

### Demographics

**Age of Participants:** The study finds that most of the wastepickers surveyed are in the productive working age group- between twenty to sixty years. Only 8 percent of women wastepickers are above sixty while no men surveyed belonged to that age group.

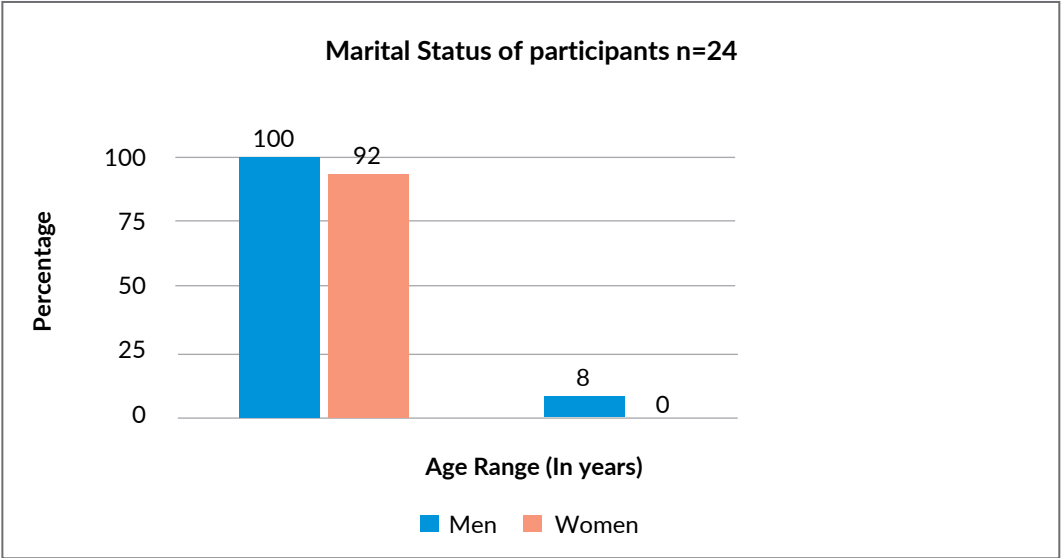
Figure 3: Age of Participants



**Marital Status of the Participants:** All but eight percent of the women surveyed in the study are married.



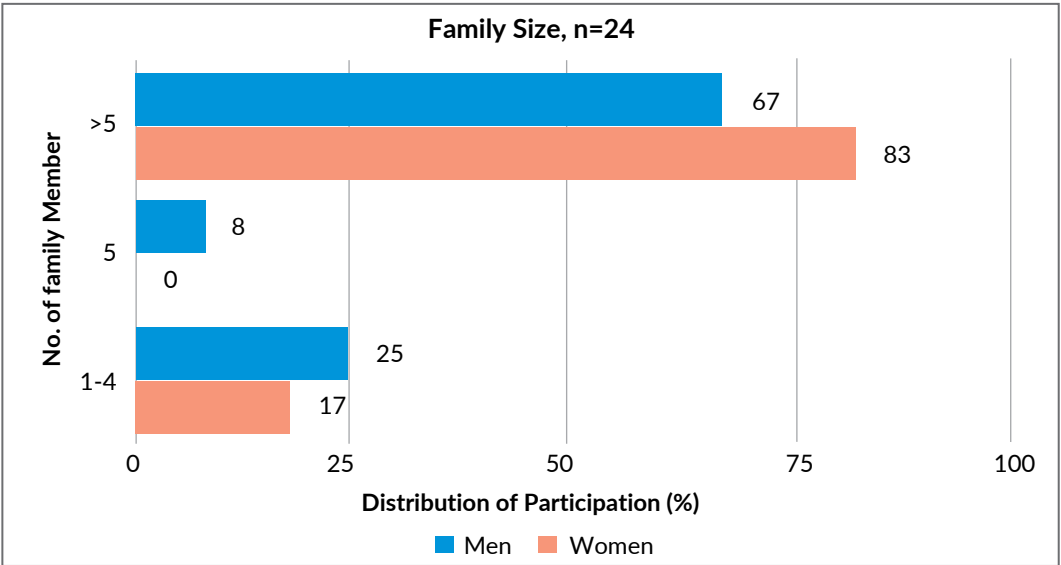
Figure 4: Marital Status of Participants



Family and Relationships

**Family size:** The women in the survey had a larger family size (more than 5 members) as compared to men.

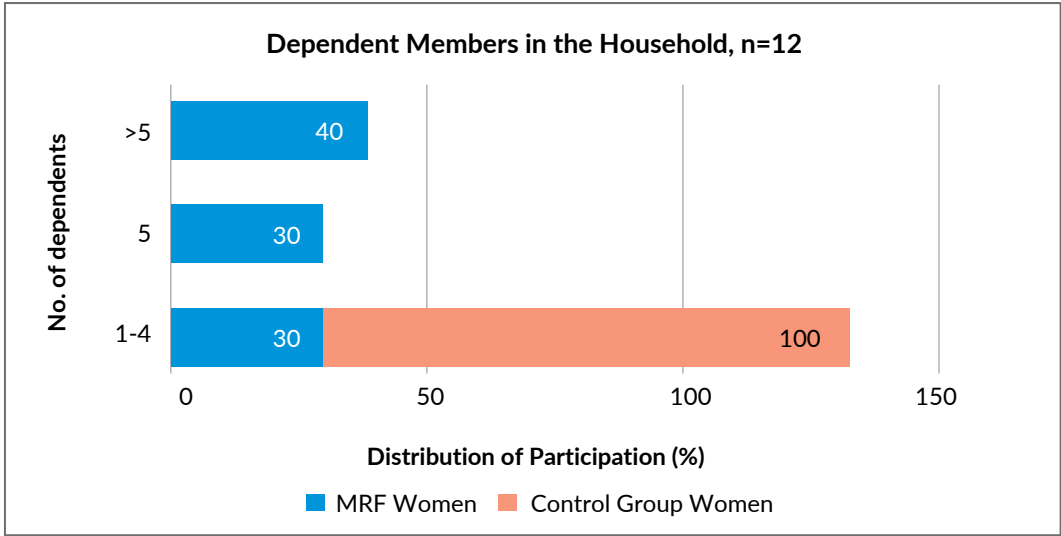
Figure 5: Family Size



**Dependent members of the household:** The control group women have more dependent members as compared to MRF women. 70 percent of the total control group women respondents have five or more family members who are dependent on them. Both men and women respondents have similar numbers of dependents.

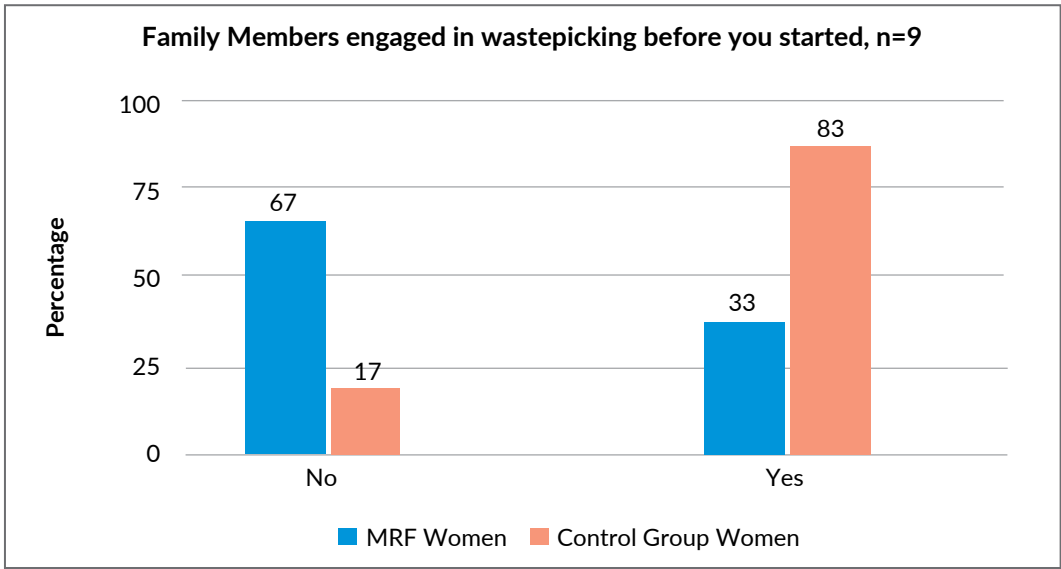
It appeared that the MRF women were aware of the benefits of having limited children in a family.

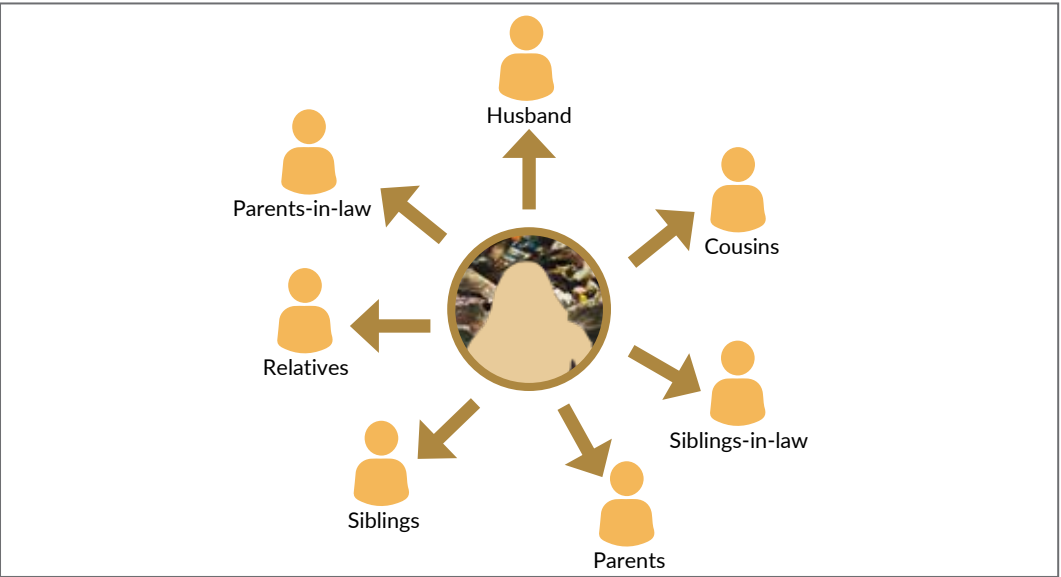
Figure 6: Dependent Members in the Household (MRF women vs. Control Group women)



**Family Engaged in Wastepicking:** Eighty-three percent of the control group reported that their family members were engaged in waste picking before they started. This may indicate the persistence of poverty which limits the choice of profession. It may also indicate that kinship ties influence the choice of work to be taken up due to familiarity and convenience. Further, an equal number of men and women (67 percent each) said that their families were engaged in waste picking before they started.

Figure 7: Family members engaged in Waste Picking (MRF vs. Control Group)

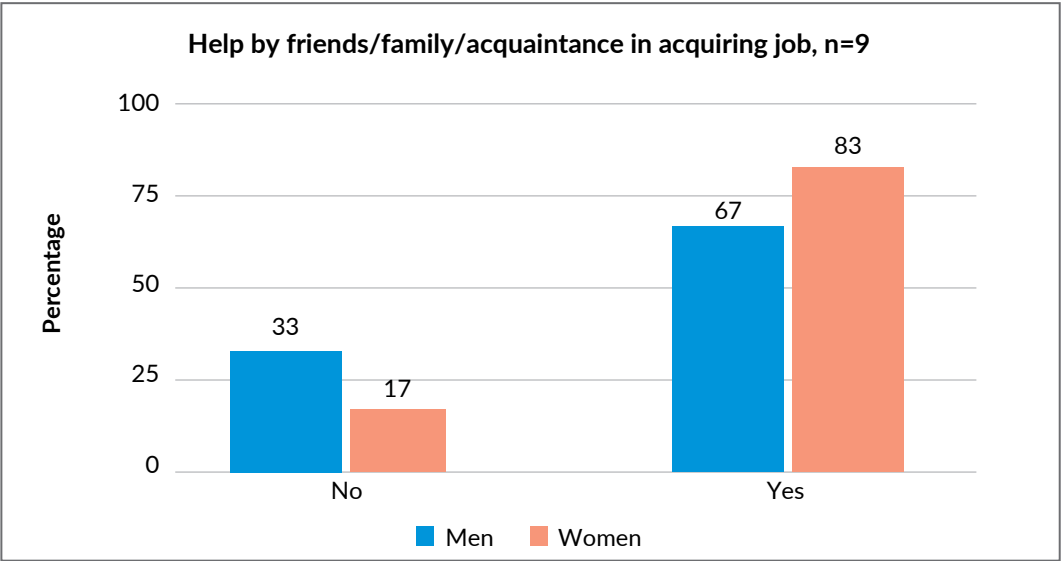




**Support from family members/acquaintances to acquire waste work:** The figure above indicates family members, ranked by degree of importance, who have reportedly helped the wastepicker respondents in acquiring work. A wastepicker survey reported that family connections in a profession made it easier for him to get into the profession. In his case, it was his parents.

Eighty-three percent of control group participants and sixty-seven percent of MRF group participants reported that their family connections, friends, and acquaintances helped them acquire work. Some wastepickers reported that among acquaintances, civil society organizations working with wastepickers were important players in them getting work.

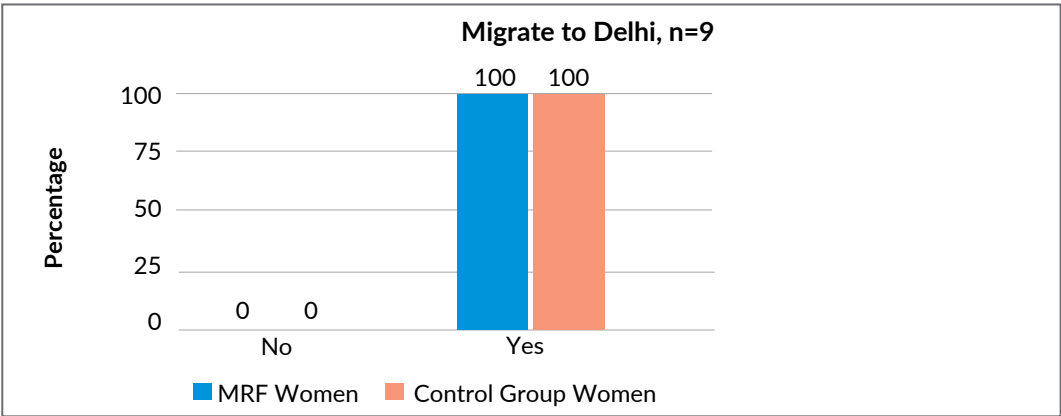
Figure 8: Family connection help (Men vs. Women)



Migration

**Migrant Status:** Hundred percent of both the MRF and Control group in social network analysis are migrants living in Delhi. This also explains why support from family, friends and acquaintances becomes necessary to procure work- or why a profession which already has family members employed becomes the easier choice.

Figure 9: Migration to Delhi (MRF vs Control)



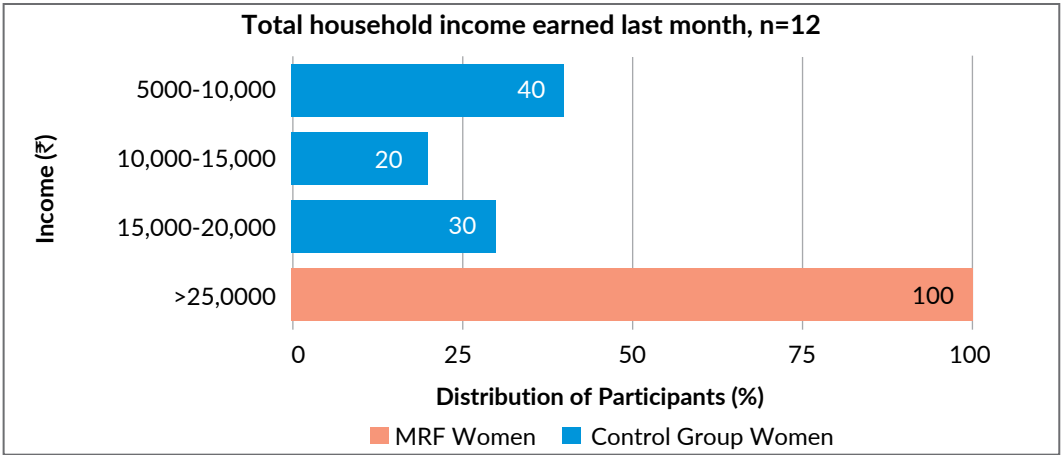
FINANCIAL DYNAMICS

Income

This section explores the incomes earned by wastepickers. Total household income earned: The MRF women have more household income as compared to the control group women. While 100 percent of the MRF women earn more than ₹ 25,0000 as household income, 60 percent control group women earn ₹ 10,000 or less.

The difference of ₹ 15,000 indicates that formal spaces for work are critical to help women earn better.

Figure 10: Total Household income earned last month (Control Group Women vs MRF Women)





Earning Members of the Household: Fifty percent of the men surveyed are single earning members of their family. Only 8 percent of households are women the singular earners. 50 percent of the women work and earn alongside their spouses, while the rest report that there are two or three more earning members in their family apart from them. This indicates that women often enter the profession to add to the incomes of the family.

Figure 11: Earning Members in the Household (Men vs. Women)

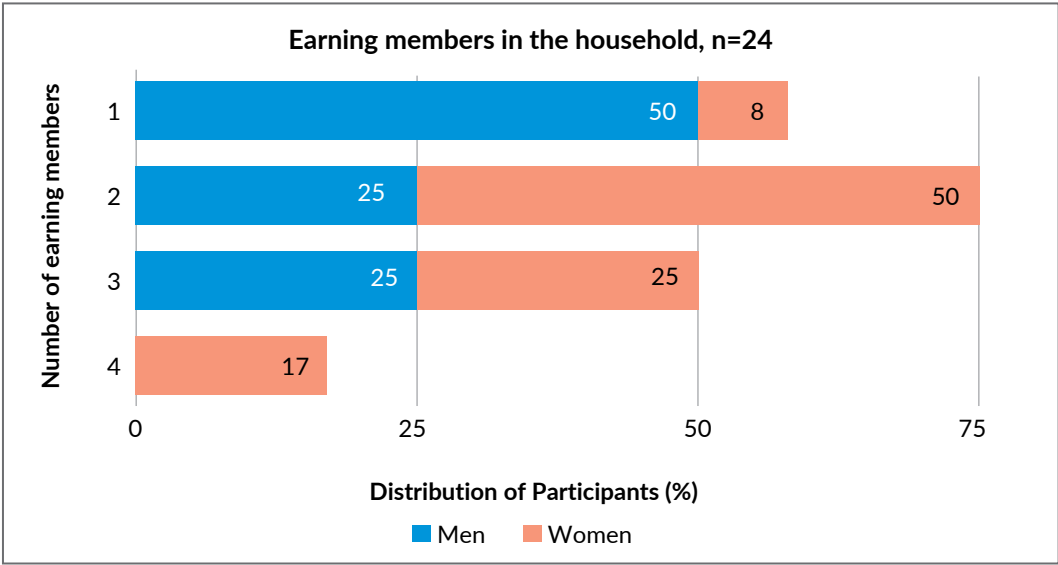
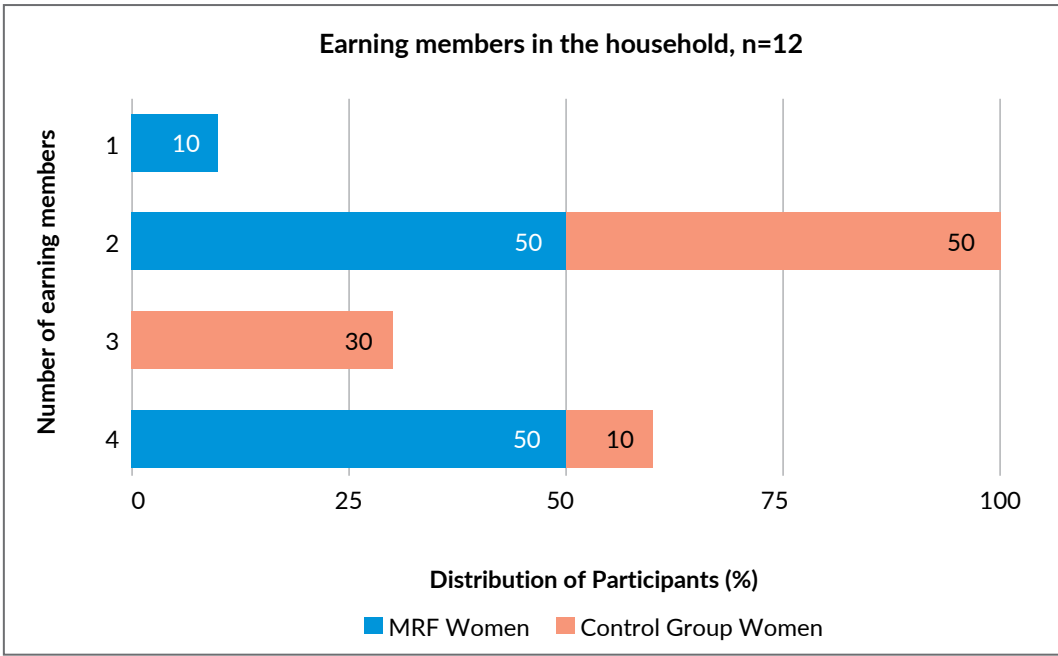


Figure 12: Earning Members in The Household (Control Group women vs MRF women)



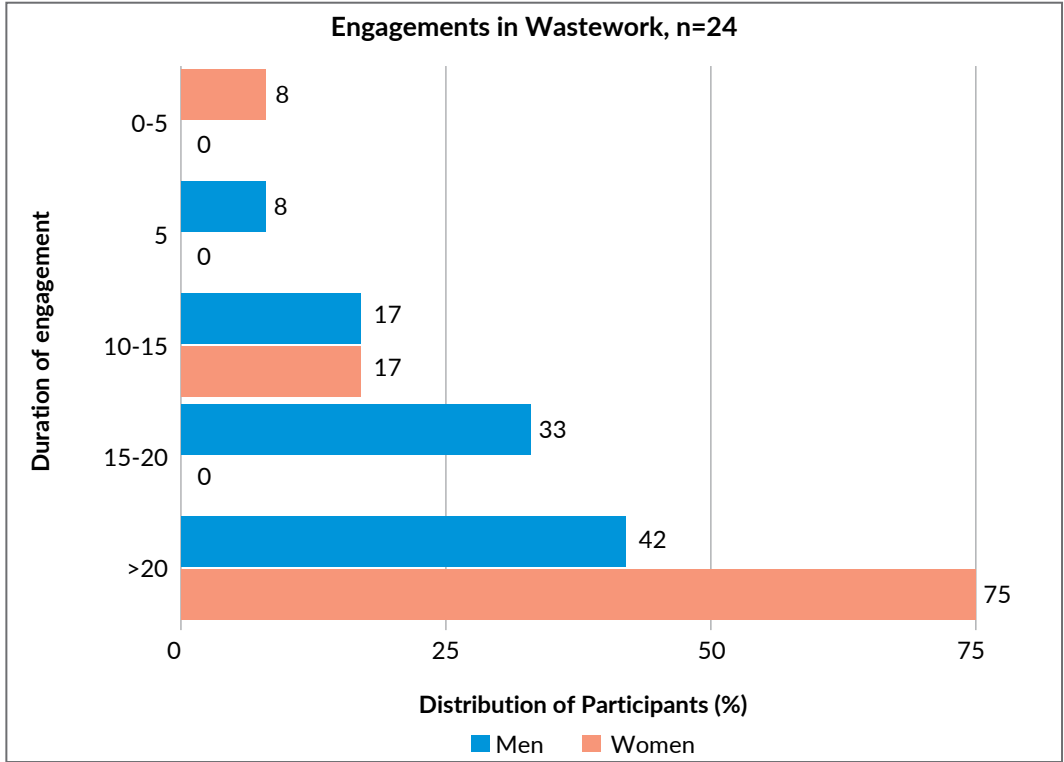
Earning From Waste

This section studies the earning wastepickers have from waste.

ENGAGEMENT IN WASTE WORK

Majority of wastepickers have been working with waste for 15+ years. 76 percent of women as opposed to 42 percent of men are engaged in waste work for more than 20 years.

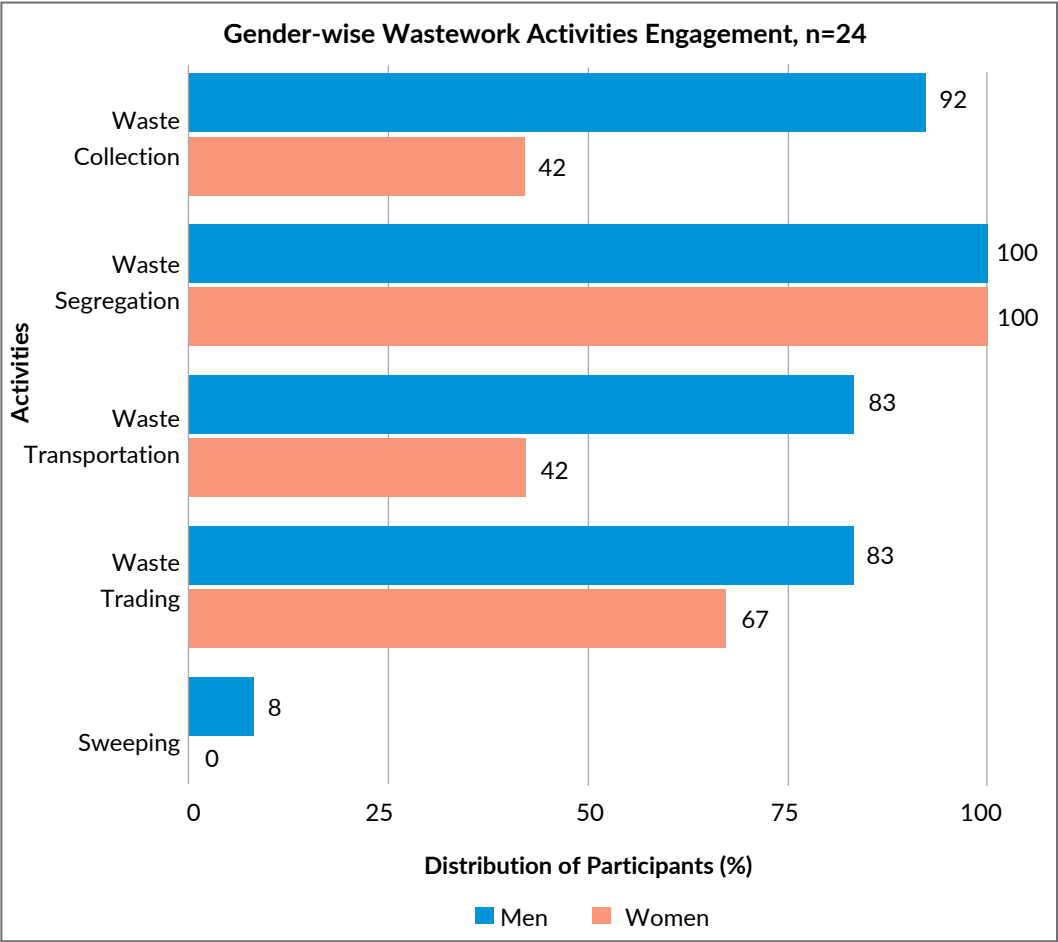
Figure 13: Engagement in Wastework (Men vs. Women)



**Type of Waste Work:** Hundred percent of men and women respondents are involved in waste segregation. 91 percent of men are involved in waste collection while 84 percent of them are involved in waste transportation. As opposed to this high percentage, only 42 percent of women are involved in waste collection and transportation. Lesser women (66 percent) than men (84 percent) are involved in the waste trade. This indicates that women are not as involved as men in outdoor facing or other activities. This is further proven as 66 percent of men are involved in door-to-door waste collection, as opposed to 16 percent of women.

Sushila (name changed), one of the control group women, stated that as a wastepicker, her task was only to segregate waste that her husband collected and brought home. Post segregation, he would then go to the local waste godown owner to sell the waste. She attributed her indoor-facing role to societal stigma. Her community folks would ridicule her husband as incompetent if she stepped out for work.

Figure 14: Gender-wise Waste work Activities Engagement

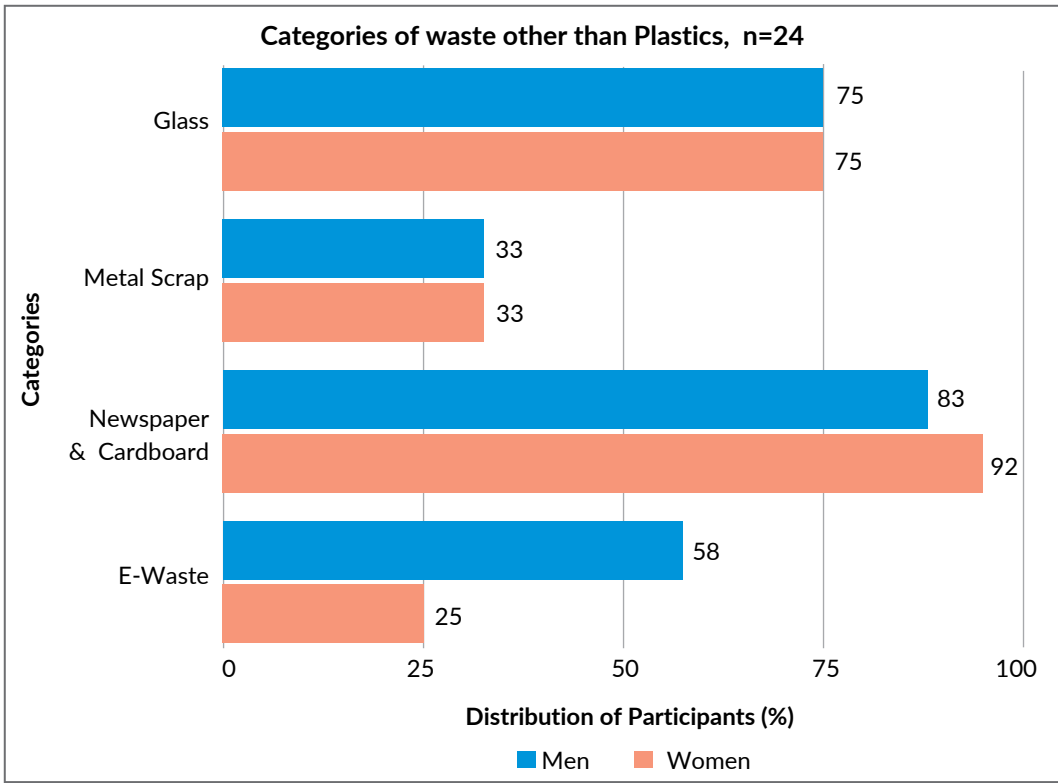


WHAT KIND OF WASTE DO THE WASTEPICKERS COLLECT?

Hundred percent of wastepickers reported working with plastic waste. When asked about the other kinds of waste they worked with, most women (92 percent) and men (83 percent) reported that they collected newspaper and cardboard, followed by glass. 58 percent of men reported working with domestically hazardous waste as opposed to 25 percent of women.

The record sheet analysis of the wastepickers, Romila and Mahesh (MRF participants) revealed that they recorded and segregated their waste into 3 major categories – plastics, cardboard and paper, and glass bottles. These categories were further segregated based on their sale value. Plastics were further hyper-segregated into three categories- PET bottles, milk packets (Low-density Polyethylene – LDPE), and mixed plastics (colloquially known as guddi plastic) which contains a mix of various materials of plastics like High-Density Polyethylene (HDPE) High Molecular – High-Density Polyethylene (HM-HDPE), Polypropylene, LDPE, etc.

Figure 15: Categories of waste other than Plastics



The distribution of types of wastes collected and sold by Romila and Mahesh is shown in the diagram.

Figure 16: Distribution of the types of waste sold by Romila

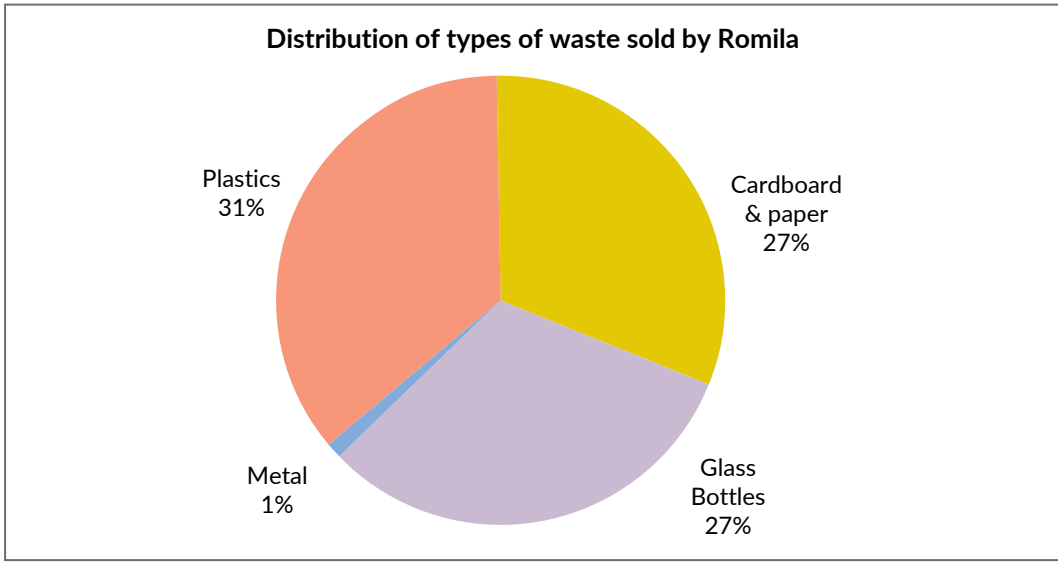
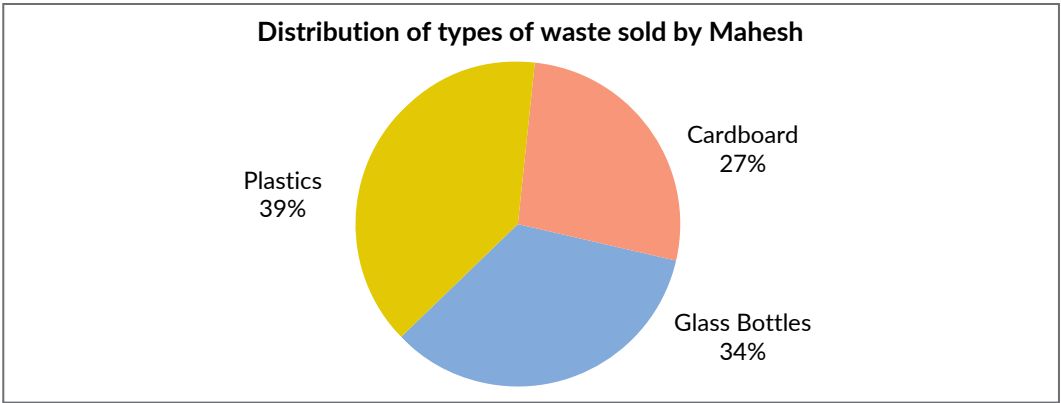




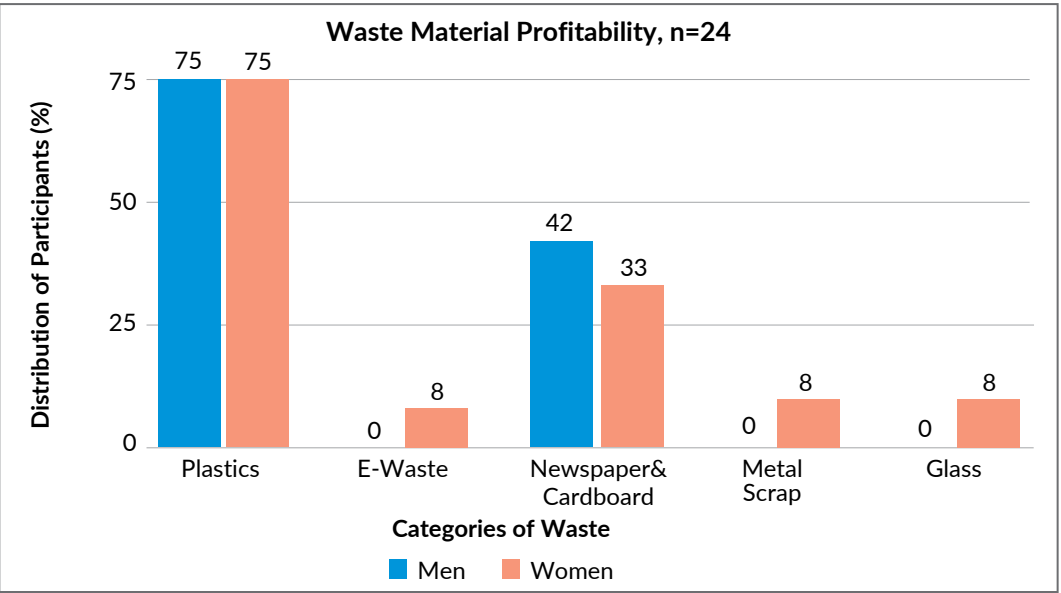
Figure 17: Distribution of the types of waste sold by Mahesh



INCOME FROM PLASTICS

Both men and women (seventy-five percent) reported that they earn the most from plastics and that it brings them the most profit. This is followed by paper and cardboard, while 43 percent of men earn profits from the same, and 33 percent of women earn from the same. Clearly, plastics are the most profitable for wastepickers.

Figure 18: Waste material profitability (Men vs Women)



A further investigation on access to high-value plastics like PET reveals that a hundred percent of the MRF women procure PET above 10 kilograms and only thirty percent of women in the control group. 50 percent of men in the control group procure PET above 10 kilograms. Overall, while 50 percent of men procure over 10 kilograms of PET weekly, the number for women is 42 percent. Further, 17 percent of women procure less than 5 kilograms of PET.

The data shows that men have greater access to high-value plastics as opposed to women. However, MRF women become outliers as compared to this trend. Formalized space and permits to work are seen to be beneficial for women to cover the gap in access.

Earnings from Plastic Waste: It is seen that the MRF women earn above ₹ 2000 per week for the plastic waste they sell. The MRF women earn more than the control group women.

A significant percentage of men (forty-two percent) earn between ₹ 1000-2000 per week for the plastic waste they sell, for women it's between 500-1000 (forty percent). Thus, women earn less than men. This can be attributed to less access to high-value plastics as well as comparatively less bargaining power.

Figure 19: Earnings From Plastic Waste (men vs women)

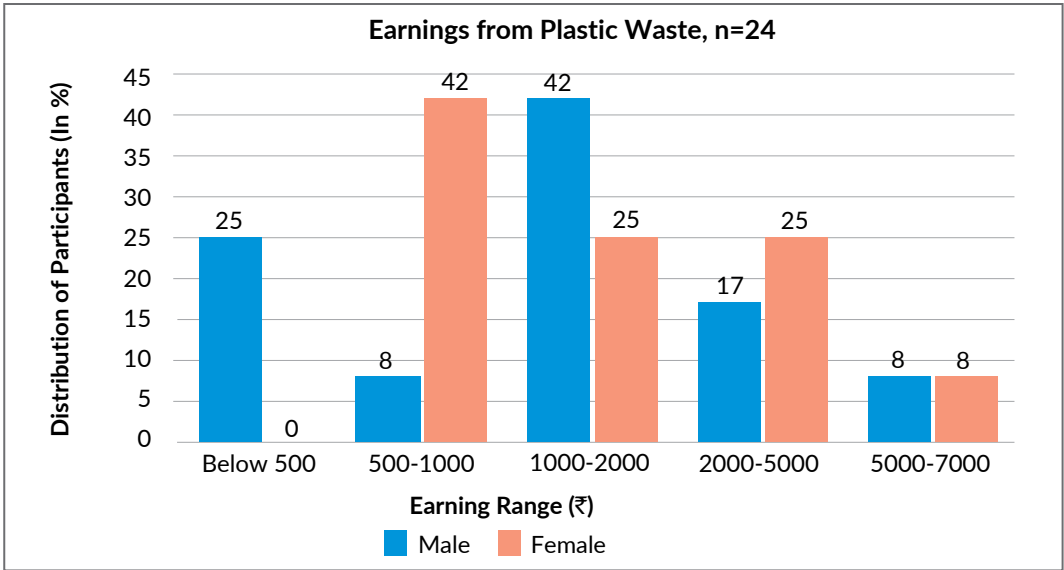
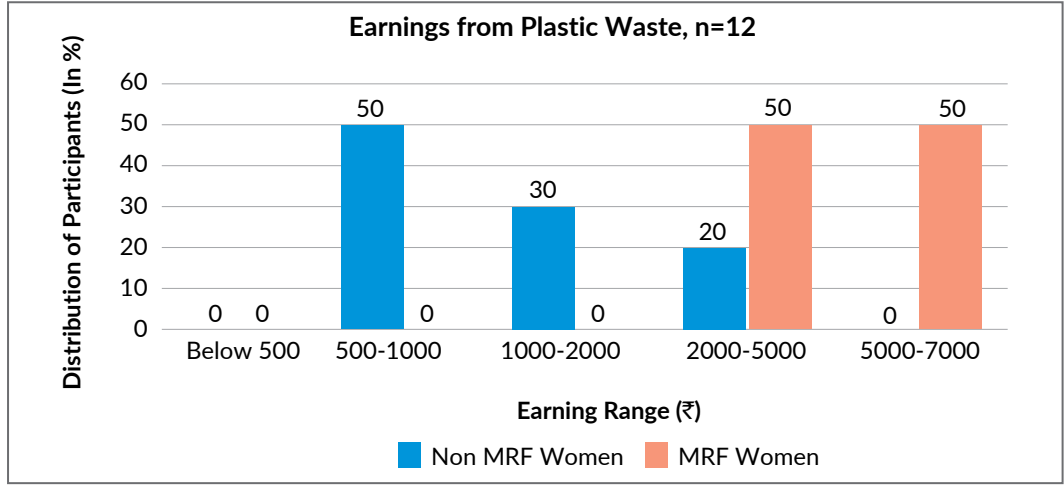


Figure 20: Earnings From Plastic Waste (MRF women vs Control Group Women)



KARISHMA’S STORY: THE POWER OF WOMEN’S GROUPS

Karishma’s husband is a wastepicker collecting waste from large bins on a cycle and selling the segregated waste to small itinerant buyers. While her husband collects and sells waste, Karishma segregates waste along with other women in her neighbourhood. Sitting as a collective and segregating waste, these women tend to do household duties in the morning and evening and segregate waste in the afternoon. At first go, all of them identify themselves as homemakers and are not aware that their labour has an economic value. On being asked about their income from waste, they explain that all the income generated is brought home by their husbands and is used for household expenses.

These women do not have access to personal income and mention that their husbands are alcoholics. The men often drink because it’s otherwise difficult to work with the smell of the waste. This has resulted in lower savings and a prevalence of gender-based, physical violence.

When the women are asked about their involvement in selling the waste that they themselves segregate, they are unable to fathom the idea. They explain that speaking to a male apart from close relatives is frowned upon. It’s both about physical safety and normative behaviour. Society rewards women who follow the norm.

Karishma finds it difficult to talk about the challenges she faces domestically and as a woman. To help her overcome the barrier, she was invited to training sessions on financial literacy, legal literacy, and occupational safety and hazards conducted by Chintan. She attended these trainings and subsequent discussions with other women wastepickers. Here she also got the chance to interact with Romila and Kanti, the MRF participants.

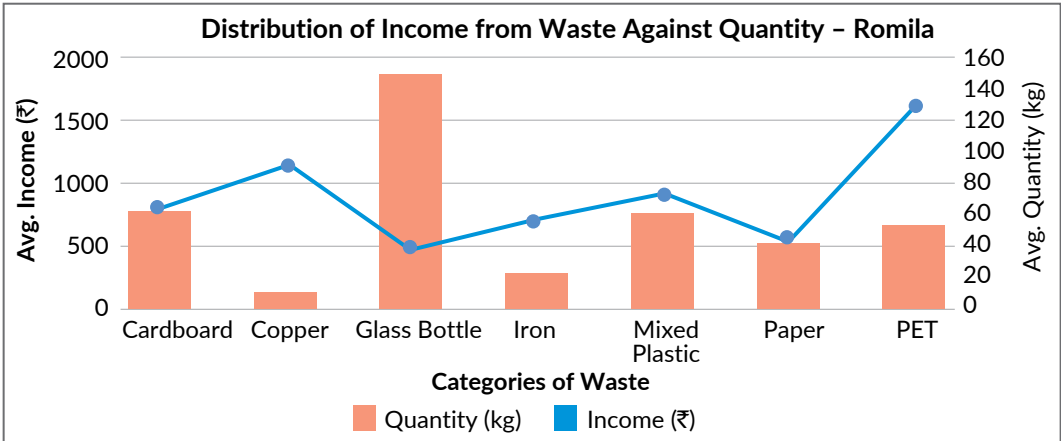
Post the capacity-building programs and meeting with other wastepicker women, Karishma exhibited higher self-confidence. She learned about the prevalent rates of waste materials through her interactions and realised that her husband was getting 7 times lower rate than other participants. Before these sessions, Karishma’s household did not earn an income in case her husband fell sick. After learning how other wastepicker women were empowered enough to not only sell their waste but also, negotiate for higher prices, Karishma took ownership of selling waste when her husband was not well and negotiated for a higher rate.

**Plastic incomes captured on record sheets:** The sale value of the waste materials, as opposed to quantity, explains which waste materials fetch the highest price to the wastepickers. The figure below represents the distribution of income from waste against quantity sold by Romila for the months of August and September 2022. The horizontal represents the categories of waste, the left vertical axis represents the average income earned

from the waste sold in ₹ while the right vertical axis represents the average quantity of waste sold. The line represents the income while the clustered columns represent the quantity.

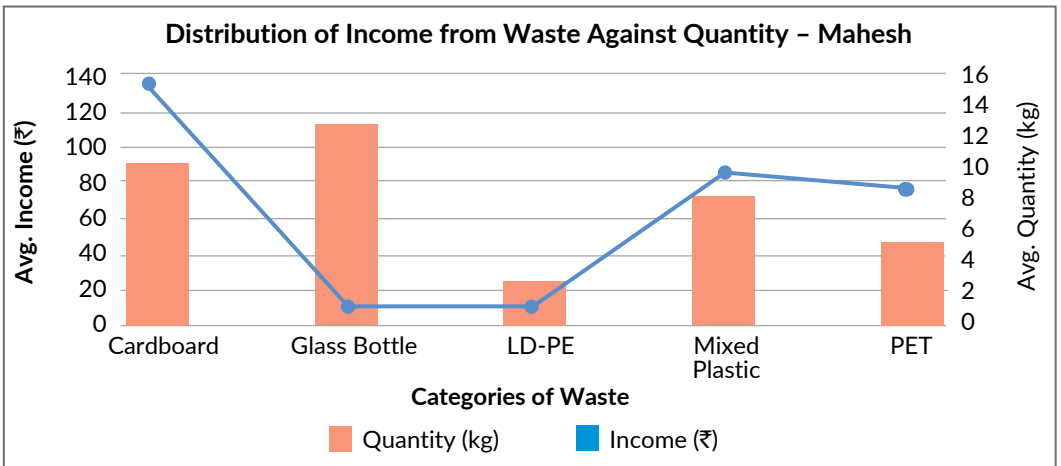
From the figure depicting Romila’s distribution of income, it is observed that PET bottles fetch the highest income. Even though glass bottles are collected the most, they bring the least income.

Figure 21: Distribution of Income from Waste Against Quantity - Romila



A similar comparison of Mahesh’s average income and quantity collected for the months of August and September 2022 reveals that while the quantity of cardboard collect is high and the income from it the highest, PET and mixed plastics are close competitors.

Figure 22: Distribution of Income from Waste Against Quantity - Mahesh



A 2021 study by Chintan<sup>13</sup> finds that forty to sixty percent of wastepicker incomes are dependent on plastics. This study too comes to a similar conclusion: plastics are profitable for wastepickers, but men have access to more high-value plastics than women.

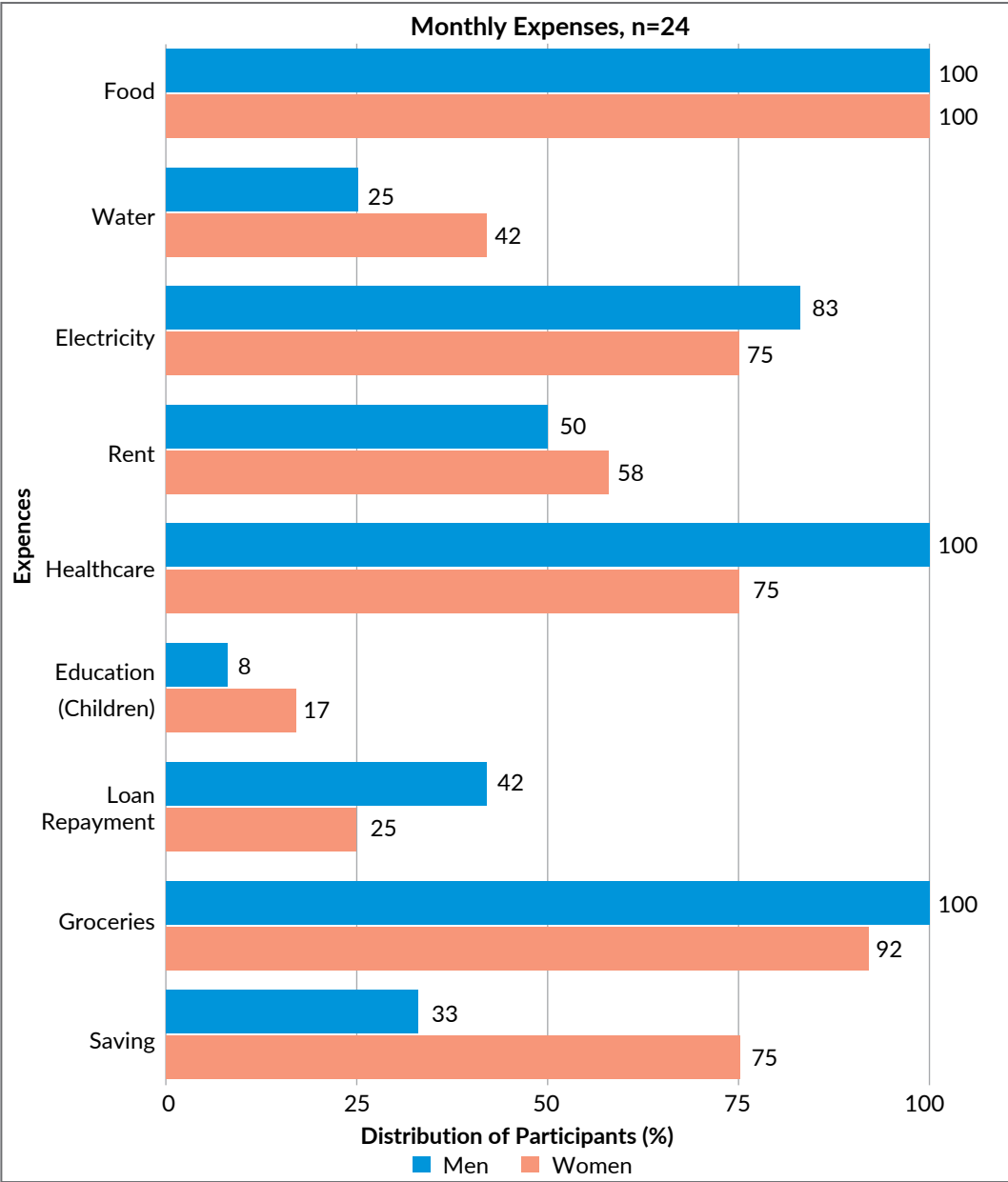


Expenditure

**Monthly Expenses:** It is seen that women spend more on rent, water, and children's education. 100 percent of the MRF women spend on the education of their children. These women appreciate the value of educating their children, and their increased earnings help them invest in the same.

It is also seen that as compared to men (thirty-four percent), over seventy-five percent of women, more than double, save money.

Figure 23: Monthly Expenses 7



SAROJA'S STORY: PETS ARE FAMILY TOO

When walking through a residential area near central Delhi, one can find folding beds stacked with everyday essentials on every corner of the street. These belong to the informal labourers living and working there. Among them is Saroja, a migrant worker from Bihar and a wastepicker.

Saroja came to Delhi in search of her missing husband. Soon after she arrived, she understood that her husband had abandoned her leaving her to fend for herself. Saroja worked for her for a measly income, food, and shelter, where she also learned wastepicking. Saroja continued working in this godown until a few years later, she had a confrontation with the owner about not receiving her wage on time. Reporting this matter to the local policeman, she left the godown with her remaining wage.

She has since been working as a 'pheri wali' or a small itinerant wastepicker collecting waste from large bins and dumpsites. She befriended a municipal worker in the Bengali Market area who helped her in acquiring the space where she works and lives. Living on the street, her belongings are stacked on her folding bed and a firewood hearth is opposite a space she has dedicated to segregating the waste she collects.

Roaming around the market she collects wet and dry waste from the famous sweetmeat shops, small clinics, and large bins kept around the market. She contributes to the income of her marital home back in Bihar. She has recently been joined by her husband's nephew who contributes to her income. She complains of him indulging in intoxicants and not contributing enough to the work. In the control group, the researchers came across 3 such duos and 1 trio where the older wastepicker segregated waste while the younger ones collected and transported it. In Saroja's case, however, she is the one collecting waste on a tricycle while her nephew segregates the waste. She is directly exposed to biomedical waste she collects from the small clinic. None of the wastepickers working in the area has any access to PPE kits.

Saroja does not have formal permits for the space she uses to segregate waste. She expressed the fear of all her belongings getting confiscated at any given point in time. Moreover, the lack of space and inability to transport waste to longer distances, makes her very dependent on the godown owner she sells to and has to agree to their prices.

Saroja earns about Rs 8,000 to 10,000 a month, which she shares with her nephew and her relatives in Bihar. After all the struggles she has encountered on the familial front, she has found a little family in Bhura, her dog, and Kali, her cat. Despite bare minimum earnings, she makes sure that Bhura and Kali are well fed and properly taken care of. She often buys them pet food.

Debt

**Debt Liability:** Sixty-seven percent of men and fifty-five percent of women have taken loans and are liable to pay the debt. Overall, men have greater debt liability than women.

A 2015 discussion paper by UN Women studying debt patterns in Ecuador, Ghana, and Karnataka (India), finds that men within households hold more debt than women. In Karnataka, the difference is the biggest.<sup>14</sup>

A post-COVID report by ActionAid finds that with low wages and declining savings, the dependence on loans was a reality at 47 percent in urban areas since 1st June 2020.<sup>15</sup> This report echoes the same (even though not linked with COVID) with a combined total of 61 percent wastepickers having some or the other kind of debt liability.

Figure 24: Debt Liability

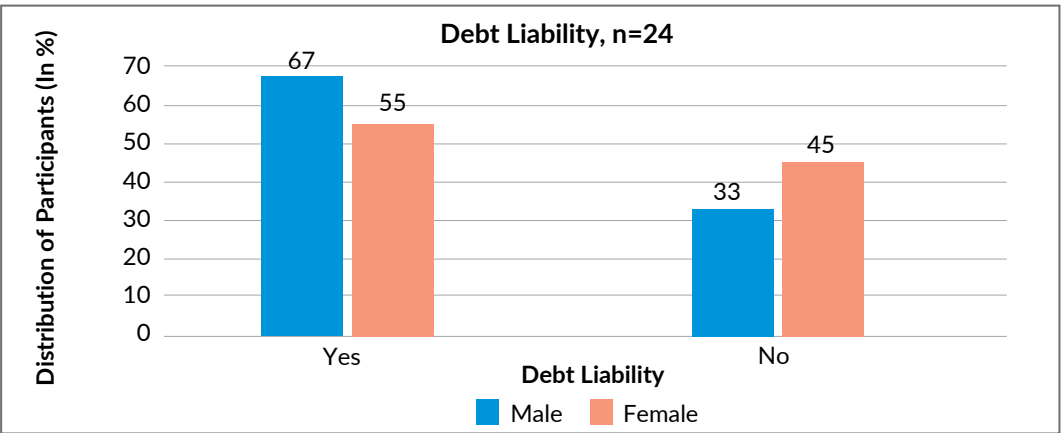
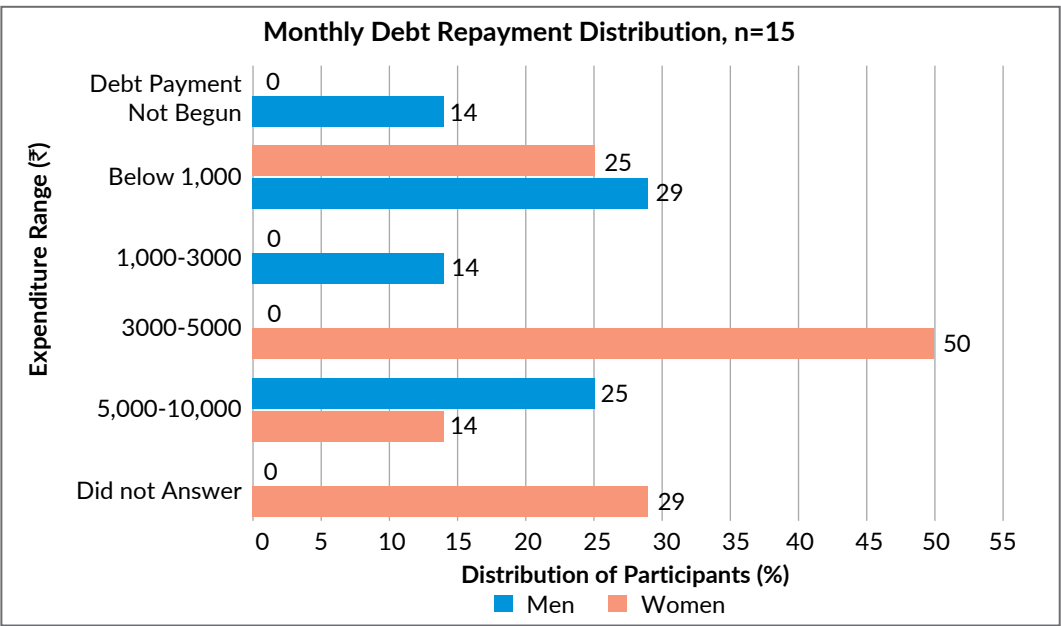


Figure 25: Monthly Debt Repayment Distribution

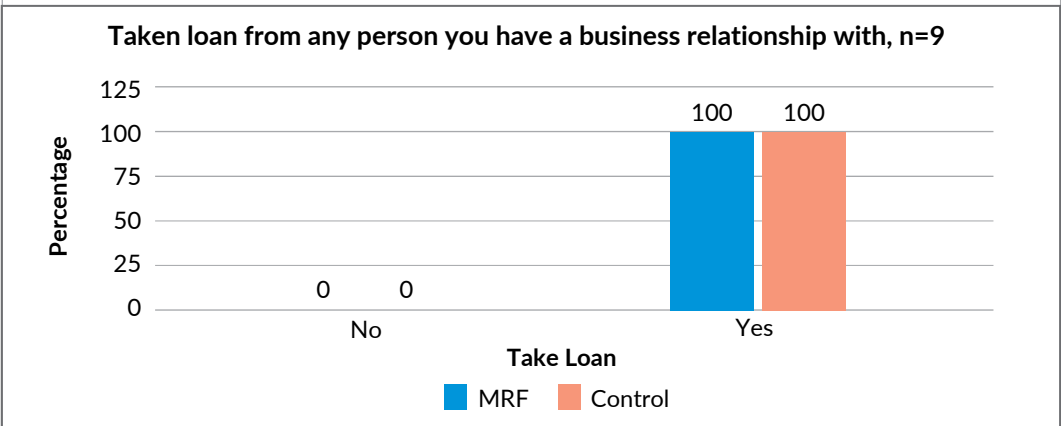


**Monthly Debt Repayment Distribution:** Fifty percent of men respondents have a monthly debt payout between ₹ 3,000 and ₹ 5,000 while twenty-five percent of them have a debt payout greater than ₹ 5,000. Among women, 29 percent of them have a liability of less than ₹ 1,000, while 14 percent of the women have debts greater than 5000.

**Taking a loan from any person with whom you have a business relationship:** Hundred percent of both men and women categories of respondents (from both MRF and control group) have taken a loan from a person they have a business relationship with.

Some of the primary reasons for debt reported range from unexpected emergencies (medical emergencies, funerals, marriage) to daily expenses for groceries.

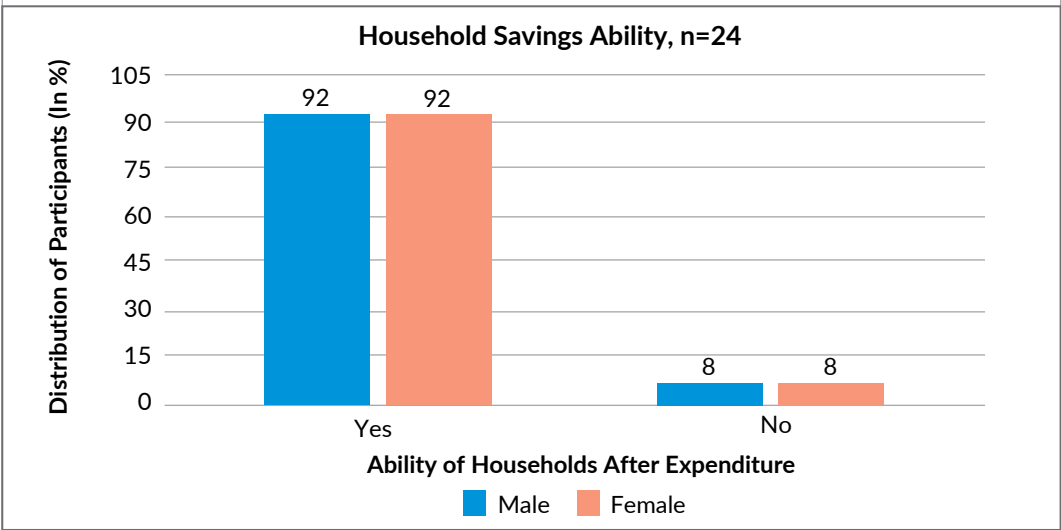
Figure 26: Taken loan from any person you have a business relationship with (Control Group vs. MRF)



Savings

**Household Saving Ability:** Ninety-two percent of both men and women report that are able to save money as a household.

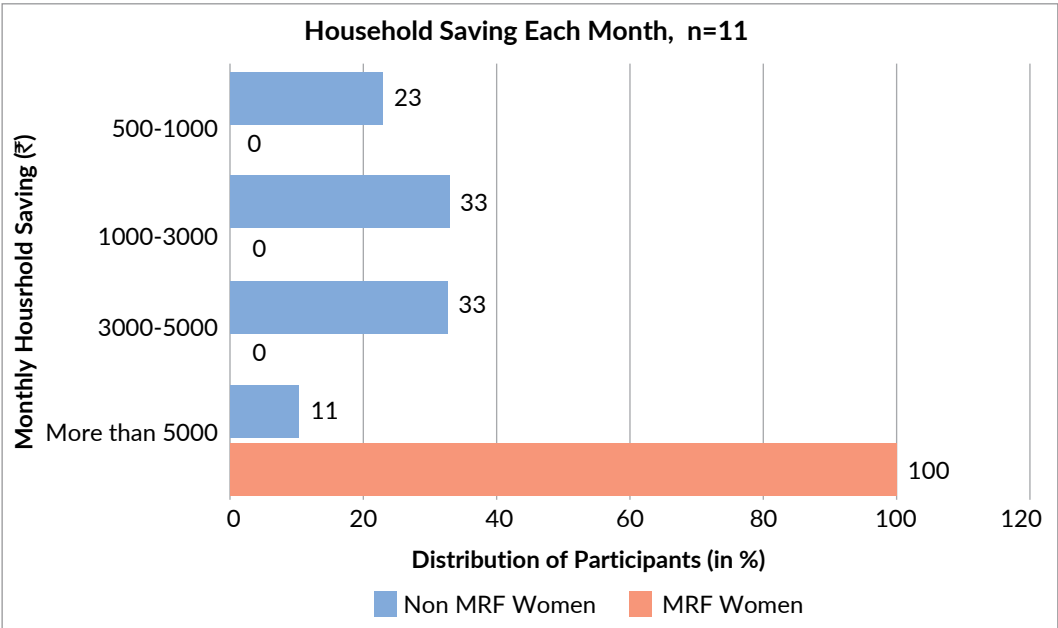
Figure 27: Household Savings Ability





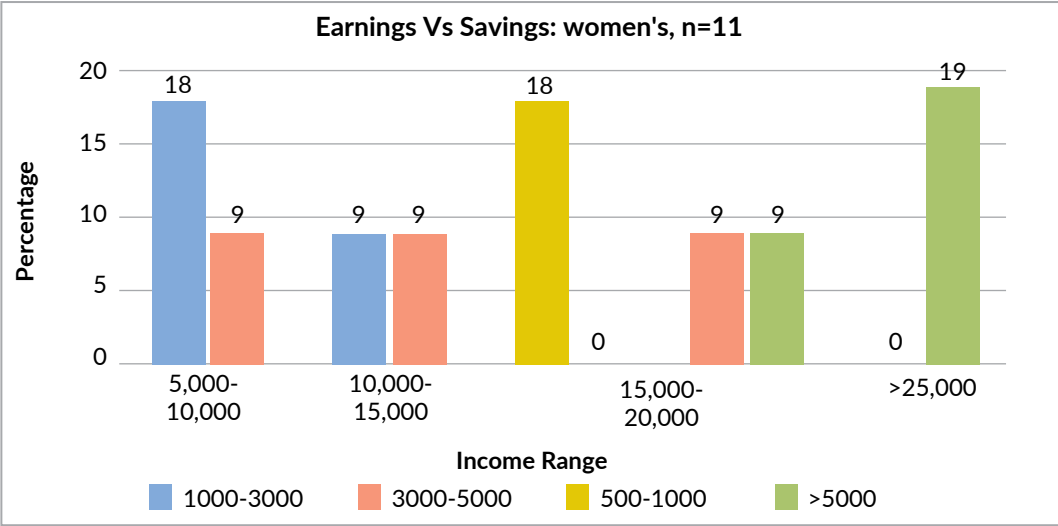
Household savings each month: While a hundred percent of the MRF women can save more than ₹ 5000 a month, sixty-six percent of the control group women save between ₹ 1000-5000. A positive trigger may be seen when one has formal space to work vs. not having such a space and requisite permits.

Figure 28: Household Saving Each Month (Control Group women vs MRF women)



**Earnings vs. Savings:** Women irrespective of MRF and Control Group save more than the men respondents despite their income range. Most women respondents save at least ₹ 1,000 to ₹ 5,000, regardless of their income.

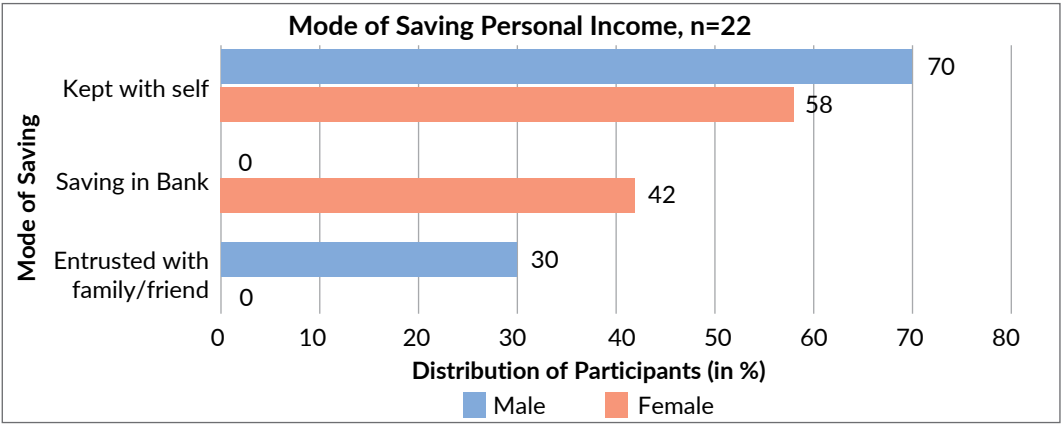
Figure 29: Earnings Vs Savings – women's



Mode of Saving Personal Income: Seventy percent of men keep their savings to themselves, while thirty percent entrust them to a family member or friend. In contrast, 42 percent of women keep their savings in a bank while no man reported doing that.

Overall, the study reveals that women are prudent and saving-oriented and prefer keeping their money in formal institutions as compared to their men counterparts.

Figure 30: Mode of Saving Personal Income.

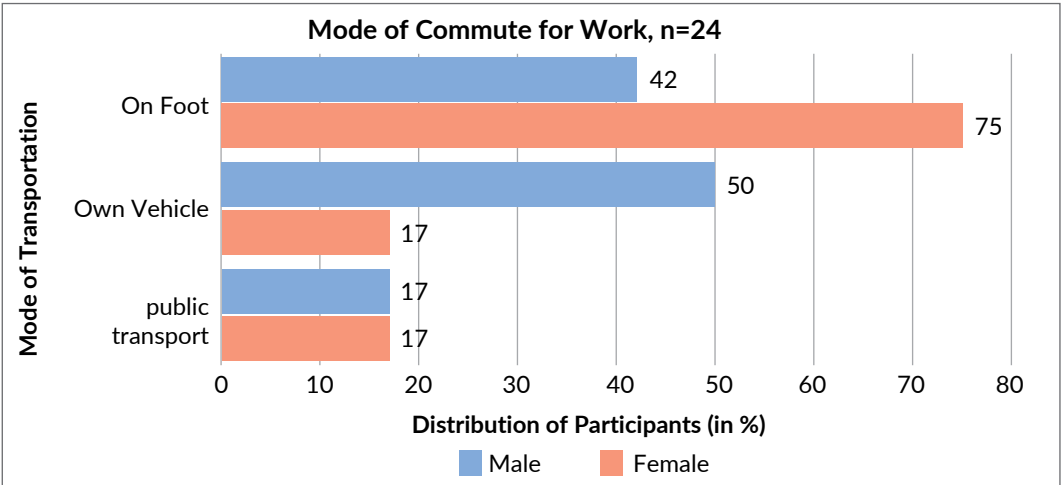


WORKPLACE DYNAMICS

Working Hours and Commute

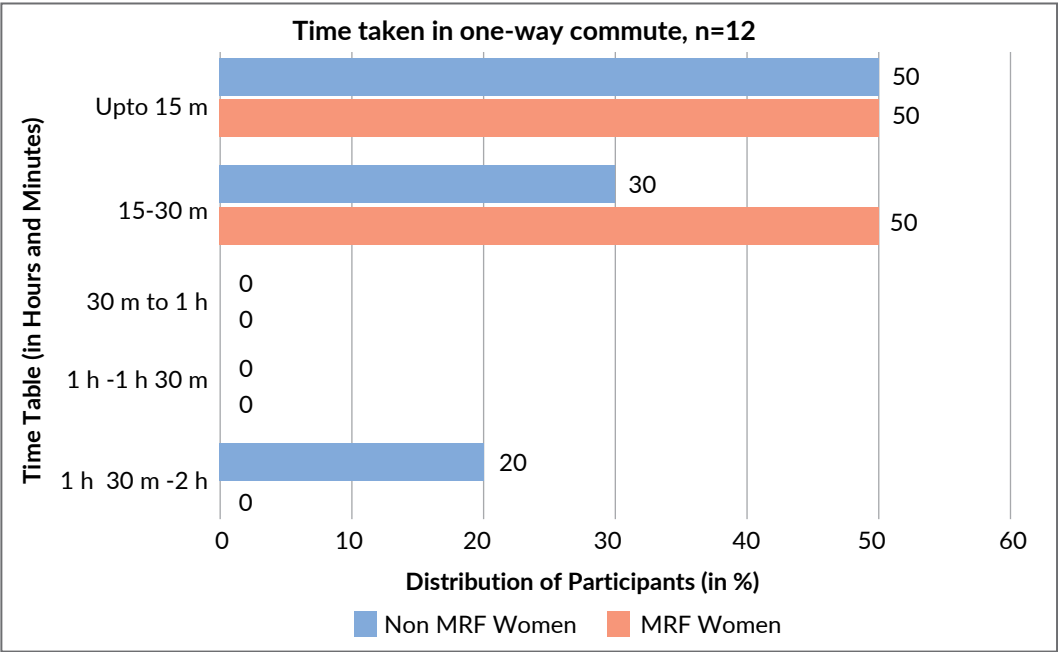
**Mode of Commute for Work:** Seventy-five percent of the women respondents prefer to walk to their workplace whereas fifty percent of men use their own vehicle. In the case of public transport, both women and men respondents are equal users at 17 percent each. Further, 84 percent of women travel less than 5 kilometres for their work indicating the proximity of the workplace to their homes.

Figure 31: Mode of Commute for Work



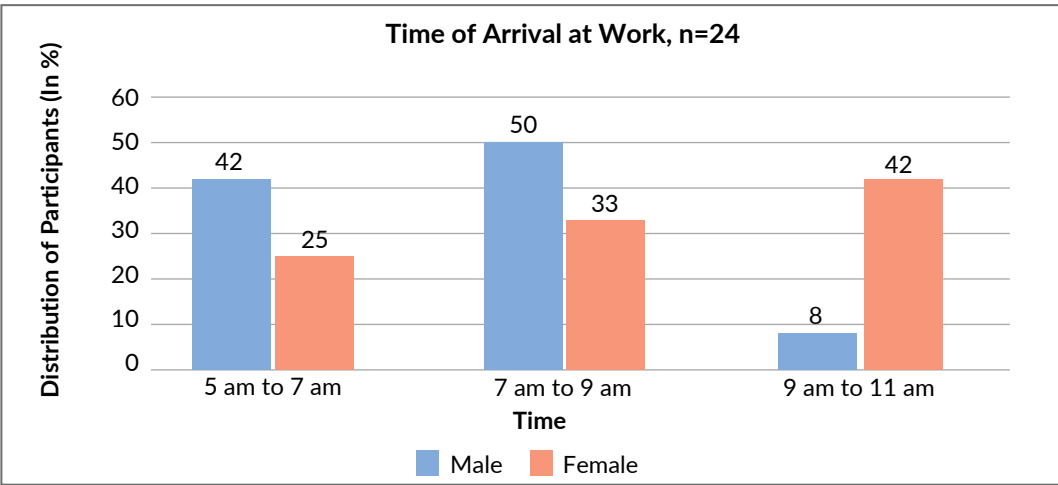
**Time taken in one-way commute:** While a hundred percent of MRF women take 30 minutes or less to commute to work, twenty percent of the control group women take up to two hours to reach their workplace.

Figure 32: Time taken in one-way commute (MRF women vs Control Group women)



**Time of Arrival at Work:** Ninety-two percent of the men respondents arrive at their workplace from 5 am to 9 am. 42 percent of women respondents arrive between 9 am and 11 am which may be indicative of their occupation with caregiving activities at home before arriving at work.

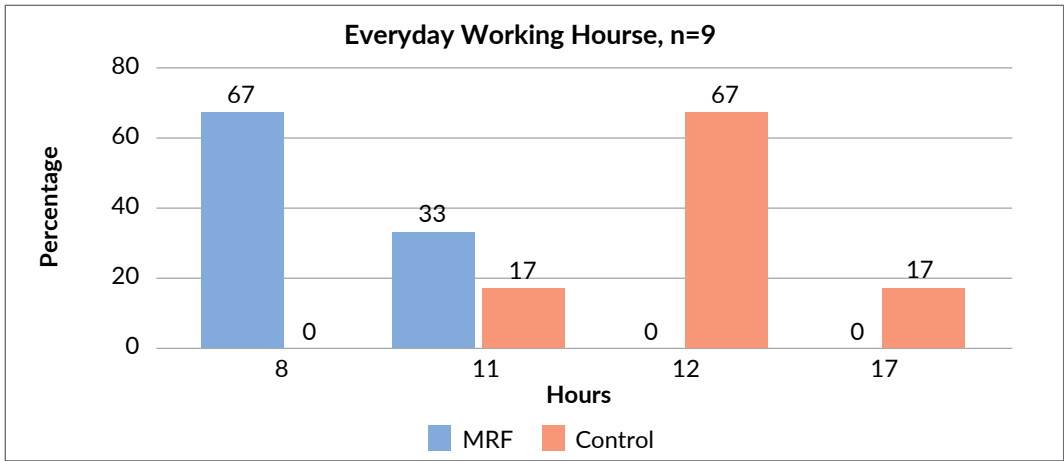
Figure 33: Time of Arrival at Work



Working Hours

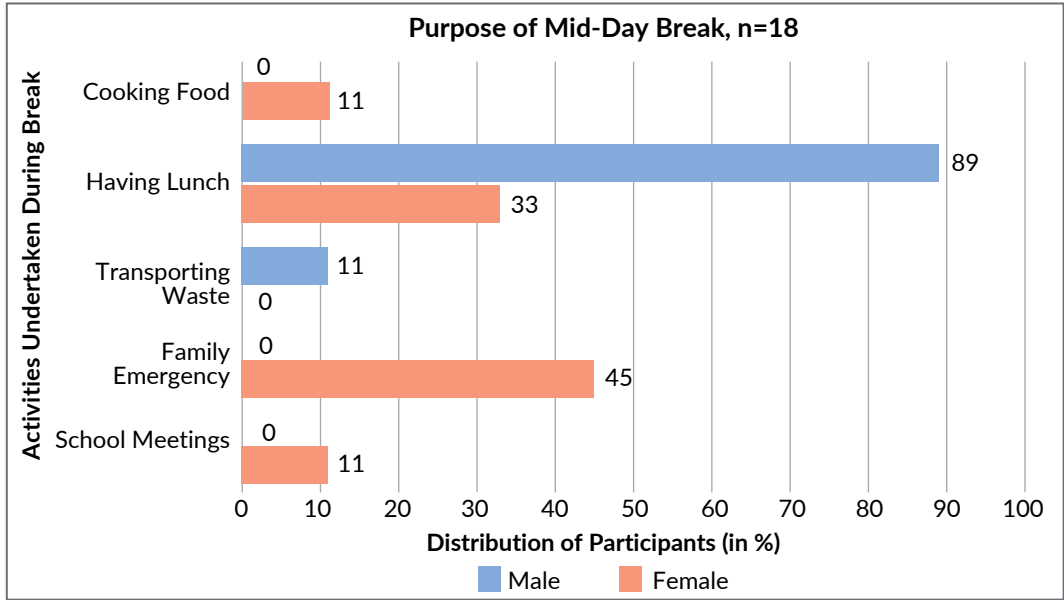
**Working Hours:** Hundred percent of the MRF participants work for 8-11 hours a day, whereas the control group participants put in longer hours. 84 percent of them work for 12 hours or more.

Figure 34: Everyday Working Hours (MRF Vs Control)



**Mid-day Break:** Eighty--nine percent of the male respondents take a mid-day break to have lunch, while eleven percent considered transporting waste as break time. On the other hand, 67 percent of women reported that they take a break for undertaking caregiving activities- family emergencies, cooking meals or attending meetings in their children's school. None of the men reported undertaking any such activity.

Figure 35: Purpose of Mid-Day Break



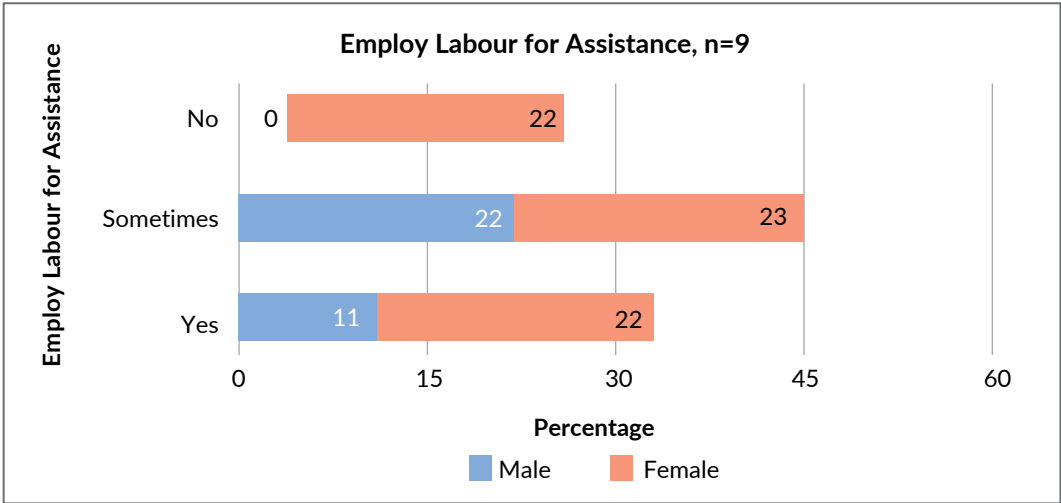


Employment and Formal Training

**Employ Labour for Assistance:** Forty-five percent of women respondents hire labour for assistance (sometimes or permanently) while only thirty-three percent of men respondents do the same.

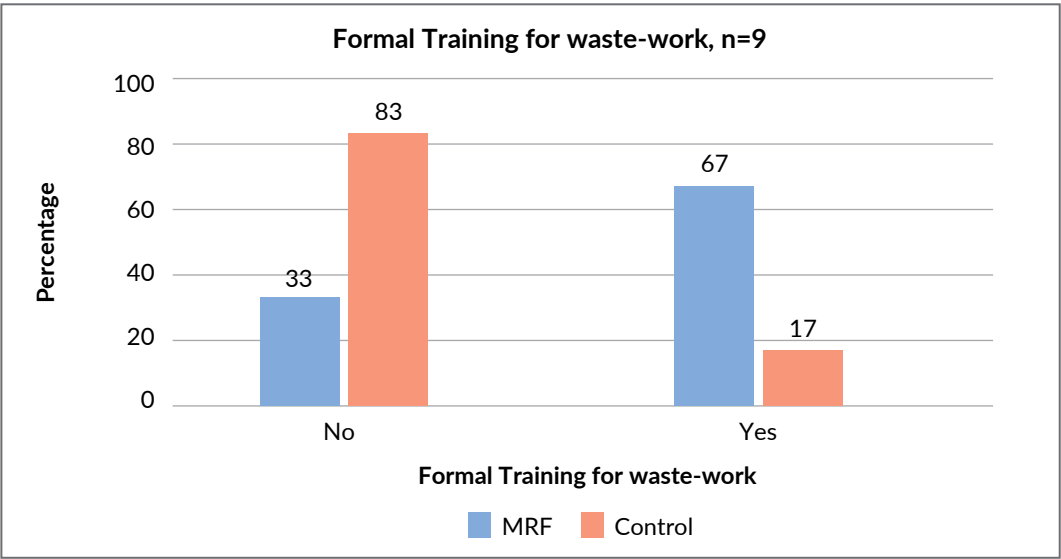
Most respondents reported that they hire labour based on their friend's recommendations and prefer someone who is known to them and is trustworthy.

Figure 36: Employ Labour for Assistance (men vs women)



**Formal Training for waste-work:** Sixty-seven percent of the MRF participants reported receiving formal training for their work, while eighty-three percent of the control group did not.

Figure 37: Formal Training for waste-work (MRF vs Control)



Choice of Waste buyer

Maximum respondents (sixty-seven percent of both men and women) sell their waste to a single aggregator for different types of waste collected. 33 percent of men and women respondents sell different types of waste to different aggregators.

AYAN'S STORY: THE INVISIBLE GENDER

Hidden behind a large banyan tree and a public toilet, are two large waste bins. Working at those bins are the duo: Sheena a wastepicker and her daughter's friend Ayan. On being asked who she works with, Sheena introduces Ayan as 'her boy', which may loosely translate as 'her son'. As soon as Ayan enters the dumpsite, Sheena explains that Ayan's real name is Radha, and he was born biologically as a girl. In suppressed laughter, Sheena and one of her acquaintances say that "Radha [deadname] has lost her mind which is why she behaves and dresses up like a man." It was observed that such statements made Ayan uncomfortable.

Ayan clarified that he identifies as a man and prefers using male pronouns. He is about 20 years old and started working as a wastepicker after finishing high school. When asked why he did not go for higher studies or any other occupation, Ayan explained that the tough financial condition of his family did not allow him to pursue higher studies. No education also meant a lack of professional opportunities – he remained unemployed for a year. That is until his friend also Sheena's daughter introduced them to each other. Sheena trained him in wastepicking– collecting, segregating, and transporting waste. Currently, Ayan works and stays with Sheena on weekdays and goes to his parent's house on the weekends. He wants to continue working as a wastepicker. He explains that having one's own business is more reassuring than having a job with no security.

Being young, Ayan is responsible for collecting and transporting waste on a tricycle. Sheena helps in segregation and deals with the trading of waste. She gives a share of the total earnings to Ayan and pays for his living expenses. Ayan's role may be considered equivalent to an apprentice to Sheena. He receives a small amount which he uses to spend on his needs. As a result of this apprentice-mentor relationship, Ayan has got an advantage in some areas while he also experiences some restrictions to his growth. Sheena who has the final say in all business relationships restricts Ayan's mobility and interactions as well. For instance, Ayan got an opportunity to be a part of a leadership program for wastepickers to which Sheena denied permission for him to go.

Despite the restrictions and low-profit margin in wastepicking, Ayan is optimistic and wishes to continue wastepicking until he finds a better business venture.

Sixty percent of respondents of the Control Group women tend to sell their waste to a single aggregator for all waste categories and only thirty percent sell their waste to different stakeholders in the value chain. The focused group discussions revealed that most wastepickers tend to sell their waste to known acquaintances and godown owners or to people who support them during an emergency or provide accommodation. This indicates that relationships of trust and congeniality work strongly within the informal sector.

Figure 38: Stakeholders to whom the Participants are selling their waste (Men vs Women)

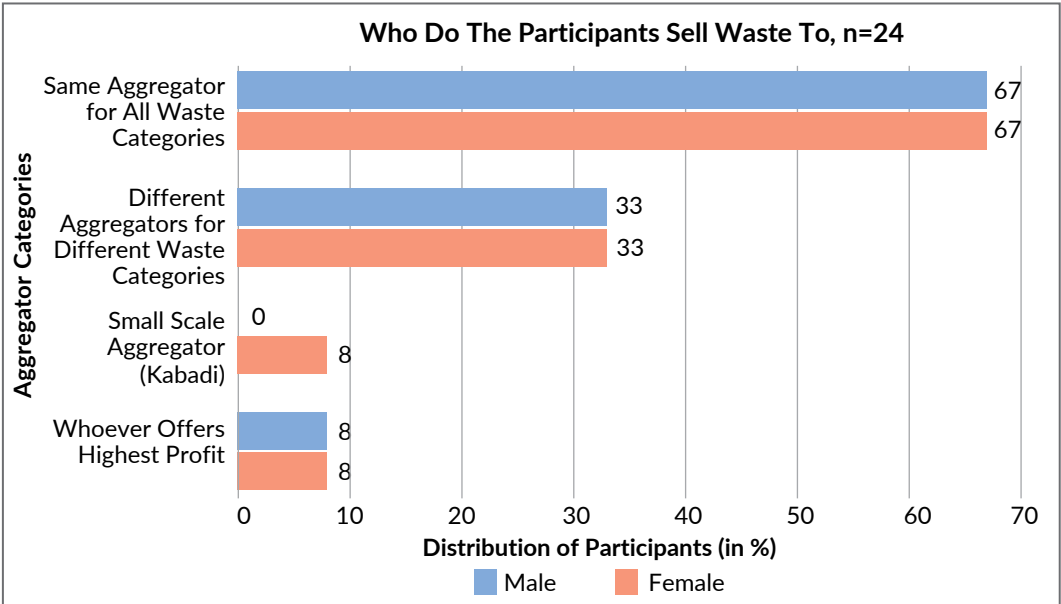
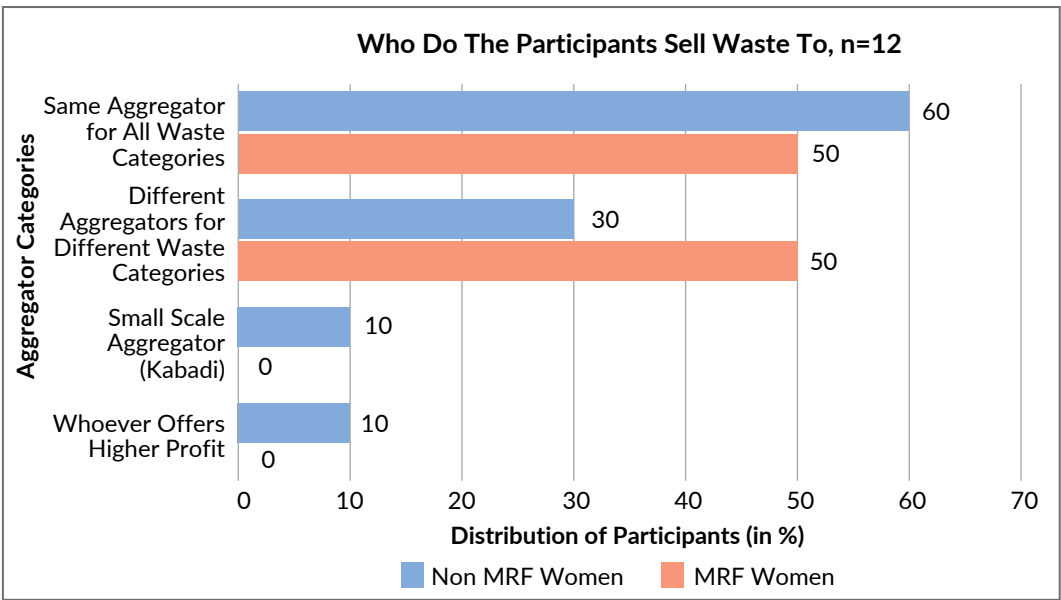


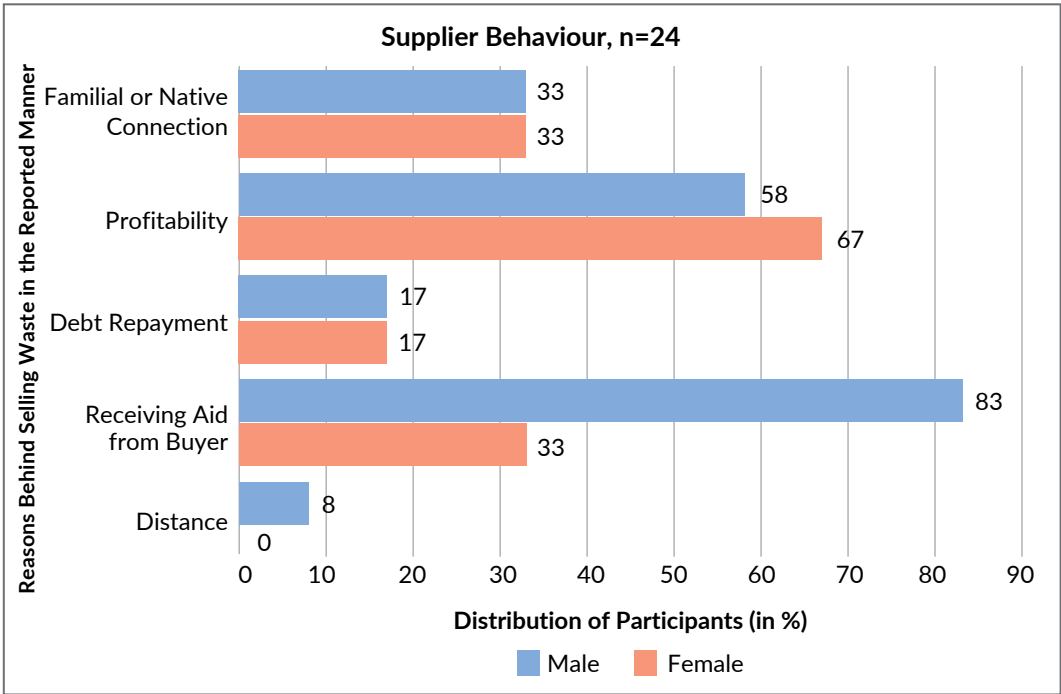
Figure 39: Stakeholders to whom the Participants are selling their waste (MRF women vs Control Group Women)



**Motivation to Sell:** Eighty-three percent of the male respondents sell their waste to buyers from whom they receive aid (during emergencies) and twenty-nine percent sell their waste to sustain profitability. While 33 percent of both male and female categories find it important to have a familial or native connection, 67 percent of women see profit as a reason to sell to a godown owner. This indicates that while trust and familial connection are critical for professional relationships in the informal sector, more women than men consider profit which can increase their income to be an important consideration. While the MRF women consider familial connection and profit as primary considerations for choosing a seller, the control group women consider profit (70 percent) and receiving aid during emergencies (50 percent) as their key factors.

Often wastepickers, particularly women, consider the social acceptability of the buyer in their network to sell waste, and that can keep them from negotiating a better deal.

Figure 40: Reason to Sell (Men vs Women)



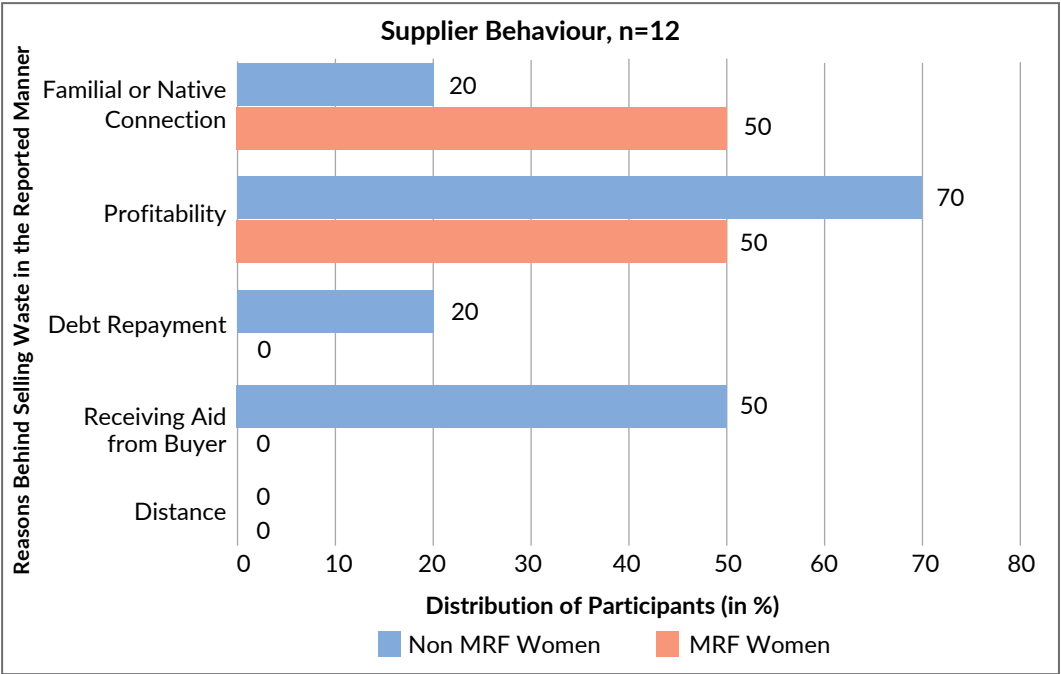
**Workplace safety**

**Space for Waste:** Sixty-seven percent of men and sixty-four percent of women have stated that there is no access to sheltered and safe spaces for segregating waste.

**Difficulties Due to Lack of Space for Segregation:** Eighty-three percent of women and seventy-five percent of men report that the lack of space to work exposes them to extreme weather conditions. While a whopping 75 percent of women fear physical harassment, only 25 percent of men see it as a threat. Similarly, while 17 percent of women fear sexual harassment, none of the men seems to have that fear for themselves.



Figure 41: Reason to Sell (MRF women vs Control Group women)



It should also be noted that risk and injury impact women differently than men. Not only are they susceptible to it themselves, but the burden of any other family member getting harmed or falling sick due to work also falls on them due to their gendered roles as caregivers. Thus women, face the brunt of unsafe workspaces not just for themselves but also for other members of their family.

Figure 42: Space for Waste

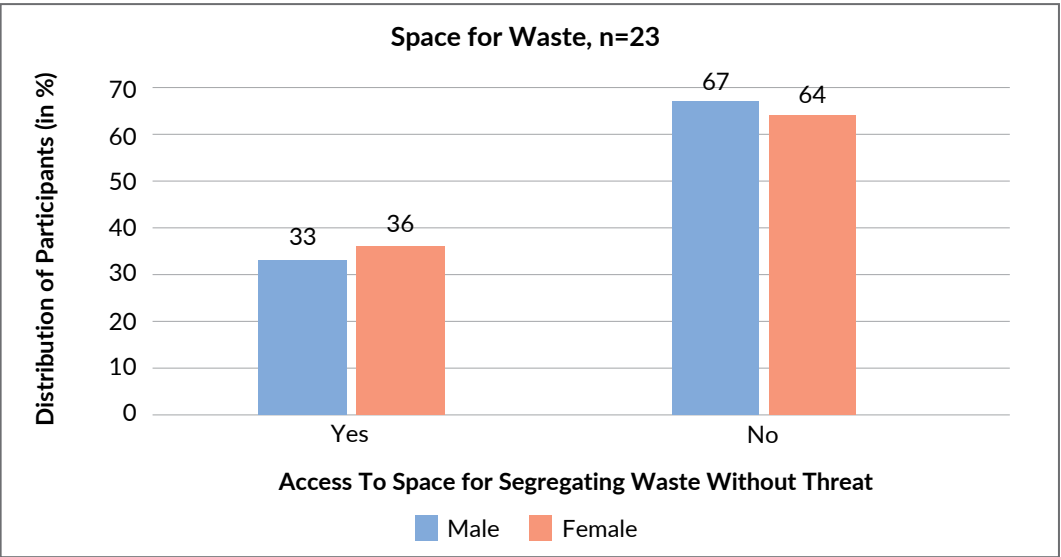
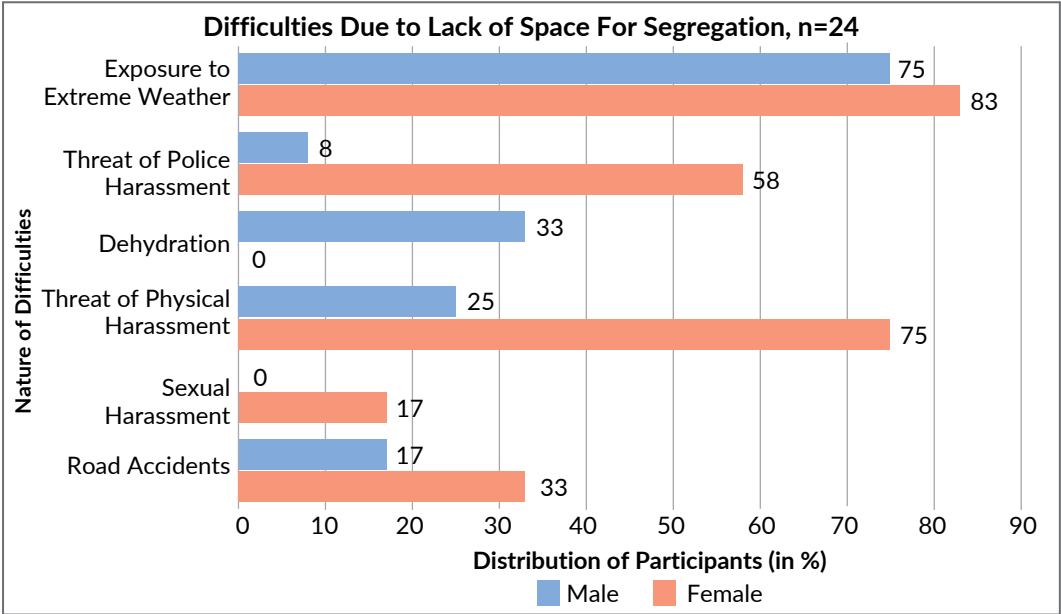
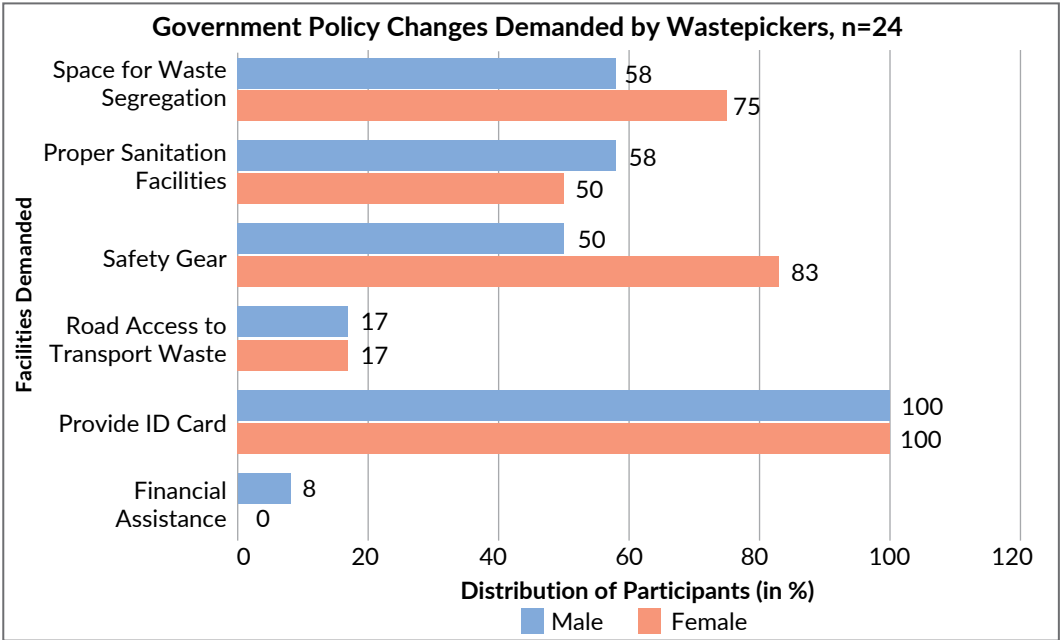


Figure 43: Difficulties Due to Lack of Space For Segregation (men vs women)



**Policy Change:** Hundred percent of wastepickers have stressed the need for formal identification cards to carry out their work without the fear of harassment or displacement. Apart from space for work (75 percent), women also stress the need for safety gear to prevent occupational risks (83 percent). This indicates that women feel more physically unsafe and susceptible than men.

Figure 44: Government Policy Changes Demanded by wastepickers (men vs women)



## ROMILA'S STORY: THE 'COST' OF SPACE TO WORK

Romila (MRF participant – NDMC) is a 28-year-old woman, married with two school-going kids. Her family migrated to Delhi for better employment opportunities. They started working as wastepickers after migrating to Delhi. Romila could not finish her schooling and had to help her parents with waste work instead. She says she learnt about collecting waste from open bins and landfills from her father and segregation from her mother. Over time, the family has grown operations from wastepicking from bins to ownership of two kabadi shops or small junk stores – both owned by her brothers. Romila sells segregated waste to her brother.

Romila got in touch with Chintan, an organization working with wastepickers as well as a student volunteer group to receive basic training on literacy, composting and solid waste management.

Having proven herself as a potential wastepicker leader and an enterprising businesswoman, she was provided with a micro-Material Recovery Facility (MRF) Chintan and NDMC. This facility is in one of the country's most economically viable zones – an area dotted with foreign embassies, state houses and homes of senior bureaucrats and politicians.

The participant is a part of a nuclear family, living with her husband and children. Her household and personal income per month is one of the highest in the study - above ₹ 25, 000. The record sheet analysis reveals that she earned ₹ 30,173 in the month of August and ₹ 48,865 in the month of September. This compared to her male counterpart in the NDMC area is much higher. For the same contract, Mahesh earned ₹ 1,964 in August and ₹ 7,089 in September. Romila earned 15 times more

than participant 2 in August and nearly 7 times more in September.

Romila enjoys the competitive advantage of location, family connections, access to loans, and civil society organizations' support. These perks add to her success and depict an ideal situation for a wastepicker to advance in their business.

However, these advantages are thwarted without a progressive society. Romila faced setbacks created by culturally entrenched sexism. Certain male wastepickers living in the same locality alleged that she had acquired the space for work through sexual relations with a local official. The rumour was spread with the intent to damage the participant's image in the community, harm her business and corner her to give up her space of work. Informal businesses are highly dependent on kinship and friendship ties, and a rumour of such nature could severely impact her business. The allegations spread through the community and even reached her marital home back in her native village.

In a community meeting to mediate the conflict between the two parties, the men making allegations about Romila finally accepted that they were behind the act and tried to blame the rumour-mongering as done under the influence of alcohol. Romila asserted multiple times that her "self-respect was hurt, and the incident damaged her reputation." She feared that these rumours would impact her business and sour her familial relationships.

A legal battle is currently ongoing, and the silver lining is that Romila's family is fighting the battle alongside her. However, visiting the court takes up a lot of her time and mental space. All Romila wants is to work in peace.



# 4 Conclusions and Recommendations

**T**his chapter reflects on the key conclusions, and consequent recommendations for policymakers and relevant civil society organisations to ensure gender-inclusive waste management.

1. **Decentralised waste management is key to women's participation:** Eighty percent of women take up to 30 minutes to reach their workplace, and seventy-five percent women choose to travel on foot to their workplace as compared to forty-two percent men. While none of the men report taking breaks from work to carry out caregiving activities at home, 67 percent of women take breaks from work for meeting at their children's school, cooking food and other such domestic work. Thus, workplaces that are closer to the women's homes are key to their participation.
2. **Space for work is key to improving incomes for women:** The study finds that a hundred percent of the MRF women participants earn a household income above ₹ 25, 000 per month, whereas sixty percent of the control group women earn below ₹ 15,000. None of the control group women have a household income above ₹ 20,000.  
It was also found that a hundred percent of the MRF women earn above ₹ 2,000 per week for plastics, whereas eight percent of the control group women earn below ₹ 2000 per week.  
Thus, a positive correlation is seen between having space (such as micro-MRF or a dry waste collection centre) and improved incomes.
3. **The threat perception of physical harm during work is high amongst women:** Seventy percent of women reported physical harassment as a potential threat at work, seventeen percent reported sexual harassment as a threat and fifty-eight percent were fearful of harassment from officials. Thus, the current work environment is viewed as physically unsafe by women.
4. **MRFs can serve as positive triggers for investment in SDGs:** Even while the informal sector is highly dependent on loans, it was found that twelve percent fewer women have debt liability as compared to men. Further, while only 33 percent of men saved money, 75 percent of women saved money. Finally, even though a minor proportion of the wastepicker population invests in their children's education, 11 percent more

IT WILL BE ALMOST IMPOSSIBLE  
TO IMAGINE A PLASTIC-FREE INDIA  
WITHOUT FAIR PARTICIPATION OF  
WOMEN WASTEPICKERS



women invest in the same as compared to men. 100 percent of the MRF women invest in their children's education.

Thus, women's participation can help fight poverty, improve financial resilience among low-income communities and create a better future for children.

5. **Women have less access to high-value plastics as compared to men:** While seventy-five percent of wastepickers reported that plastics bring them the most profit, an in-depth analysis found that women have less access to high-value plastics like PET (forty-two percent) as compared to men (fifty percent). While 100 percent of the MRF women procure over 10 kilograms of PET daily, only 30 percent of the control group women procure the same. Thus, a gender gap remains in access to high-value plastics, which can consequently impact incomes.
6. **Kinship ties are both a resource and a barrier for better work in the informal waste sector:** Social networks are key to the kind of work and income wastepickers acquire in the informal sector. 83 percent of control group participants and 67 percent of MRF group participants reported that their family connections, friends, and acquaintances helped them acquire work. Some wastepickers reported that among acquaintances, civil society organizations working with wastepickers were important players in them getting work. However, the focused group discussion has also revealed that the social acceptability of buyers in their social network is an important consideration- this can be a limiting factor to profitable deals.
7. **Cultural barriers to gender equality are prevalent even if economic barriers are removed:** As was seen in the case of Romila, the NDMC MRF participant, she was a victim of gender-based violence and sexual rumour mongering from certain male members in the community due to insecurity over the space she had acquired for work. This reflects that even as women achieve economic equality and agency, cultural barriers still prevent complete safety and inclusion.

## 4.2. RECOMMENDATIONS

1. **Decentralized micro-MRFs are key to including women in waste management and the Swachh Bharat Mission:** The urban local bodies are responsible by law to provide infrastructure and run waste management in cities including integrating wastepickers. Cities can retrofit their open bins (dhalaos) to convert them into micro-MRFs or dry waste collection centres. For cities which don't have existing infrastructure to build on, spaces can be identified at a ward level and at least one such MRF can be set up in every ward. These can then be contracted to wastepicker women.
2. **Priority to women wastepickers in providing micro-material recovery facilities for work:** Women wastepickers should be given priority when allocating space for work

to wastepickers. The Swachh Sarvekshan rewards ULBs for including and providing formal identification to wastepickers. Lists of these wastepickers already exist with ULBs. It is recommended that these lists be used to identify women wastepickers in the jurisdiction and provide them with work on priority. Finally, these contracts can be valid for 2 years with the possibility of renewal post-review. A contract should not extend a 4-year period to ensure that other wastepickers can also avail the opportunity of having a formal space to work.

3. **Gender sensitization and gender-based violence training for the wastepicker community:** To eliminate and reduce barriers to gender inclusivity it is important that the community members receive sustained training on ways to identify and eliminate gender-based violence and discrimination. It is crucial that male members come on board to close the gender gap. Civil society organizations may take the lead in supporting such efforts.
4. **Creating a women's safety net to reduce the threat of violence and inequality:** These will include the formation of clusters of wastepicker women who are connected to various other stakeholders like police personnel, civil society actors and ULB officials. The clusters can become safe spaces for discussion on gender related issues such as income gaps, physical and gender-based violence, mobility etc. These groups can regularly be trained on financial management, entrepreneurship etc. and be empowered with tools to counter misogyny.  
Further, government schemes for women's inclusion and empowerment should actively be made available to wastepicker women given their significant number and invisibility. Municipalities should be trained on gender-based vulnerabilities to be allies to these women.  
Finally, it should be noted that the burden of occupation injury falls on women differently than men. Not only do they bear the brunt of the injury or harm they may face themselves, but burden of injury or harm to any other family member also falls on women. Any measure for gender inclusivity and occupational health should address this nuance.

5. **Inclusion of women wastepickers in a circular economy for plastics:** New guidelines and regimes have been introduced to hold producers accountable for the plastic waste they generate through Extended Producer's Responsibility Guidelines. These currently do not reward the informal sector, but an opportunity for wastepickers has been created to earn better incomes. Given the gap in access to high-value plastics, the following is recommended to ULBs:
  - i. Incentivizing collection of low-value plastics and rewarding producer companies on the score of gender inclusivity in meeting their recycling targets per EPR.
  - ii. Prioritizing the inclusion of women in EPR models such that they can access high-value plastics.

List of References Used

Chaturvedi, B. Plan The Ban: Eliminating Single Use Plastics in India without displacing people, a report: 2021. Chintan Environmental Research and Action Group, 2021

Chintan Environmental Research and Action Group. "Space for Waste -2021 A Study to analyze space needs for Solid Waste Management". Chintan Environmental Research and Action Group. 2021. [https://counterviewfiles.files.wordpress.com/2021/09/space-for-waste-2021-note\\_chintan-india.pdf](https://counterviewfiles.files.wordpress.com/2021/09/space-for-waste-2021-note_chintan-india.pdf)

Chintan Environmental Research and Action Group. "Who Recycles Your Waste? - Chintan Fact Sheet." Chintan Environmental Research and Action Group, Aug. 2019, [https://www.chintan-india.org/sites/default/files/2019-08/chintan\\_who\\_recycles\\_your\\_waste\\_fact\\_sheet-4.pdf](https://www.chintan-india.org/sites/default/files/2019-08/chintan_who_recycles_your_waste_fact_sheet-4.pdf).

Council on Foreign Relations. "Growing Economies through Gender Parity." Council on Foreign Relations, <https://www.cfr.org/womens-participation-in-global-economy/>.

Crenshaw, K. "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color." Stanford Law Review, vol. 43, no. 6, July 1991, pp. 1241–1299., <https://doi.org/10.2307/1229039>.

Dias, Sonia, and Ana Carolina Ogando. "From Theory to Action: Gender and Waste Recycling." Women in Informal Employment: Globalizing and Organizing, <https://www.scribd.com/document/552127061/Dias-Ogando-gender-and-waste-toolkit-book-three>.

Directorate, OECD Statistics. "INFORMAL SECTOR – ILO." OECD Glossary of Statistical Terms, <https://stats.oecd.org/glossary/detail.asp?ID=1350>.

Grown et al., "Discussion Paper: Who borrows? An Analysis of gender, debt and asset in Ecuador, Ghana and Karnataka, India." UN Women, New York, 2015, <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2015/DiscussionPaper-AnalysisOfGenderDebtAndAssets-en.pdf>

Pal, S. (2020, November 08). Informal sector workers continue to struggle with low wages, high debts: Actionaid Report. Retrieved from <https://www.newsclick.in/informal-sector-workers-continue-struggle-low-wages-high-debts-actionaid-report>

Perez, Caroline Criado. Invisible Women: Exposing Data Bias in a World Designed for Men. Vintage,

Appendix A

Social Network Analysis Survey Instrument

Objective: The objective of this survey is to map the social network of the participants.

Participants: MRF participants – 3; Control Group – 2 men + 2 women

<b>GENERAL</b>		
1. Name	12. Please list the time you dedicate for each task you undertake	recommendations d. Family's recommendation
2. Age		
3. Gender		20. Why do you use this method of recruiting labour?
4. Group	<b>IMMEDIATE WORK CONTACT</b>	
a. MRF Group	13. Please list the three people you met last week regarding work	<b>TRAINING AND SKILL DEVELOPMENT</b>
b. Control Group	14. Please list why you met each of them	21. Did you do any other work before waste picking?
5. MCD jurisdiction	15. Do you meet other people for the same kind of business relationships as those mentioned above?	22. Who introduced you to that work?
a. NDMC	16. If so, list the names against each category	23. Why did you leave that work?
b. SDMC	a. Godamwala	24. How did you learn about waste work?
	b. Pheriwala	25. Did you get any formal training for waste work?
	c. Kabadiwala	26. If yes, then who trained you?
	d. MCD Official	27. If not, how did you acquire knowledge about conducting waste work?
	e. Police Official	28. Please name the most influential people who imparted knowledge to you about waste-work
<b>WORK</b>	17. Do you employ any labour assistance?	
6. Nature of Work (Designation) (Multiple selections)	18. If so, how many times a week?	<b>ACQUISITION OF SPACE FOR WORK</b>
a. MRF operator	19. How do you recruit them?	29. Did you migrate to
b. Pheri	a. Anyone who is available	
c. Waste-picking from bins	b. Through existing contractor/ godamwala	
d. Godam owner	c. Friends'	
e. Door to Door collector		
7. When did you start working in waste?		
8. What was your age when your started waste-work?		
9. Why did you start working in waste?		
10. Who was the first contact to tell you about waste work?		
11. How many hours do you spend at work every day?		

Delhi?

30. When did you migrate to Delhi?

31. Do you have a dedicated space to segregate waste?

32. Is it attached to your living space?

33. How did you acquire this space?

34. Did any friends/family/acquaintances help you in acquiring it?

**FAMILIAL AND NEIGHBOURHOOD CONNECTIONS**

35. Were any of your family members engaged in waste picking before you started working in waste?

36. If so, please select who was engaged in waste-picking.

a. Parents

b. Grandparents

c. Parents-in-law

d. Siblings

e. Cousins

f. Siblings-in-law

g. Cousins-in-law

37. Do you think having familial connections helped you in getting an edge over other wastepickers?

38. Do a lot of people from your community/village work as wastepickers in Delhi?

39. If so, why do you think waste-picking is a popular choice?

40. Did any of your neighbourhood connections from the village help you with the waste work in Delhi?

**TAKING AND GIVING LOANS AND CREDIT**

**TAKING CREDIT:**

41. Do you take small credit from the people you work with?

42. What reasons do you take small credits?

43. How often do you take credit?

**TAKING LOANS:**

44. Did you ever find yourself in a situation to take a loan from any person you have a business relationship with?

45. In the last 3 years, have you taken any loans?

46. What were the reasons for you to take these loans?

47. Did you take any loans from the people you work with?

48. Who are they?

49. Why did you approach them only for loans/s?

50. How long did it take you to build that trust to have a loaning

relationship?

**GIVING CREDIT:**

51. Do you give small credit to people you work with?

52. What reasons do you give these credits?

53. How often do you give credit?

**GIVING LOANS:**

54. Did you ever have to give a loan to any person you have a business relationship with?

55. In the last 3 years, have you given any loans?

56. What were the reasons for you to give these loans?

57. Did you give any loans to the people you work with?

58. Who are they?

59. Why do you think they approach you only for loans/s?

60. How long did it take you to build that trust to have a loaning relationship?

## Appendix B

### Master Survey Instrument

#### Main Survey - I

Name of Surveyor:  
Date of Survey:  
Time of Survey:  
Place of Survey:

#### Questions

**PART I: DEMOGRAPHIC DETAILS**

1. Name of Respondent:

■ 3

■ 4

■ 5

2. Age of Respondent:

■ More than 5

3. Gender of Respondent:

■ Male

■ Female

■ Prefer not to say

4. Marital Status of the Respondent:

■ Married

■ Unmarried

■ Widow/Widower

■ Separated

■ Divorced

■ Other

5. Area of the Survey

■ NDMC

■ MCD-S

6. Home Address of Respondent:

■ 1

■ 2

■ 3

■ 4

■ 5

■ More than 5

7. Work Address of Respondent:

■ 1

■ 2

■ 3

■ 4

■ 5

■ More than 5

**PART II: HOUSEHOLD INCOME**

1. The number of people in the household:

■ 1

■ 2

2. The number of dependents in the household:

■ 1

■ 2

■ 3

■ 4

■ 5

■ More than 5

3. The number of earning members in the household:

■ 1

■ 2

■ 3

■ 4

■ 5

■ More than 5

4. What was the total household income earned last month?

■ 5,000 – 10,000

■ 10,000 – 15,000

■ 15,000 – 20,000

■ 20,000 – 25,000

■ Above 25,000

5. How much income did you individually generate last month?

■ 5,000 – 10,000

■ 10,000 – 15,000

■ 15,000 – 20,000

■ 20,000 – 25,000

■ Above 25,000

6. What are the sources of your income other than waste-picking?

Manual Labor (बेलदारी)

■ Informal Sanitation Worker (कभी किसी ने छत साफ़ करने को या घर साफ़ करने को बुलया)

■ Rickshaw Puller

■ Auto rickshaw/cab driver

■ Petty Shop

■ Other

7. Roughly how much income were you able to generate from sources other than waste-picking?

■ Below 500

■ 500 – 1000

■ 1000 -1500

■ Above 2000

8. How much of it did you



- spend on the following:

9. How many children do you have?

10. Are your children earning?

■ Yes, they are earning and not dependent on my household income.

■ Yes, they are earning but still dependent on my household income

■ No, none of them earns and is dependent on my household income.

■ \_\_ (no. of) children depend on my household income, and \_\_ don't.
- Vegetables and Fruits

■ Dairy

■ Meat

■ Oils and Masalas

OPTIONS

■ Below 500

■ 500 – 1000

■ 1000 – 1500

■ 1500 – 2000

■ 2000 – 2500

■ 2500 – 3000

■ 3000 – 3500

■ 3500 – 4000

■ Above 4000

13. Toiletries and other groceries

■ Below 500

■ 500 -1000

■ 1000 – 1500

■ 1500 – 2000

■ Above 2000

14. Water

■ Free

■ 0 - 500

■ 500 – 1000

■ 1000 – 1500

■ 1500 – 2000

■ Above 2000

15. Electricity

■ Free

■ 0 – 500

■ 500 – 1000

■ 1000 – 1500

■ 1500 – 2000

■ Above 2000

16. Rent

■ N/A

■ 0 – 500

■ 500 – 1000

■ 1000 – 1500

■ 1500 – 2000
- Above 2000

17. Do you have any debts to be paid off?

■ Yes

■ No

18. Do you have any interest in the repayment?

■ Yes

■ No

19. What is the nature of your debt repayment?

■ I pay monetarily (cash/cheque/UPI)

■ I pay in kind, i.e., I offer services to the creditor

■ I have an agreement with the creditor to sell waste at a cheaper rate to pay off my debt

■ Other

20. Amount of debt repayment each month

■ N/A

■ Below 1000

■ 1000 – 3000

■ 3000 – 5000

■ 5000 – 10000

■ 10000 -15000

■ Above 15000

■ Other

21. Is your household able to save money after all the household expenses?

■ Yes

■ No

■ Sometimes

22. If so, how is the amount saved treated?

PART III: MONTHLY HOUSEHOLD EXPENDITURE AND SAVINGS

11. What are the monthly expenses you incur every month?

■ Food \_\_\_\_\_

■ Water

■ Electricity

■ Rent

■ Loan Repayment

■ Savings

■ Groceries

■ Medicines

■ Other
12. Food Expenditure last month

CATEGORIES

■ Grains

- Any form of bank account – Savings/ FD/RD/Post-office deposit, etc.

■ It is entrusted with a family member residing with me

■ It is kept safely with a relative or a friend that our family trusts

■ It is kept with a Godam dealer for emergency use

■ It is contributed to the self-help group that I or a family member is a part of

■ Other
23. Who is entrusted with the money in your family?

■ Spouse

■ Father

■ Mother

■ Son

■ Daughter

■ Father-in-law

■ Mother-in-law

■ Son-in-law

■ Daughter-in-law

■ Uncle/Brother

■ Aunt/Sister

■ Other
24. Who is generally entrusted with the family's savings?

■ Man

■ Woman

■ Gender is not a determinant
25. How much money is
- the household able to save every month?

■ Below 500

■ 500 – 1000

■ 1000 – 3000

■ 3000 – 5000

■ Above 5000

26. Do you save money from your own earnings which is not a part of your household savings?

■ Yes

■ No

■ Sometimes

27. If so, how do you treat your personal savings?

■ Any form of bank account – Savings/ FD/RD/Post-office deposit, etc.

■ I keep it with myself

■ It is entrusted with a family member residing with me

■ It is kept safely with a relative or a friend that our family trusts

■ It is kept with a Godam dealer for emergency use

■ It is contributed to the self-help group that I or a family member is a part of

■ Other

28. If you entrust your money with a friend or relative, is gender a determinant, and if so which one?
29. If not yourself then, who do you entrust your money with?

■ A man

■ A woman

■ Gender is not a determinant

■ Spouse

■ Father

■ Mother

■ Son

■ Daughter

■ Father-in-law

■ Mother-in-law

■ Son-in-law

■ Daughter-in-law

■ Uncle/Brother

■ Aunt/Sister

■ Other

30. Do you send any money to support your relatives, like family in the village, a sibling's family, etc.?

■ Yes

■ No

■ Sometimes

31. Do you send money to support your relatives every month?

■ Yes

■ No

32. If yes, how much money do you send to them every month?

■ Up to 500

■ 500 – 1000

■ 1000 – 5000

■ 5000 – 10000

■ Above 10000

33. If not each month, how much do you send

them on average?

Up to 500

500 – 1000

1000 – 5000

5000 – 10000

Above 10000

PART IV: CHILDREN

34. How many children do you have?

1

2

3

4

More than 4

35. What are their genders?

CATEGORIES

Male

Female

OPTIONS

1

2

3

4

More than 4

36. What are the Ages of your children?

CATEGORIES

0 – 5

5 – 10

10 – 14

14 – 18

Above 18

OPTIONS

1

2

3

4

More than 4

37. Are any of your children earning?

Yes

No

38. What are the genders of your earning children?

CATEGORIES

Male

Female

Options

1

2

3

4

More than 4

39. What are the ages of your earning children?

CATEGORIES

Male

Female

OPTIONS

0 – 5

5 – 10

10 – 14

14 – 18

Above 18

40. Do the earning children bear family expenses?

Yes

No

Some do, some don't

Other

41. How do they contribute?

They contribute in bearing household expenses

They bear their own expenses but not household expenses

They occasionally contribute to household

expenses

Other

42. Do your children earn a livelihood from waste-picking?

Yes

No

Other

PART V: OCCUPATION AND MONETARY TRANSACTIONS AT WORK

43. How long have you been working as a wastepicker?

0 – 5 Years

5 – 10 Years

10 – 15 Years

15 – 20 Years

Above 20 years

44. What waste activities do you do? (Multiple selections)

Waste Collection

Waste Segregation

Waste Transportation

Trading of waste

Other

45. Where do you get the waste, you deal with from?

I do door-to-door collection

I collect from large bins

Formal tie-ups with RWAs

Formal Tie-Ups with Shop owners and local businesses

Informal Tie ups with RWAs

Informal Tie-Ups with Shop owners and local businesses

Tie Up with Municipality

From other wastepickers

46. Do you work with plastic waste?

Yes

No

47. Do you pay for plastic waste for waste work?

Yes

No

Sometimes

48. How much are you able to earn from plastic waste weekly?

Below 500

500 - 1000

1000 – 2000

2000 – 5000

5000 – 7000

7000 – 10000

Above 10000

49. Which kinds of plastics do you segregate each week?

CATEGORIES

HDPE (Dabba plastic डब्बा प्लास्टिक)

Mix Plastic (Guddi plastic गुड्डी प्लास्टिक)

PP (दूध की पन्नी)

PET Bottle (पानी की बोतल)

PE/HM (Kali panni काली पन्नी / एच. एम.)

Others (Please Specify)

Specify)

OPTIONS

Yes

No

Sometimes

50. If others, please Specify their name and description

51. How many of the following kinds of plastics are you able to procure each week?

CATEGORIES

HDPE (Dabba plastic डब्बा प्लास्टिक)

Mix Plastic (Guddi plastic गुड्डी प्लास्टिक)

PP (दूध की पन्नी)

PET Bottle (पानी की बोतल)

PE/HM (Kali panni काली पन्नी / एच. एम.)

Others (Please Specify)

OPTIONS

1 – 2 Kg

2 – 5 Kg

5 – 8 Kg

8 – 10 Kg

Above 10 Kg

52. If others Please Specify their name and description

53. What is the usual market rate of the following plastics per KG?

CATEGORIES

HDPE (Dabba plastic डब्बा प्लास्टिक)

Mix Plastic (Guddi plastic गुड्डी प्लास्टिक)

PP (दूध की पन्नी)

PET Bottle (पानी की बोतल)

PE/HM (Kali panni काली पन्नी / एच. एम.)

Others (Please Specify)

54. If others Please Specify

PART VI: PLASTICS AND OTHER WASTES

55. Are there any other kinds of plastics that you work with apart from plastics?

Yes

No

56. What are the other types of waste that you work with?

Newspaper/Raddi

Glass Bottles

Metal

E-waste

Cardboard

Fabric Waste

Other

57. Which of the following wastes brings you the most amount of profit?

Newspaper/Raddi

Glass Bottles

Metal

E-waste

Cardboard

- Fabric Waste
- Other

**PART VII: BUSINESS EXPENSES**

58. What are the various business expenses you have to incur? (Multiple Selection)
- Payment to waste seller
  - Payment to labour/assistant
  - Equipment/vehicle repair
  - Money given to any safai karamchari to let you work without disturbance
  - Electricity Bill
  - Money given to any police officer/traffic police officer to let you work or transport waste without hassle
  - Water Bill
  - Money is given to any MCD officer to let you continue your work
  - Fees / Fine on rickshaw being taken away
  - Other
59. How much do you end up spending on the following every week?
- CATEGORIES**
- Payment to waste seller
  - Payment to labour/

- assistant
  - Electricity
  - Water
  - Bribe to any government office
  - Bribe to any non-governmental person
  - Equipment/vehicle repair
  - Waste transportation cost
- OPTIONS**
- Up to 500
  - 500 – 1000
  - 1000 – 5000
  - 5000 – 10000
  - Above 10000

**PART VIII: TRANSPORTATION TO WORK**

60. How do you commute for your work?
- On foot
  - Metro/Bus
  - Rickshaw/E-rickshaw
  - Auto
  - Own Vehicle
  - Other
61. How far is your place of work from home?
- Within 1 km
  - 1 – 5 km
  - 5 – 10 km
  - 10 – 15 km
  - 15 – 20 km
  - Above 20 km
62. How long does it take for you to reach your place of work?

- Up to 15 minutes
  - 15 to 30 minutes
  - 30 min to 1 hour
  - 1 hour to 1 hour 30 min
  - 1 hour 30 min to 2 hours
  - More than 2 hours
63. When do you reach your place of work?
- 5 AM – 7 AM
  - 7 AM – 9 AM
  - 9 AM – 11 AM
  - Later than 11 AM
64. Do you take any breaks in the middle of the day from your work?
- Yes
  - No
  - Sometimes
65. Do you leave your place of work for the break?
- Yes
  - No
  - Sometimes
66. For what activity do you leave your place of work?
- Having lunch
  - Cooking lunch for family
  - Family Emergency
  - Other
67. When do you wind up your work and leave for the day?
- 1 – 2 PM
  - 2 – 4 PM
  - 4 – 6 PM
  - 6 – 8 PM
  - 8 – 10 PM

- Depends on the amount of waste I am able to gather each day

**PART IX: ACTIVITIES AT WORK**

68. Who does the following activities at work?
- CATEGORIES**
- Collection
  - Segregation
  - Transportation
  - Trading
- OPTIONS**
- Self
  - Family Member Male
  - Family Member Female
  - Coworker / Friend – Male
  - Coworker / Friend – Female
  - Godam Owner
69. Who do you sell your plastic waste to?
- Different Godam Owners
  - Single Godam Owner
  - Family member's Godam
  - Local Junk Shop
  - Other
70. Why do you sell your waste to them?
- They are known to me from my village
  - They are family
  - They offer a better price

- I owe them money
- They help out in emergencies
- They have provided me with accommodation/help to me
- They provide transportation of waste
- Other

**PART X: OCCUPATIONAL SAFETY – AWARENESS AND ACCESSIBILITY**

71. What risks do you think you face being a waste worker? (Multiple selections)
- Health hazards leading to chronic diseases
  - Injuries from sharp objects
  - Injuries from lifting heavy weights
  - Skin diseases
  - Dehydration
  - Sexual harassment
  - Threat of police violence
  - Fear of road accidents
  - Threat of violence from common people
  - Dog bites
72. Do you have access to any of the following?
- Safety gear – gloves, masks, jackets
  - Safe drinking water

- Sanitation facilities (toilets)
  - A space to rest during the day
  - Other (ADD)
73. Do you have access to a safe space to segregate waste?
- Yes
  - No
  - Sometimes
74. If not, then what difficulties do you usually face because of it?
- Extreme weather conditions
  - Threat of police violence
  - Dehydration
  - Threat of violence from local residents /business owners
  - Sexual harassment
  - Fear of road accidents
  - Other
75. What steps do you think the government should take to make you feel secure about your occupation?
- Provide space for segregating waste
  - Provide proper sanitation facilities
  - Provide safety gear (gloves, masks, etc.)
  - Provide road access for transporting waste
  - Other (please mention)



# Appendix C

## Record Sheet Analysis

### INTRODUCTION

Record Sheets refer to daily record maintenance of waste collected and sold by the participants. These record sheets were designed by the researchers in coordination with the wastepickers based on the existing systems of record-keeping maintained by them. The aim of collecting this information was to gain an understanding of the incomes generated in waste work by the selected participants by various kinds of wastes especially plastics and check if gender affects their incomes.

### OBJECTIVES

The record sheet maintenance was conducted keeping in mind the following objectives.

1. To map the value, quantity, and quality of plastic waste reaching both men and women and to identify gendered differences
2. Identifying Plastics that hold maximum value to wastepickers and map gendered differences
3. Mapping incomes from waste collection to further identify gendered differences
4. Identifying the categories of work the wastepicker is personally involved in, to further study gender differences

### OVERVIEW OF RECORD SHEETS

The record sheets were aimed to be collected from all four participants in both the municipal areas namely, NDMC and SDMC. However, regular maintenance of record sheets was only possible in the cases of NDMC participants - Ms Romila and Mr Mahesh. The major reason behind the non-maintenance of the record sheets from the SDMC area was the extreme caution exercised by the participants in the backdrop of rampant privatization of waste management.

The participants of the SDMC area complained of providing information to various commercial and non-commercial organizations in the hope of receiving economic and legal support resulting in further exploitation. The repeated breach of trust made them averse to providing their business information to Chintan.

Given below are the record Sheets used by the researchers for collecting and maintaining the data. The data were recorded manually by the wastepickers on paper, which were later digitized by the researchers.

Table 1: Purchase and Collection Sheet

S.No.	Date	Vendor (Customer) + Labour	Item + Labour	Quantity (KG) + Labour Duration (No. of Days)	Item Rate + Labour Rate (₹)	Total Amount (₹)

**Note:** This particular sheet incorporated the details of labour engaged by the participants as this sheet dealt with expenses made for business. As the expenditure on labour was not as frequent among the majority of the participants, incorporating the same in the purchase sheet was considered viable by them. The data on labour expenditure however was recorded separately by the researchers digitally.

Table 2: Sales Sheet

S. No.	Date	Vendor	Item Name	Quantity (KG)	Rate of Item (₹)	Total Amount Received (₹)

**Note:** The record sheets analysed in this section are the daily records of waste materials sold after purchase and collection for the month of August and September 2022. These sheets were maintained by Ms Romila and Mr Mahesh both working at the MRFs provided by Chintan.

## References

1. Perez, Caroline Criado. *Invisible Women: Exposing Data Bias in a World Designed for Men*. Vintage, 2020.
2. Council on Foreign Relations. "Growing Economies through Gender Parity." Council on Foreign Relations, <https://www.cfr.org/womens-participation-in-global-economy/>
3. Chintan Environmental Research and Action Group. "Who Recycles Your Waste? - Chintan Fact Sheet." Chintan Environmental Research and Action Group, Aug. 2019, [https://www.chintan-india.org/sites/default/files/2019-08/chintan\\_who\\_recycles\\_your\\_waste\\_fact\\_sheet-4.pdf](https://www.chintan-india.org/sites/default/files/2019-08/chintan_who_recycles_your_waste_fact_sheet-4.pdf).
4. Ibid.
5. Crenshaw, K. "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color." *Stanford Law Review*, vol. 43, no. 6, July 1991, pp. 1241–1299., <https://doi.org/10.2307/1229039>.
6. Dias, Sonia, and Ana Carolina Ogando. "From Theory to Action: Gender and Waste Recycling." *Women in Informal Employment: Globalizing and Organizing*, <https://www.scribd.com/document/552127061/Dias-Ogando-gender-and-waste-toolkit-book-three>.
7. Chintan Environmental Research and Action Group. "Space for Waste – 2021 A Study to analyze space needs for Solid Waste Management". Chintan Environmental Research and Action Group. 2021. [https://counterviewfiles.files.wordpress.com/2021/09/space-for-waste-2021-note\\_chintan-india.pdf](https://counterviewfiles.files.wordpress.com/2021/09/space-for-waste-2021-note_chintan-india.pdf)
8. Dias, Sonia, and Ana Carolina Ogando. "From Theory to Action: Gender and Waste Recycling." *Women in Informal Employment: Globalizing and Organizing*, <https://www.scribd.com/document/552127061/Dias-Ogando-gender-and-waste-toolkit-book-three>.
9. As per the Solid Waste Management Rules 2016, "materials recovery facility" (MRF) means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in Rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by the authorised informal sector of wastepickers, informal recyclers or any other workforce engaged by the local body or entity mentioned in Rule 2 for the purpose before the waste is delivered or taken up for its processing or disposal
10. As per the Solid Waste Management Rules (2016), Municipal corporations are responsible to (i) direct the town planning department of the State to ensure that master plan of every city in the State or Union territory provisions for setting up of solid waste processing and disposal facilities except for the cities who are members of common waste processing facility or regional sanitary landfill for a group of cities; and (ii) ensure identification and allocation of suitable land to the local bodies within one year for setting up of processing and disposal facilities for solid wastes and incorporate them in the master plans (land use plan) of the State or as the case may be, cities through metropolitan and district planning committees or town and country planning department; (iii) direct the town planning department of the State and local bodies to ensure that a separate space for segregation, storage, decentralised processing of solid waste is demarcated in the development plan for group housing or commercial, institutional or any other non-residential complex exceeding 200 dwelling or having a plot area exceeding 5,000 square metres
11. "Who Recycles Your Waste? - Chintan Fact Sheet." Chintan Environmental Research and Action Group, Chintan Environmental Research and Action Group, Aug. 2019, [https://www.chintan-india.org/sites/default/files/2019-08/chintan\\_who\\_recycles\\_your\\_waste\\_fact\\_sheet-4.pdf](https://www.chintan-india.org/sites/default/files/2019-08/chintan_who_recycles_your_waste_fact_sheet-4.pdf).
12. Directorate, OECD Statistics. "INFORMAL SECTOR – ILO." OECD Glossary of Statistical Terms, <https://stats.oecd.org/glossary/detail.asp?ID=1350>
13. Chaturvedi, B. *Plan The Ban: Eliminating Single Use Plastics in India without displacing people*, a report: 2021. Chintan Environmental Research and Action Group, 2021
14. Grown et al., "Discussion Paper: Who borrows? An Analysis of gender, debt and asset in Ecuador, Ghana and Karnataka, India." UN Women, New York, 2015, <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2015/DiscussionPaper-AnalysisOfGenderDebtAndAssets-en.pdf>
15. Pal, S. (2020, November 08). Informal sector workers continue to struggle with low wages, high debts: Actionaid Report. Retrieved from <https://www.newsclick.in/informal-sector-workers-continue-struggle-low-wages-high-debts-actionaid-report>

## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



# संतुलन

Santulan / Samtulan / Santulanā in Hindi,  
Prakrit and Sanskrit means balance, equilibrium.

It is used here in the gender context of the  
waste workers community.

