Baseline analysis of the socio-economic situation of Safai Sathis

Urban Social Protection Programme, UNDP India

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List of Acronyms

ATM	Automated Teller Machine
ID	Identification Document
JSB	Japan Supplementary Budget
LPG	Liquefied Petroleum Gas
MRF	Material Recovery Facility
MT	Metric Tonnes
OBC	Other Backward Classes
PWM	Plastic Waste Management
SC	Schedule Castes
ST	Schedule Tribes
SWM	Solid Waste Management
ULB	Urban Local Body
UNDP	United Nations Development Programme
WASH	Water, Sanitation and Hygiene

Foreword

Safai Sathis, or waste collectors, play a significant role in waste recycling in India. Their hard work to ensure cleanliness and resource recovery during the COVID-19 pandemic has been vital to the protection of the environment, public health, and society in India.

While there have been improvements in certain social indicators, such as access to drinking water, electricity and sanitation in the living standards of Safai Sathis, a lot more needs to be done to bridge the gaps.

UNDP, with support from the Japan Supplementary Budget (JSB) COVID-19 Response, and as part of its efforts to reduce poverty and address marginalization, especially among vulnerable populations, has conducted a baseline analysis of the socio-economic situation of Safai Sathis. Administered through UNDP's Project Utthaan, this was one of the first large-scale assessments conducted in India, covering 9,300 Safai Sathis in 14 cities. This exercise underlined the need to strengthen access to social protection schemes, healthcare facilities, financial inclusion, and formalized employment for this community.

The baseline analysis identified certain key areas for improvement to promote social empowerment of the Safai Sathis, and it also showed that they continue to face inequity in areas such as education, household income and social recognition.

The recommendations of this report help identify and address the gaps in social protection for Safai Sathis. It also makes clear that collaborative efforts between policymakers, government departments, urban local bodies and social protection experts can bring about a lasting change in their lives.

I would like to express my special appreciation for Japan's support and thanks to the UNDP India Plastic Waste Management team, UN Volunteers, and our project partners for conducting this analysis. I would also like to appreciate the efforts of the UNDP Policy team in producing this report and continuing to help strengthen systems on the ground to improve the lives and livelihoods of vulnerable communities.

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Executive Summary

The Safai Sathis are key stakeholders in the waste recycling ecosystems across India. During the pandemic, these individuals worked, and continue to work on the frontlines to ensure that progress on sanitation is not side-tracked. However, documented evidence of the hardships faced by this community shows that they grapple with low levels of household income, limited access to public safety nets, high health risks, social marginalization, and high uncertainty in employment. Given the contribution of the Safai Sathis to the overall economic development of the country, an exploration of the developmental issues surrounding them is crucially important.

In 2020, UNDP India surveyed 9,300 Safai Sathis in 14 cities across 10 Indian states to understand their demographic, work, income, financial and housing conditions along with their levels of enrolment and access to social protection measures. This report provides evidence from this cross-sectional cohort and highlights key policy priorities pertaining to Safai Sathis.

With equal representation of male and female Safai Sathis and with representation from all social categories, the key findings from the survey are:

- Around 65 percent of respondents reported having no formal education. This percentage is higher among socially disadvantaged groups.
- The average household size was four individuals with the number of family members ranging from 0 to 16 among those surveyed.
- More than half of the respondents worked as itinerant waste pickers, street sweepers and waste pickers at a landfill, all work categories that are highly informal in nature. Socially disadvantaged groups and those with no formal education were more heavily concentrated in such informal work.
- Ownership of identification documents varied across the sample, including:
    - Approximately 90 percent of the individuals indicated ownership of an Aadhar card.
    - Around 63 percent reported having a voter ID card with more women (as compared to men) reporting owning one.
    - Less than 6 percent reported having a birth certificate.
    - Around 12 percent reported having an occupation card.
    - Around 0.5 percent reported the ownership of caste and income certificate.
- Approximately 7 in 10 respondents reported having a monthly household income of less than Rs. 10,000. Only 4 percent reported earning more than Rs. 20,000 a month.
- Around 67 percent reported having a bank account. Only 3 in 10 of these individuals reported that their bank accounts were linked with the Jan Dhan scheme.
- One in 2 individuals indicated the ownership of a beneficiary document such as a ration card, and a majority of them reported using it to obtain ration. On the other hand, only 4 percent of the individuals owned a health card.
- Rented and temporary housing were among the most prominent forms of accommodation. Most reported that basic utilities, such as drinking water and electricity, were available to them, while only six in 10 individuals reported having access to sanitation facilities. The use of wood-based cooking fuel was found to be at par with the use of liquefied petroleum gas and other cleaner cooking methods.

The findings of the survey reflect the progress that has been already made, and that which is also being currently effected, to improve the living standards of Safai Sathis across the country. At the same time, however, the results also underscore the need to address the economic and social exclusions faced by this community, particularly by the most vulnerable sections, such as women and the socially disadvantaged. UNDP, along with other key stakeholders, can expedite the ongoing efforts by:

a) Strengthening and formalizing the economic contributions of this community,
b) Initiating skilling programmes and exploring alternate livelihood opportunities and,
c) Expanding and increasing the uptake of social safety nets among the Safai Sathis.

Bolstering the growth prospects of the Safai Sathis while reducing their vulnerabilities can transform their lives and promote inclusive development.

Chapter 1
Introduction

The waste management ecosystem is a substantial part of the recycling economy in India as well as the daily lives of citizens. With more than a tenth of the world's waste being generated in India (Bhaduri and Mehta, 2020), the stakeholders involved in the processes of this ecosystem play a key role in the cleanliness of both public and private spaces. They also impact the country's water, sanitation, and hygiene (WASH) initiatives and its overall sanitation agenda. India's cities – particularly its urban spaces that are still in the process of building regularized municipal recycling systems – rely on the informal participation of waste pickers to keep the recycling economy running.

It is estimated that India has approximately 5 million sanitation workers engaged across nine different categories of sanitation work (Dalberg Advisors, 2018). The term 'waste pickers' refers to all people, employed or otherwise, who are responsible for the cleaning, sorting, collection, transportation and delivery of recyclables to aggregators and material recovery facilities (MRFs). These individuals can be present in any step of the solid waste management (SWM) chain and include itinerant cleaners, waste pickers, workers in domestic, public, and institutional settings, street sweepers, those who work as waste pickers for households, landfills and aggregators, and other municipal contract collectors. As essential public workers, the Safai Sathis fill a crucial gap by recovering recyclables from (mostly urban) settlements and providing raw materials to the formal recycling chain.

Despite the importance and scale of the work performed by the Safai Sathis, a large majority of this work exists in the informal economy. These workers are often unprotected by labour rights frameworks and laws. Their contributions to both – the overall economy and the recycling economy – remain largely invisible due to the informal nature of their work. At a more granular level, anecdotal evidence suggests a high concentration of socially disadvantaged groups within the lower rungs of the waste management ecosystem. With limited earning capacity, Safai Sathis from historically disadvantaged communities are now facing the increased risk of falling back into poverty and experiencing insecurities relating to food, income, work, and livelihood.

In addition, the documentation of the contributions of Safai Sathis in formal solid waste systems, the environment and the economy also remains largely divergent from local realities. The workers often operate in hazardous conditions while facing exclusionary rhetoric in precarious urban spaces on a daily basis (Wittmer, 2021). News items about the injuries from landslides at landfills and illness and death due to exposure to hazardous biomedical and solid waste sustained by Safai Sathis have been well documented across the country (Mistry et al., 2020; Reddy, 2020). Rapid urbanization, scanty resources (both financial and technical) and inadequate governance structures have also contributed to the social and economic insecurity for Safai Sathis in India (Dias, 2016).

Since March 2020, the COVID-19 pandemic has further exacerbated the vulnerabilities of Safai Sathis. The participation of these workers on the frontlines of the country's COVID-19 response increased their associated physical and mental risks (Ghosh, 2020). Growing irregularities in payments during the pandemic coupled with job losses also intensified existing challenges for Safai Sathis.

From a policy perspective, tracing and mapping employment-related indicators (including enumeration) for these workers has been a long-standing challenge. This is especially true in India where a large section of the informal workforce does not own government identification cards. The lack of such documentation restricts the Safai Sathis' access to key social protection measures such as food grain subsidies, health, education, financial benefits, etc. The absence of holistic information also continues to impede progress on policies which could potentially increase the welfare of these workers, particularly during external shocks such as the COVID-19 pandemic.

Chapter 2
Project Utthaan –
Rise with resilience

Since 2018, UNDP India has been working on addressing the issue of plastic pollution in more than 30 Indian cities through its integrated Plastic Waste Management (PWM) programme. The project is geared towards implementing a socio-technical model which addresses two-fold challenges: a) the management of plastic waste through recovery channels and b) the mainstreaming of Safai Sathis in formal (and social) systems through interventions focused on improving livelihoods and enabling social protection linkages.

The project[1] has, since its inception, successfully collected 76,600 metric tonnes (MTs) of plastic waste, the equivalent to saving 1,91,530 kg of carbon dioxide from being released into the atmosphere. The project has also planted approximately 9,000 trees. In addition, more than 7,000 Safai Sathis, along with 35,000 family members, have been reached and assisted through various interventions.

In April 2020, the PWM programme conducted an internal situational analysis with 35 implementing partners and 2,300 Safai Sathis. The aim was to examine the impact of COVID-19 on waste management operations and the lives of Safai Sathis. The analysis revealed that rations, daily wages, access to health care, personal protective equipment and health insurance were among the top requirements for the surveyed cohort.

As a result of these findings, Project 'Utthaan – Rise with Resilience' with support from JSB, was created as UNDP India's COVID-19 response to support Safai Sathis while accessing social protection schemes and building more resilient communities. The project seeks to support the Safai Sathis by facilitating:

- Increased links to government schemes and streamlining their work in accordance with the Solid Waste Management Rules, 2016, and the Plastic Waste Management Rules, 2018;
- Greater financial security through opening bank accounts and using direct bank transfers to receive payments;
- Linkages to self-help groups for alternate sources of income;

[1]**More information regarding the PWM Programme can be found here : https://www.in.undp.org/content/india /en/home/projects/plastic-waste-management.html**

- Improved food security through improved access to ration cards;
- Increased health security through enrolment in health and life insurance schemes; and
- Greater access to education for the children of Safai Sathis through government schemes.

As one of the key activities under Project Utthaan, UNDP India surveyed 9,300 Safai Sathis in 14 cities across 10 states to better understand their demography, work, income, financial and housing profiles along with their enrolment and access in social protection measures. This report analyses the results from this cross-section and aims to provide ground-based evidence for action-oriented policy recommendations.

The report is structured as follows: chapters 1 and 2 set the context and background surrounding the Safai Sathis. Chapter 3 highlights the objectives, scope, methodology and related definitional aspects of the survey. Chapter 4 deals with the results obtained from the data collected on Safai Sathis in thematic sub-sections. Chapter 5 concludes with policy suggestions.

Chapter 3
Situational survey of Safai Sathis

3.1: Objectives and definitions

This report takes an evidence-based approach towards understanding the challenges faced by the Safai Sathis community. It aims to provide on-ground evidence for designing programmes that build resilience and bolster growth prospects for them.

The specific objectives of the survey, on which this report is based, were to:

1) Understand the demographic profiles of Safai Sathis across target urban areas.
2) Identify the scope and nature of their work and to map their income profiles.
3) Assess ownership of key identification documentation and collect information on gaps in accessing key social protection mechanisms.
4) Highlight the level of access that this community has towards basic utilities such as housing, drinking water, electricity, and sanitation.

The term 'waste picker' has been, as per the characterization adopted by the SWM Rules, 2016, defined as 'a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation… for sale to recyclers directly or through intermediaries to earn their livelihood.'

UNDP, in its own capacity, uses 'Safai Sathis' as a dignified expression and as an alternate to the term 'waste pickers'.

For this survey, Safai Sathis were chosen based on the source of waste collection, by the different settings in which they were engaged and keeping in mind the presence[2] of on-ground agencies working towards the betterment of this community. This ensured representation from the various rungs of the waste management ecosystem. The findings presented in this report, however, are not intended to be representative of the SWM sector. Instead, they are indicative of an overview of the socio-economic situation of Safai Sathis.

[2]Cities with implementation partners keen on working in this area, whose urban local bodies (ULBs) were ready and those with opportunities to engage with other stakeholders like the Urban Livelihoods Mission (ULM) were chosen for the first round of the survey. Cities like Bengaluru and Pune, where waste picker organizations are already working towards enabling social protection for Safai Sathis, were not included in the sampling frame.

Based on project experience and preliminary studies, the following broad categories of Safai Sathis were identified:

1. Itinerant Safai Sathis (free-roaming waste collectors)
2. Safai Sathis working at MRFs (Swachta Kendras)
3. Safai Sathis working at dumping grounds
4. Street sweepers engaged in waste collection activities
5. Housekeeping staff engaged in waste collection activities
6. Safai Sathis employed by local aggregators/micro-entrepreneurs
7. Municipal contractors engaged in waste collection activities

3.2: Methodology

Questionnaires:
Survey questionnaires were developed for each category of Safai Sathis through an iterative process of field testing.

Interactive Discussions:
UNDP implementing partner organizations were engaged in discussions to:
a) Discuss the scope of the survey,
b) Pilot the questionnaire,
c) Understand the various categories of Safai Sathis, and
d) Map their area of work and residence.

Administration:
The survey was conducted between October 2020 and January 2021 over the course of 120 days. Around 18 surveyors (UN Volunteers) and 20 field staff from 14 partner organizations engaged with the PWM programme and were supported by 14 UNDP India city leads and 3 project coordinators.

Training:
An extensive two-day training and orientation programme was conducted for the surveyors on the questionnaire with the help of field assistants. The training demonstrated how to take interviews on Kobo Toolbox and familiarized the surveyors with the questionnaire. Throughout the survey, responses were examined closely for any outliers and discrepancies.

Focus Group Discussions and Case Studies:
In addition to the survey, case studies[3] and multiple focus group discussions were conducted to provide qualitative data regarding the lives of Safai Sathis, the challenges they face, the impact of the pandemic on their livelihoods and their future outlook.

[3] Some case studies can be accessed at https://undp.medium.com/safai-saathis-the-invisible-environmentalists-ecd4ecf6c934.

Chapter 4
Socio-economic analysis of Safai Sathis

The following sub-sections highlight the major findings of the survey. These results have been divided into themes such as demography (4.1), nature of work and income (4.2), financial inclusion (4.3), identification documents (4.4), ration and health (4.5), the children of Safai Sathis (4.6) and basic services (4.7). Differentials by gender, social category, migratory status, level of education and geographical location are referred to at relevant places within the report.

4.1: Demography

The survey collected responses from 9,302 Safai Sathis in 14 cities across the country. Table 1 highlights the geographical spread of the individuals surveyed.

Table 1. Geographical coverage

Geographical area (city)	Frequency (N)	Percent (%)
Aurangabad	505	5.43
Bhubaneshwar	490	5.27
Chennai	504	5.42
Cuttack	521	5.60
Delhi	1004	10.79
Ghaziabad	531	5.71
Jaipur	512	5.50
Jammu	502	5.40
Mumbai	1327	14.27
Panaji	348	3.74
Patna	1267	13.62
Puri	602	6.47
Rishikesh	410	4.41
Varanasi	779	8.37
Total	**9,302**	**100**

Source: Authors' calculations based on survey data.

More than one in two individuals surveyed were women. While cities such as Ghaziabad, Jammu, Delhi, and Panaji saw the participation of a proportionally higher number of men, the representation of women was higher in cities such as Aurangabad, Mumbai, Puri and Bhubaneshwar. A geographical breakdown of the surveyed individuals by gender composition is presented in figure 1.

Figure 1. Gender composition by geography
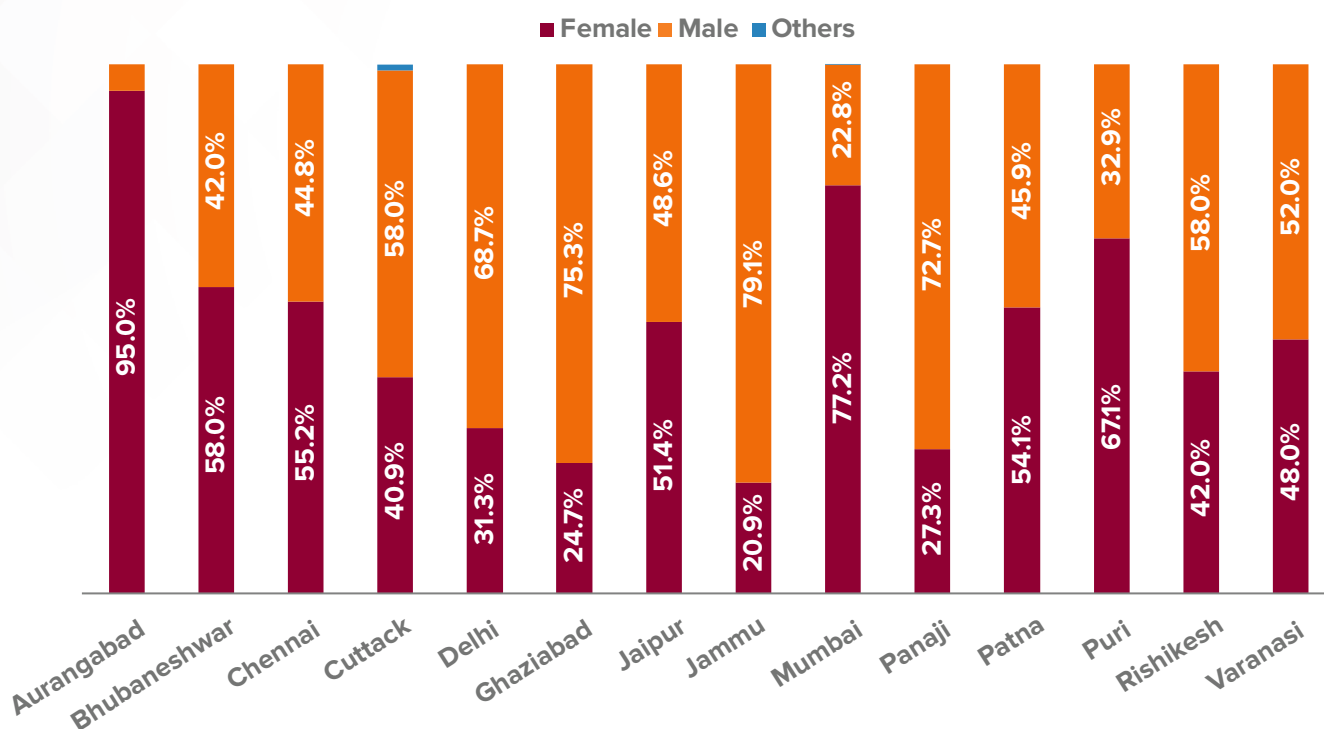
The average size of a Safai Sathis family was four members with the total number of members in the household ranging from one to 16. Nearly eight in 10 Safai Sathis were married, with married individuals reporting larger family sizes as compared to those who were either unmarried, divorced, or widowed. Further, only around one in three households were headed by women.

Socially marginalized groups were well represented in the sample. Around 47 percent of the respondents belonged to schedule castes (SC), 18 percent to other backward castes (OBC) and 5 percent to scheduled tribes (ST). Twenty percent of the individuals were from the general category. Within these social categories, the SC category recorded a higher representation of women as compared to men (52 percent vs 41 percent), whereas the OBC and general categories were more heavily concentrated in men. Figure 2 highlights the differential spread of social categories across the survey geographies with cities like Aurangabad, Patna, Rishikesh and Cuttack having the highest proportions of SC individuals.

Figure 2. Social category by geography
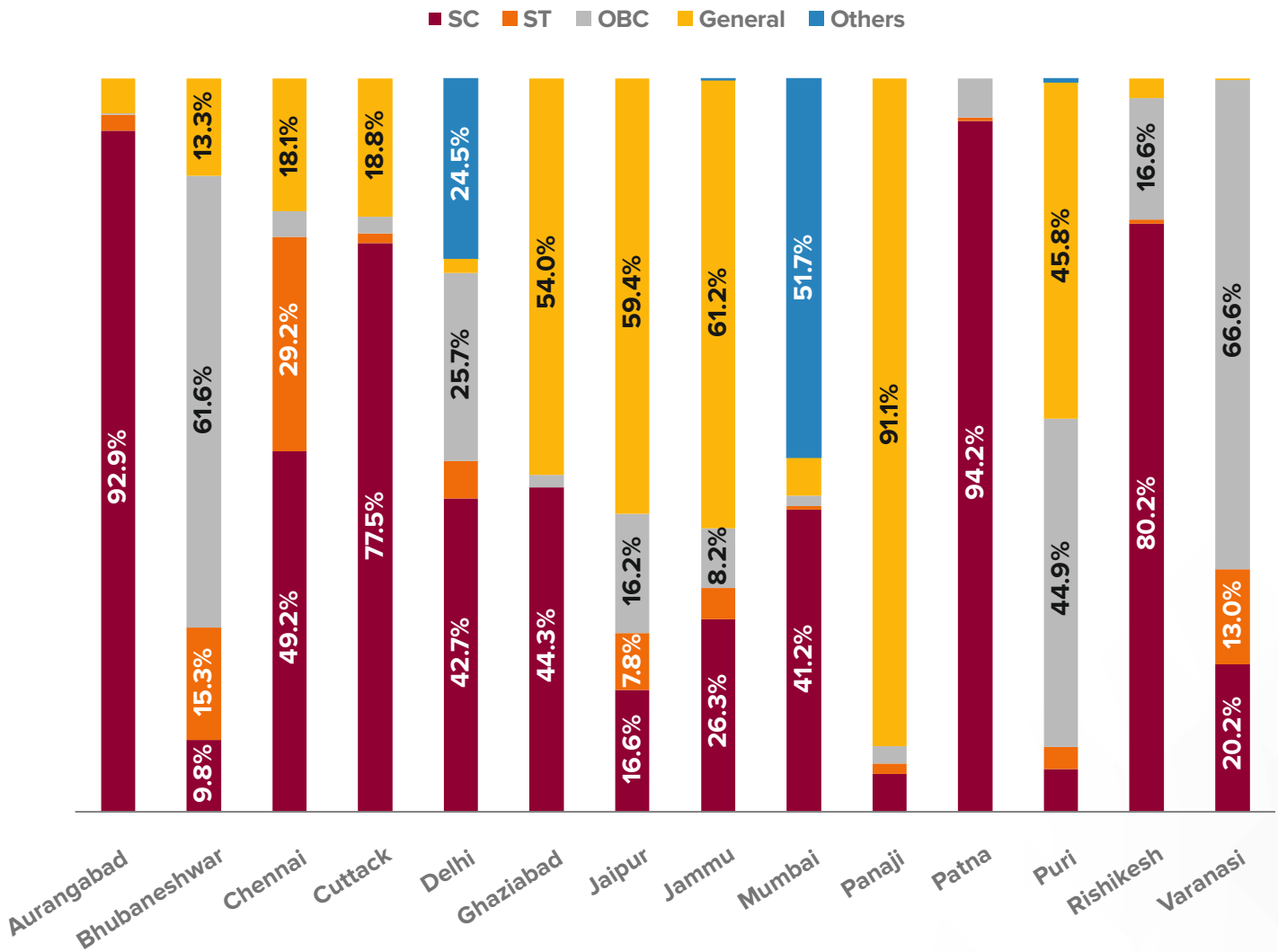
Legend: ■ SC ■ ST ■ OBC ■ General ■ Others

Aurangabad: SC 92.9%
Bhubaneshwar: SC 9.8%, ST 15.3%, OBC 61.6%, General 13.3%
Chennai: SC 49.2%, ST 29.2%, OBC 18.1%
Cuttack: SC 77.5%, General 18.8%
Delhi: SC 42.7%, OBC 25.7%, Others 24.5%
Ghaziabad: SC 44.3%, General 54.0%
Jaipur: SC 16.6%, ST 7.8%, OBC 16.2%, General 59.4%
Jammu: SC 26.3%, OBC 8.2%, General 61.2%
Mumbai: SC 41.2%, Others 51.7%
Panaji: General 91.1%
Patna: SC 94.2%
Puri: SC 44.9%, OBC 45.8%
Rishikesh: SC 80.2%, OBC 16.6%
Varanasi: SC 20.2%, ST 13.0%, OBC 66.6%

Source: Authors' calculations based on survey data. Note: frequency of sample respondents for each geographical location can be found in Table 1.

In terms of education, more than six in 10 respondents reported no formal education across the sample with more women (72 percent) as compared to men (56 percent) reporting having no formal education. For all other levels of education – such as primary, secondary, and high school and above – the proportions of men reporting such levels of education were greater than women.

A similar trend in education was also observed for socially disadvantaged communities, such as SCs, STs and OBCs, which noted a lower level of educational attainment at all levels of education as compared to those in the general category. Figure 3 highlights the differentials in educational attainment by gender (3A) and social category (3B).

Figure 3. Education profile

A. By gender

	No formal education	Literate below primary	Primary	Upper primary	Secondary	High school	Above high school
Female N=4882	72.3%	8.8%	7.8%	6.3%			
Male N=4473	56.4%	12.9%	11.6%	9.6%	6.2%		
Others N=7	14.3%		28.6%	28.6%	14.3%		14.3%

Legend:
- ■ No formal education
- ■ Literate below primary
- ■ Primary
- ■ Upper primary
- ■ Secondary
- ■ High school
- ■ Above high school

B. By social category

Legend:
- ■ No formal education
- ■ Literate below primary
- ■ Primary
- ■ Upper primary
- ■ Secondary
- ■ High school
- ■ Above high school

	Others: 936	General: 1,871	OBC: 1,676	SC: 4,329	ST: 490
No formal education	74%	58%	51%	71%	66%
Literate below primary	8%	9%	25%	6%	14%
Primary	8%	13%	12%	8%	8%
Upper primary	6%	10%	6%	9%	6%
Secondary	3%	7%	4%	5%	4%

The educational profiles of the surveyed Safai Sathis highlight three key observations: the overall low level of education, the lower education levels of socially disadvantaged categories (such as SCs, STs and OBCs) than those in the general category, and an even lower level of educational attainment for women as compared to men.

Native workers constituted a majority of the respondents with only three in 10 individuals reporting being migrants. Seventy-nine percent of the women Safai Sathis surveyed were natives, while the

proportion of migrants (particularly inter-state migrants) was higher among men. Safai Sathis from the general category and those with no formal education also recorded higher proportions of migrant workers.

Figure 4 highlights the composition of the Safai Sathis by their migratory status across the survey geographies. Locations such as Delhi, Ghaziabad and Panaji note higher levels of migrant Safai Sathis as compared to other cities, reflecting the opportunities that are provided by these cities in the waste management ecosystem.
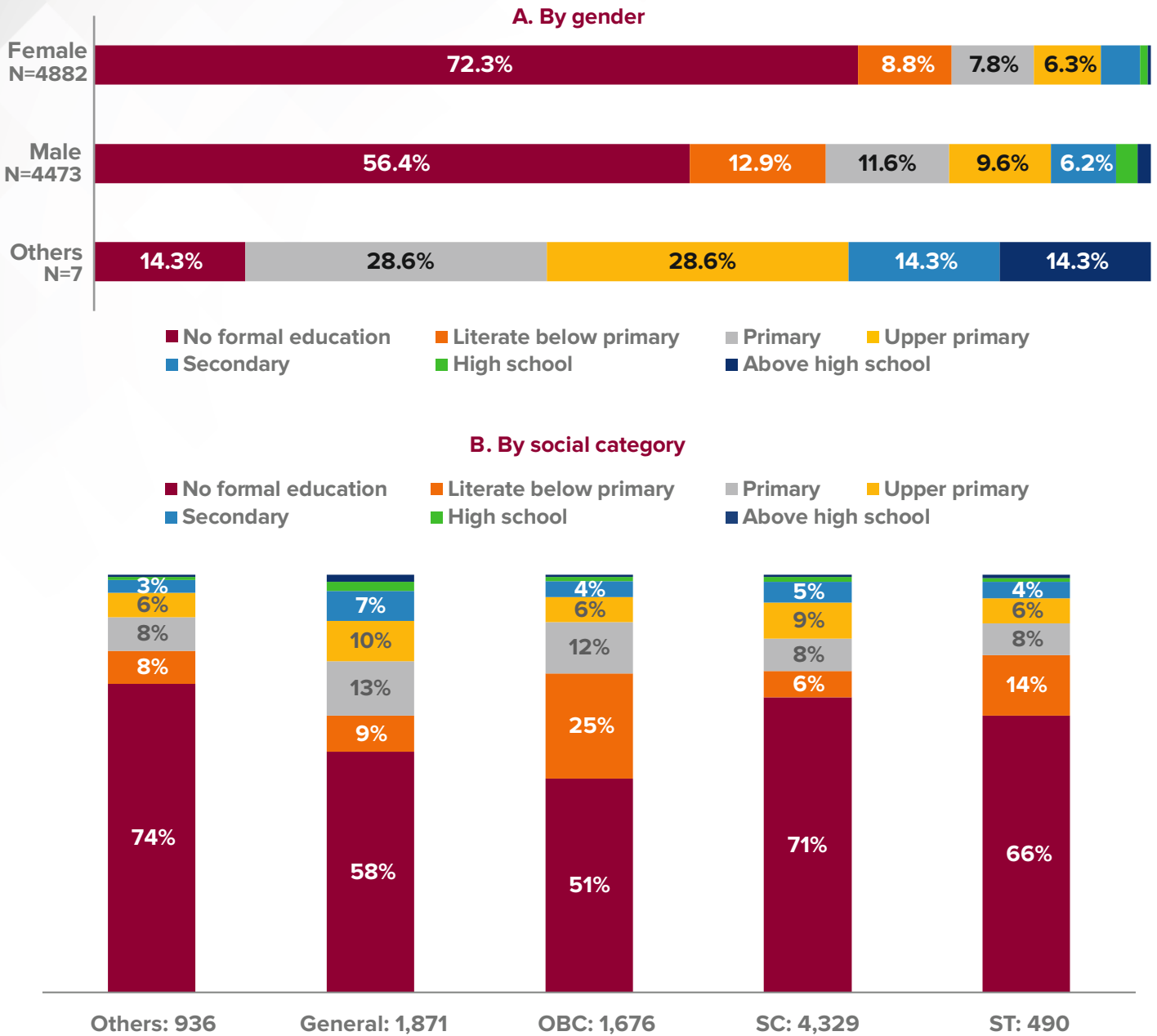
Figure 4. Migration by geography
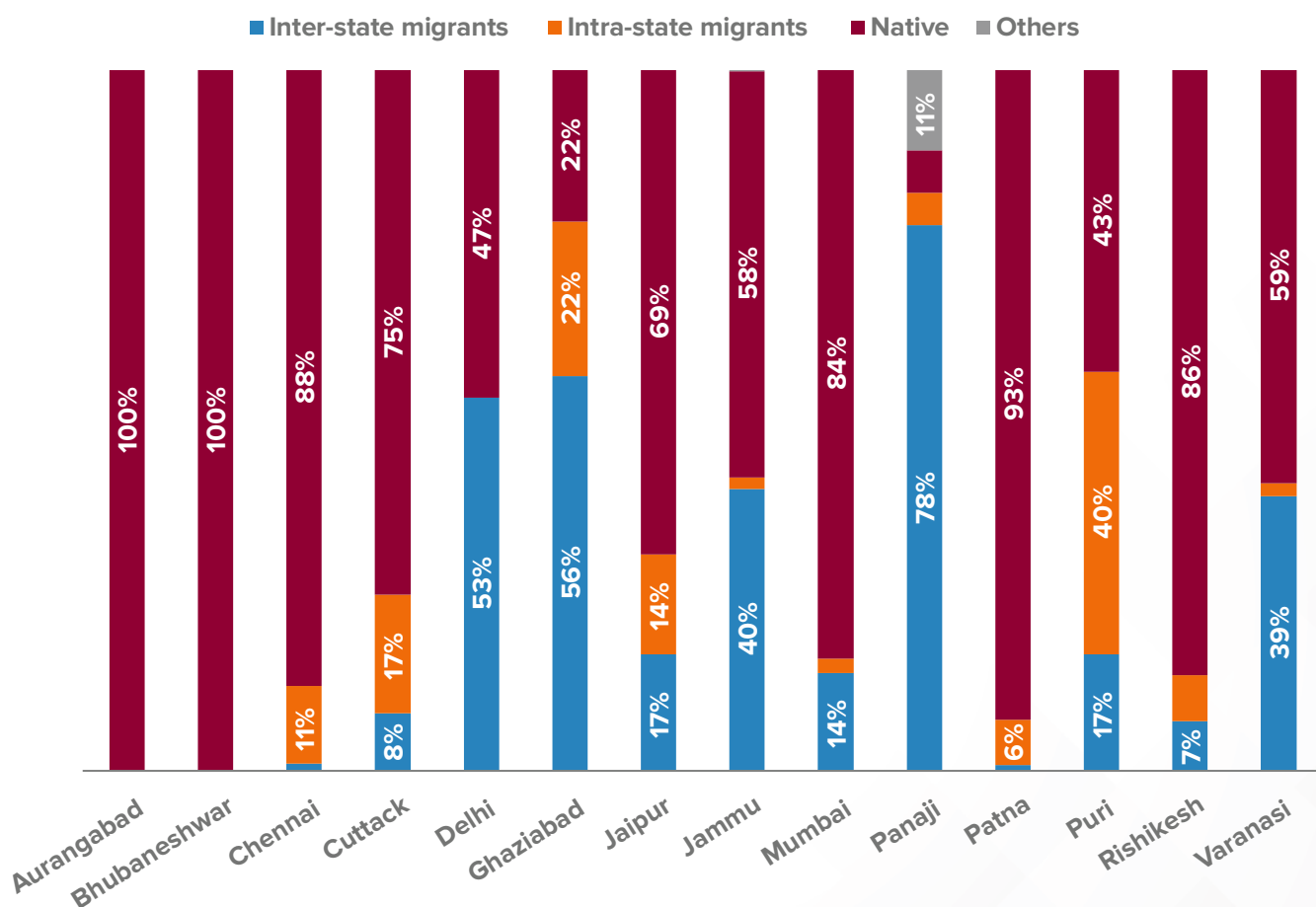
Source: Authors' calculations based on survey data. Note: frequency of sample respondents for each geographical location can be found in Table 1.

Key takeaways

The geographical coverage of the sample spans across 14 cities. With equal representation of women and men, the sample exhibits a high average household size and low levels of educational attainment. There is higher representation from socially disadvantaged cohorts, such as SCs and OBCs (as compared to general category) and native workers (as compared to migrant workers) among the survey respondents.

4.2: Nature of work and income

The current waste generation in India is estimated to be around 62 million tonnes annually (Dandapani, 2017). The journey of household waste collection, a major component of this annual estimate, in the country is well known. Waste from homes is picked up by garbage trucks, and thi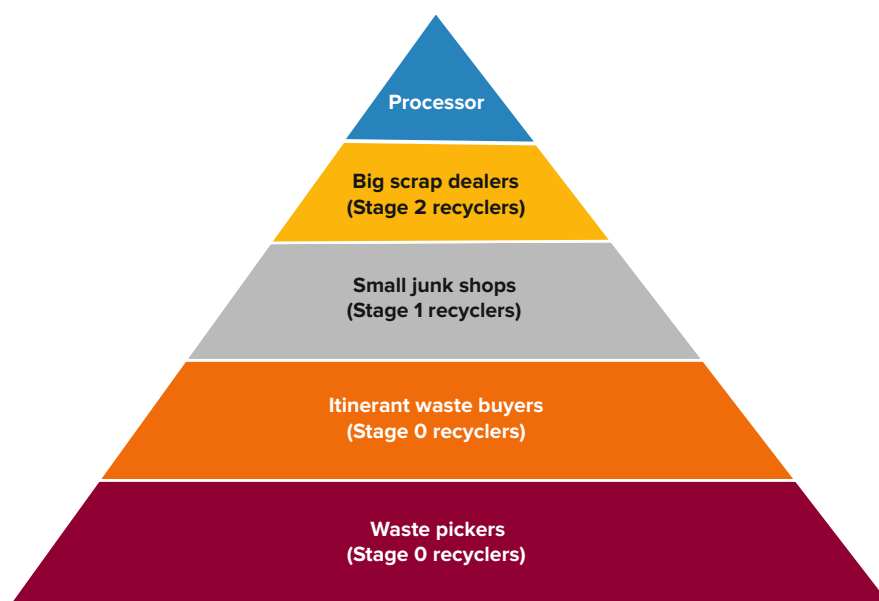s is then transferred to recycling stations or transported to landfill sites. A key operation at both destinations is the segregation of collected waste, which serves as a crucial component of the waste management ecosystem. It is at this stage that Safai Sathis make their living by collecting, sorting, and/or buying recyclable waste on the streets (or from waste dumps and landfills), and selling it to junk shops, etc.

The work undertaken by the Safai Sathis is among some of the lowest ranking members of the urban informal occupation hierarchy and is highly informal in nature. These workers are not always connected to associations or cooperatives (who generally work with waste pickers and sanitation workers) and are therefore, additionally vulnerable to livelihood uncertainty. This section explores the nature of the work of the Safai Sathis and their income profiles.

Processor

Big scrap dealers (Stage 2 recyclers)

Small junk shops (Stage 1 recyclers)

Itinerant waste buyers (Stage 0 recyclers)

Waste pickers (Stage 0 recyclers)

Source: reproduced from "Integration Of Informal Sector In Solid Waste Management, Strategies and Approaches", Centre for Science and Environment (2021).

The surveyed individuals represent a variety of work profiles within the waste management ecosystem in India, with the most prominent profiles being that of itinerant waste pickers (27 percent) and street sweepers (22 percent). Other profiles such as waste picking at a landfill or working for an aggregator, municipal contractor collector and housekeeping staff were also reported (see figure 5) by the survey respondents. It is crucial to note that all these work profiles are highly informal in nature, including that of the municipal contract collectors.

Figure 5. Work profiles

Others

Municipal contractor collector 4.90%

2.31%

Housekeeping staff

Waste picker working at MRF 12.40%

Municipal contractor collector 9.41%

Waste picker working for an aggregator 8.88%

Itinerant waste picker 26.91%

Waste picker at a landfill 13.62%

Street sweeper 21.58%
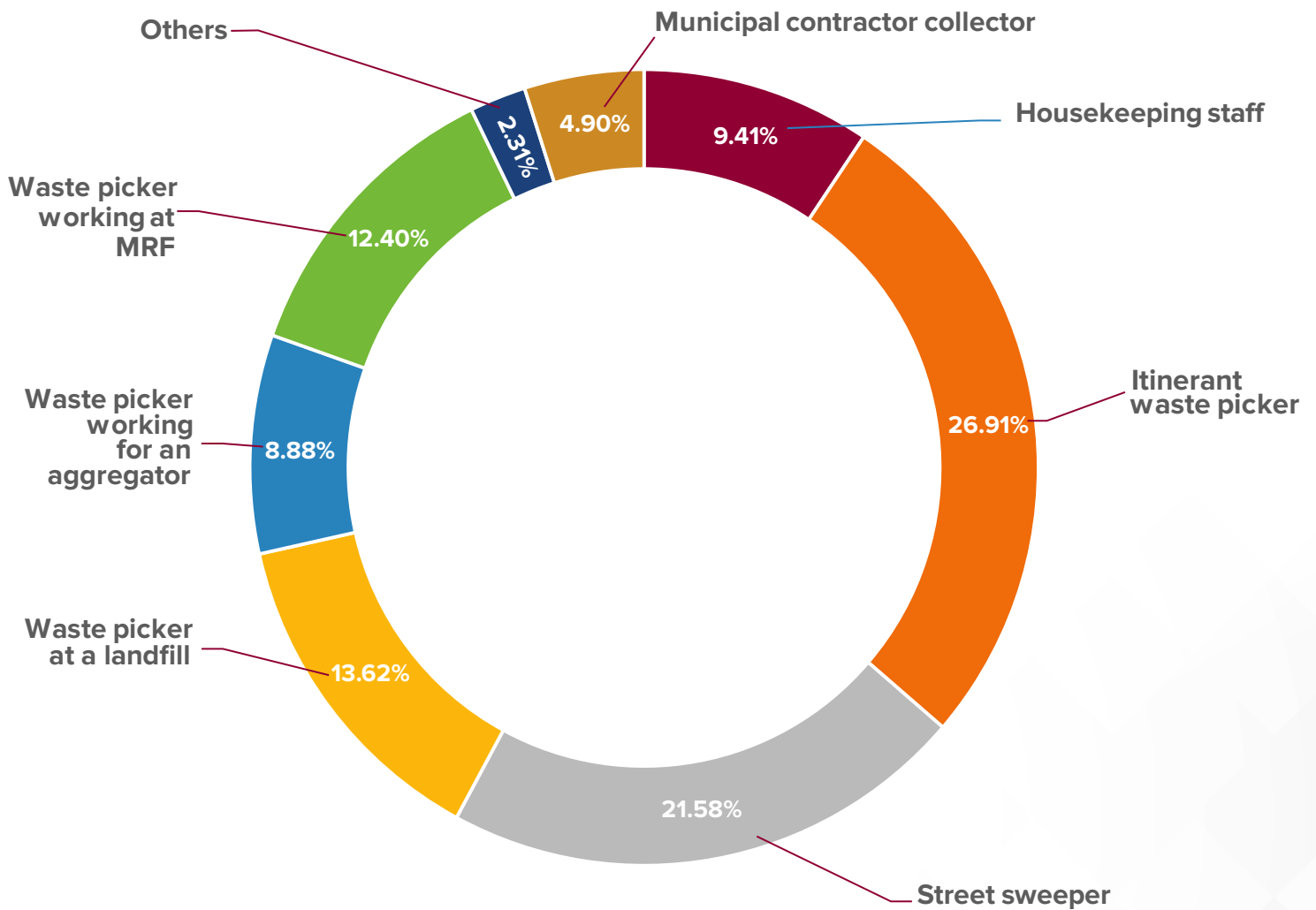
The informal occupations, prevalent amongst Safai Sathis across the sample, are often characterized by low job security, high uncertainty, and low levels of earnings (waste picking has been documented (Jozwiak, 2021) as an under-funded public service globally). Data on the average monthly household income affirms this proposition among those surveyed: more than seven in 10 individuals indicated a household income of less than Rs. 10,000 per month. This is equivalent to a monthly household income of less than US$ 137 to be shared among the household, where the average household size was four members. The precarity of this monthly income is heightened when it is observed in tandem with the high household density (and therefore possibly high household dependency) observed across the surveyed individuals. Figure 6 presents the income distribution of the survey respondents and highlights that around 6 percent of the households reported earning even less than Rs. 2,250 a month.

Figure 6. Income profile (with average household size)

More than Rs. 20,000, 5.2 pph

Less than Rs. 2,250,   3.1 pph

Rs. 2,251 to Rs. 5,000,   3.6 pph

Rs. 10,001 to Rs. 20,000,   4.2 pph

4.3%   6.4%

24.3%

20.2%

44.9%

Rs. 5,001 to Rs. 10,000, 4.2 pph

pph - average persons per household
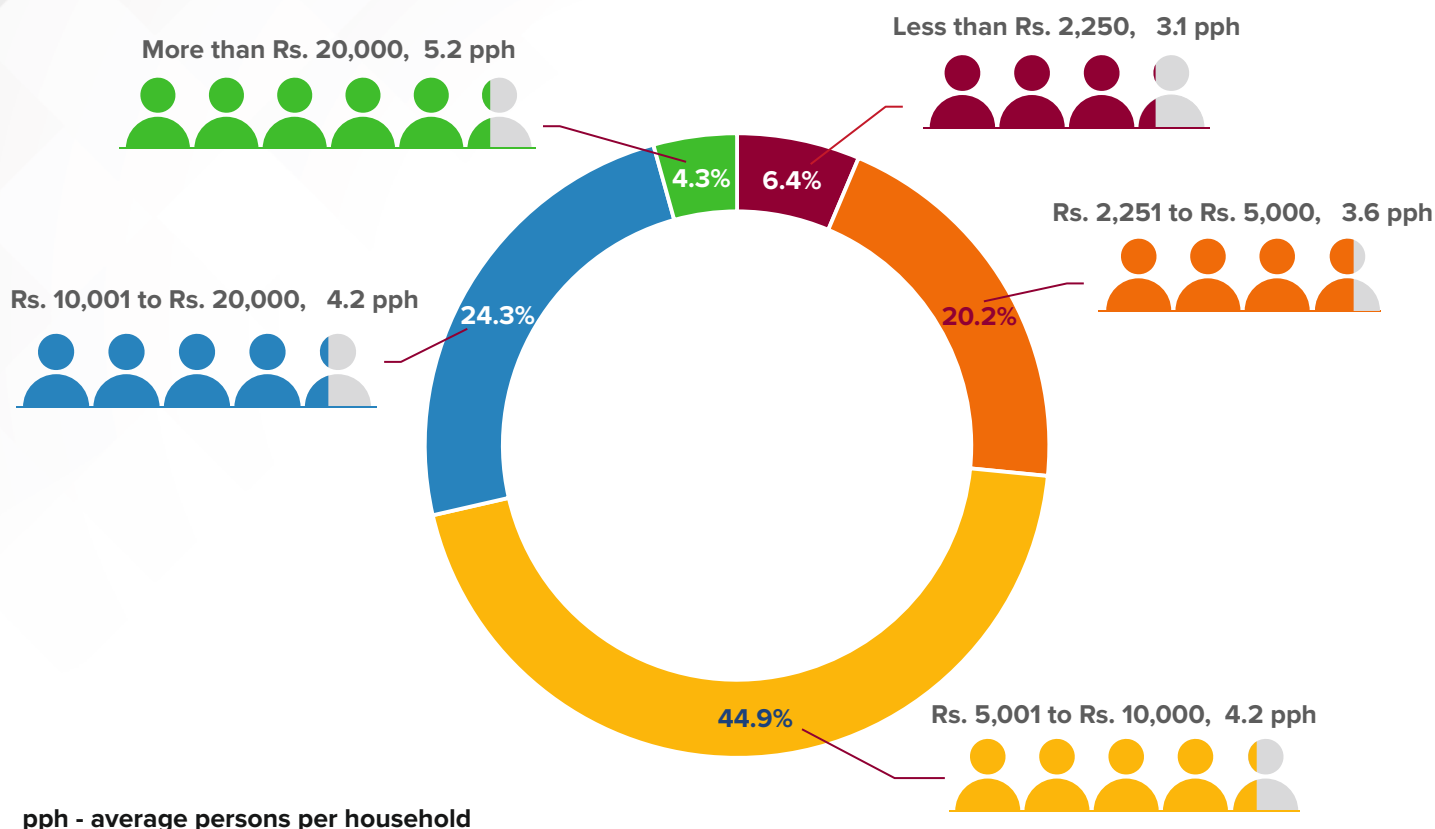
Differentials in the nature of work and income – by demographic characteristics such as gender, level of education and social category – highlight that women, those with no formal education and those belonging to socially disadvantaged communities are more vulnerable with regard to their livelihoods as compared to their respective counterparts. The three differentials are explored here.

Work and income differentials

First, a higher proportion of women work as street sweepers, waste pickers at landfills and as housekeepers as compared to men, indicating higher levels of concentration in work that is more informal in nature within the waste management ecosystem. This is further reinforced by the finding that the proportion of women working as municipal contract collectors is almost half of that of men working in the same category (3.7 percent vs 6.3 percent). With respect to incomes, 33 percent of the women surveyed have average monthly household earnings of less than Rs. 5,000 per month as compared to 20 percent of the men, a 13 percent point difference.

Second, the ratio of those with some formal education working as municipal contractor collectors to those with no formal education in the same work profile is around 3.7. This indicates a negative relationship between having a job in the higher rungs of the waste management ecosystem and lower levels of educational attainment. An income comparison between the two groups (figure 7) highlights that the proportion of those with no formal education is higher among low-income levels and that this trend reverses in the Rs. 10,000 to Rs. 20,000 income bracket.

Figure 7. Income profile by level of education

——— No formal education: N=6,010

——— Some formal education: N=3,292

6.9% 5.4%	22.2% 16.6%	46.6% 41.7%	21.6% 29.2%	7.2% 2.8%
Less than Rs. 2,250	Rs. 2,251 to Rs. 5,000	Rs. 5,001 to Rs. 10,000	Rs. 10,001 to Rs. 20,000	More than Rs. 20,000
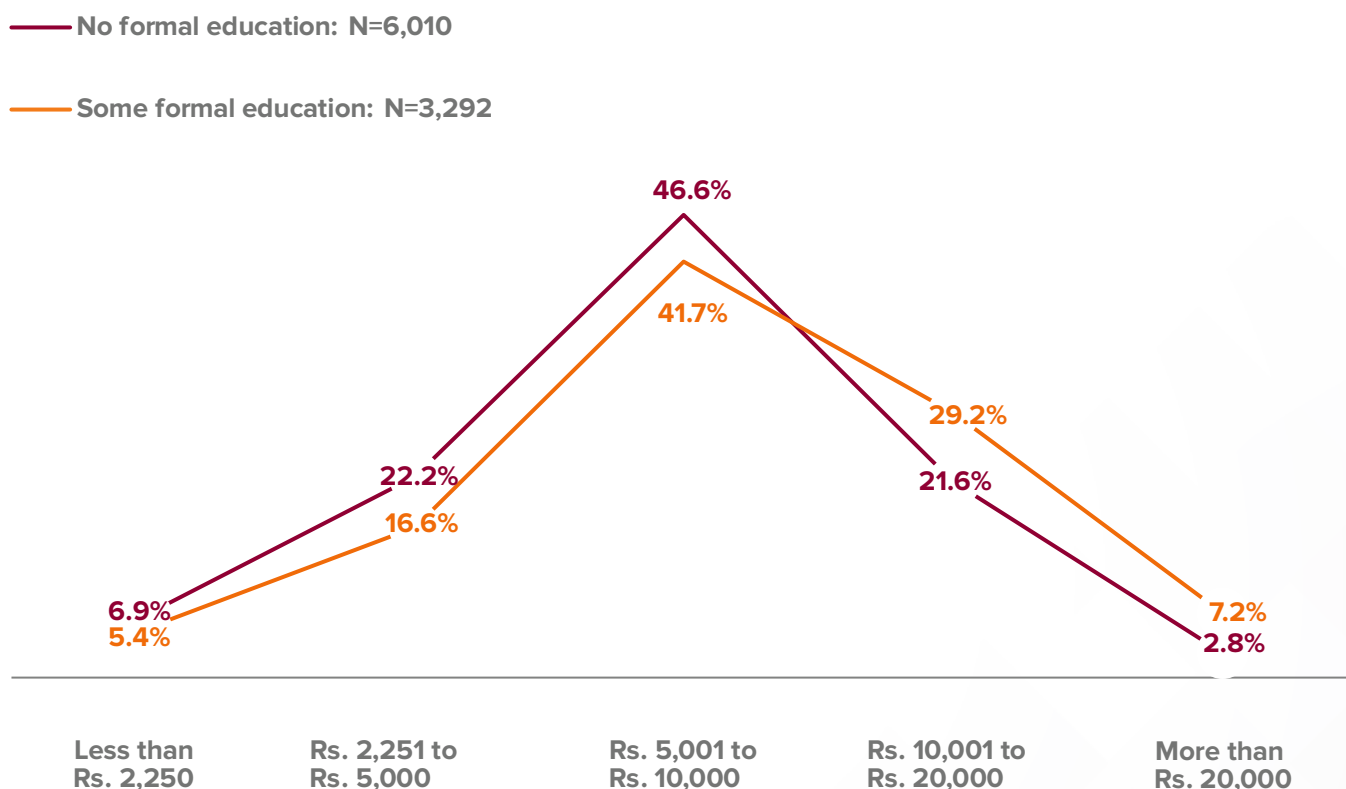
Source: Authors' calculations based on survey data.

Finally, while those from socially disadvantaged communities are better represented in the municipal contactor collector category as compared to those from the general social category, a greater proportion of the latter work as housekeeping staff. This may possibly hint towards the social stigma surrounding socially disadvantaged communities which has been widely documented in literature. The income trends between the socially disadvantaged groups and their counterparts is similar to figure 7.

Key takeaways

Findings on the nature of the work of the Safai Sathis highlights the high prevalence of informal work among them. An implication of this informality is the low levels of monthly household income observed across the surveyed individuals. The impact of the COVID-19 pandemic is likely to have been devastating for the waste picker community considering the informality of their work, their presence at the frontlines, low levels of household income and high average family size. This is especially true for more vulnerable cohorts such as women, those who are socially disadvantaged, and those who have no formal education.

4.3: Financial inclusion

The high levels of work informality and consequent low levels of income of Safai Sathis limits the financial security of these individuals and their households. This lack of financial security restricts not only the developmental journey of the Safai Sathis themselves, but also hampers the growth of their children. Instruments of financial inclusion – such as opening bank accounts, increasing account usability, increasing access to automated teller machines (ATMs), and encouraging digital payments, etc. – are some measures engaged to overcome financial insecurity. This section highlights results relating to the access and usage of financial instruments among Safai Sathis.

The ownership of a bank account is often considered a necessary measure for the financial security of individuals, and this is more important in the case of vulnerable cohorts such as Safai Sathis. Bank accounts not only allow people to deposit money (for safekeeping), send and receive payments, but they also serve as an essential gateway to receive financial support from government schemes.

On this front, around 67 percent Safai Sathis reported that they owned a bank account and of these, 21 percent reported that their account was a Jan Dhan account. The possession of the latter is a significant step towards financial security as it makes individuals eligible for various public schemes such as direct benefit transfers, the Pradhan Mantri Jeevan Jyoti Bima Yojana, Pradhan Mantri Suraksha Bima Yojana, Atal Pension Yojana and the Micro Units Development & Refinance Agency Bank (MUDRA) scheme, etc.

Figure 8 shows the spatial distribution of individuals who do not have a bank account (red), those who have a bank account but do not know whether it is linked to Jan Dhan (light blue), those who have a bank account, but which is not linked to Jan Dhan (sky blue) and those who have a bank account, and which is linked to Jan Dhan (dark blue).

Figure 8. Ownership of bank account and Jan Dhan linkages
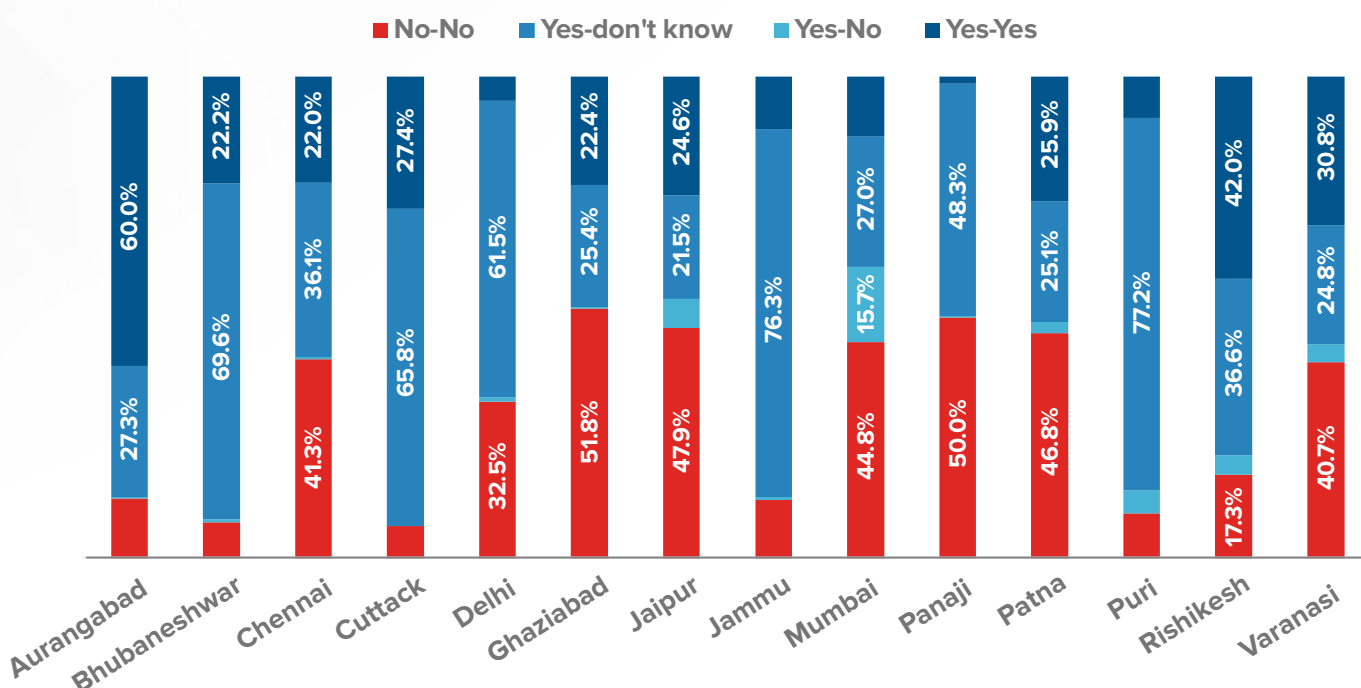
The ownership of a bank account was lower among migrant workers (as compared to native workers), those with no formal education (as compared to those with some formal education) and those whose monthly household income were below Rs. 10,000 (as compared to those whose incomes were above this threshold). On the other hand, cohorts such as women and those from socially disadvantaged communities noted higher levels of ownership of bank accounts as compared to their respective counterparts. Similar differentials – with the exception occurring along the lines of educational attainment – are also true for Jan Dhan linkages. These results indicate that while the ownership of these instruments is substantial, there is scope for rapidly expanding the usage and integration of these services among the Safai Sathis.

The access to ATM cards and use of digital payments was limited across the sample with only 15 percent and 3.5 percent individuals respectively reporting access and usage. The access to and use of ATM cards and digital payments was linked positively to increasing levels of education (figure 9).

Figure 9. Access to ATM cards by level of education

Legend: No (dark red) — Yes (orange)

Education Level	No	Yes
No formal education	91.6%	8.4%
Below primary education	87.9%	12.1%
Primary	77.8%	22.2%
Upper primary	68.4%	31.6%
Secondary	57.0%	43.0%
High school	52.4%	47.6%
Above high school	30.4%	69.6%
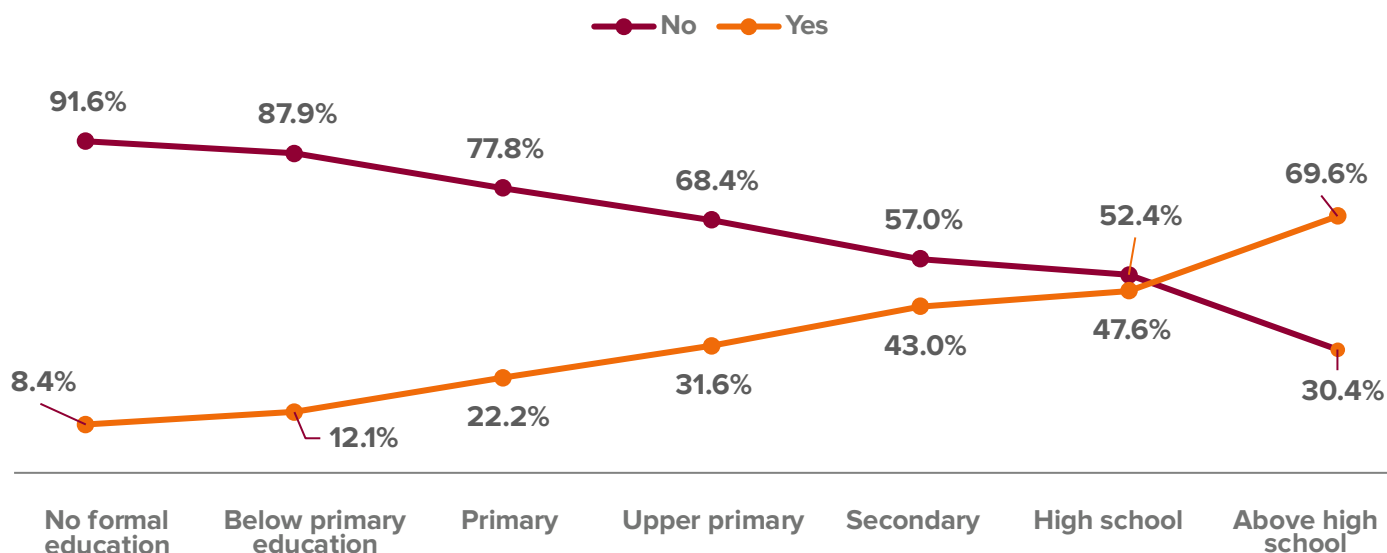
Source: Authors' calculations based on survey data.

Increasing awareness of these methods in conjunction with efforts to opening more bank accounts and linking them to the Jan Dhan Yojana can reduce obstacles in the intra- and inter-household transfer of money and lead to higher financial security[4] for Safai Sathis and their families.

> **Key takeaways**
>
> More than six in 10 individuals indicated that they owned a bank account, while the proportion of those that reported linkages to the Jan Dhan Yojana was limited. The lack of bank accounts was more prevalent among migrants, those with no formal education and those whose monthly income was below Rs. 10,000. Women and those from socially disadvantaged communities noted higher levels of ownership of bank accounts as compared to their respective counterparts. Further, the use of digital payments was also limited along with access to ATMs. Results on this theme indicate the need to expedite progress in bringing more Safai Sathis under the umbrella of financial inclusion.

4.4: Identification documents

Documentation – specifically related to securities of identity, health, food, work, and social category – is the first step towards formalization of work and forms the pillars on which welfare interventions can be

[4]Increasing savings is one part of higher financial security, including others such as decreasing the quantum of debt obligations, increasing land holdings (among other immovable and movable assets), etc.

implemented. These documents include, but are not limited to, certificates of birth, income and caste, voter ID card, Aadhar card, etc. The ownership levels of these identifications can provide a preliminary assessment of the outreach of a country's social protection programmes while aiding the analysis of the causes of insecurities for informal workers. This data can also help identify their core needs and set the course for developing strategies and mechanisms to address their challenges efficiently. This section presents the results surrounding the ownership of identification documentation among the surveyed Safai Sathis.

Table 2 highlights the ownership of different forms of identification documents by survey geographies. The following broad patterns were observed.

1. The ownership of birth, caste and income certificates across the sample is limited with a few exceptions. On average, only around 5 percent, 0.5 percent and 0.5 percent individuals respectively indicated that they owned these documents. Notable exceptions for birth certificate ownership included cities such as Jammu and Panaji, where 47 percent and 16 percent individuals respectively owned birth certificates. Both Panaji and Varanasi stand out as outliers in the ownership of caste and income certificates.

Table 2. Ownership of identification documentation by geography

City	N	Birth certificate	Caste certificate	Income certificate	Vote ID card	Adhaar card	Occupation card
Aurangabad	505	0.6	0.4	0.4	73.7	96.6	1.6
Bhubaneshwar	490	0.0	0.0	0.0	86.7	97.8	49.8
Chennai	504	10.7	0.4	0.4	78.4	92.1	1.0
Cuttack	521	0.0	0.2	0.2	82.3	97.7	3.8
Delhi	1004	0.0	0.0	0.0	38.1	96.5	0.3
Ghaziabad	531	3.2	0.0	0.0	75.5	92.8	39.4
Jaipur	512	12.5	0.0	0.0	52.7	86.5	24.4
Jammu	502	47.6	0.0	0.0	65.1	98.2	35.1
Mumbai	1327	4.0	0.2	0.2	60.7	85.2	1.0
Panaji	348	16.4	3.4	3.4	38.5	72.4	11.2
Patna	1267	0.0	0.0	0.0	62.1	79.9	4.4
Puri	602	2.7	0.3	0.3	66.8	98.5	9.3
Rishikesh	410	1.5	0.0	0.0	59.3	96.1	16.6
Varanasi	779	1.0	3.7	3.7	57.8	88.4	7.3
Average		5.6	0.5	0.5	62.6	90.4	11.6

Source: Authors' calculations based on survey data.

2. A voter ID card, an essential document to participate in the electoral procedures of the nation, was owned by more than six in 10 individuals. While more than 80 percent of the individuals surveyed in cities such as Bhubaneswar and Cuttack record having a voter ID card, cities such as Delhi and Panaji record less than 40 percent ownership of the same.

3. The ownership of the Aadhar card is the highest among the various identification documents with around nine in 10 individuals indicating ownership. Jammu and Puri record the highest ownership, while Panaji and Patna are on the lower end of Aadhar ownership.

4. Occupation cards, which ascertain the working identity of Safai Sathis, was owned by around 11 percent of those surveyed. However, contrary to this low ownership, those in Bhubaneshwar and Ghaziabad reported 50 and 40 percent ownership of occupation cards.

The ownership of these documents is additionally distinctive among different groups of surveyed individuals, and these differentials are presented in table 3. The first column lists the relevant government ID and the average holding across surveyed individuals. The subsequent columns present the comparative proportions for different cohorts. For example, 4 percent of the women indicated ownership of a birth certificate as compared to 7 percent of the men. The key observations from these differentials are highlighted here.

- The ownership of birth, income, caste, and occupation certificates is proportionally lower among women as compared to men. On the other hand, proportionally more women hold voter ID cards and Aadhar cards.

Table 3. Differential ownership of identification documentation (in percent)

Government ID (average)	Women (men)	Socially disadvantaged groups (general category)	No formal education (with formal education)	Earning less than Rs. 10,000 per month (earning more)
Birth certificate (6%)	4% (7%)	3% (11%)	4% (10%)	4% (10%)
Income certificate (0.5%)	0.4% (0.7%)	0.6% (0.4%)	0.5% (0.6%)	0.5% (0.6%)
Caste certificate (0.5%)	0.4% (0.7%)	0.6% (0.4%)	0.5% (0.6%)	0.5% (0.6%)
Voter ID card (63%)	67% (58%)	65% (56%)	61% (66%)	62% (64%)
Aadhar card (90%)	92% (88%)	92% (88%)	88% (94%)	89% (93%)
Occupation card (12%)	9.4% (14%)	11% (13%)	9.4% (15.7%)	10.4% (14.7%)

○ With the exception of birth certificates, individuals who are socially disadvantaged have higher ownership of all other identification documents as compared to their respective counterparts.

○ Those with no formal education and those earning below Rs. 10,000 per month reported less ownership of all identification documents as compared to their respective counterparts.

The results on the ownership of identification documents underscore three salient trends:

ⓐ Core identification documents, such as birth and caste certificates, are lacking among Safai Sathis.

ⓑ The same is also true for income and occupation certificates which ties to (and perpetuates) the informal nature of their work.

ⓒ The high ownership of Aadhar card can serve as a guiding light for the creation, dissemination, and validation of other identification documents.

Key takeaways

The ownership of identification documents was mixed with individuals reporting low ownership of birth, caste, and income certificates but high ownership of Aadhar cards. Vulnerable cohorts, particularly those with no formal education and those earning below Rs. 10,000 per month (household income), reported lower ownership of identification documentation, indicating a scope for improvement. The ownership of occupational cards was reported by around one in 10 Safai Sathis, indicating the urgent need to formalize their work.

4.5: Ration and health

Enhancing and ensuring the food and health security of individuals is amongst the key responsibilities of governments across the world. Within India, the work on securing these fundamentals is carried out through the public distribution system and the public health insurance schemes respectively. In recent times, concentrated efforts to include the most vulnerable within these safety nets have been increasingly documented across the country. This section highlights some results relating to the ownership of ration and health cards and the bottlenecks in accessing benefits.

Nearly six in 10 of the individuals surveyed reported owning a ration card, a type of beneficiary documentation that allows the holder to buy rations from fair price shops across the country at subsidized rates. Relatively more vulnerable sections, such as those with monthly household incomes below Rs. 10,000 and those with no formal education, lagged behind their respective counterparts in terms of ration card ownership.

Of the 43 percent who reported not owning a ration card, 23 percent and 15 percent cited the lack of supporting documents and being unaware of the procedure to obtain a ration card respectively as reasons for not having a ration card. The latter was cited in greater proportion by individuals who were from socially disadvantaged groups and those who had no formal education. Findings on ownership and reasons for not having a ration card are represented in figure 10.

Figure 10. Ownership of ration card

Yes ■ No ■

57%

43%

Reasons why they don't have a ration card

| 0.9%	22.8%	3.9%	15.5%
Lost ration card	No supporting documents	Others	Unaware of the process
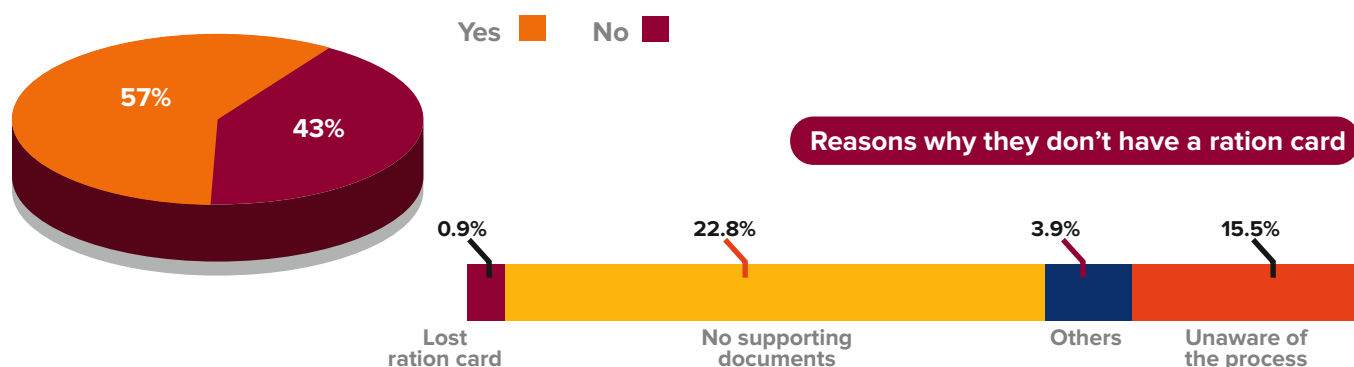
Source: Authors' calculations based on survey data.

Around 86 percent of the individuals who reported having a ration card stated that they were able to use it to avail rations. A disaggregation of the ability to avail ration by geographical area (figure 11) shows that all individuals from Bhubaneshwar, and more than nine in 10 individuals who reported having a ration card in cities such as Chennai, Cuttack, Mumbai, Puri, Rishikesh and Varanasi, were able to access rations using their cards. On the other hand, more than half of the respondents from Delhi and Ghaziabad were not able to avail rations.

Figure 11. Usage of ration card by geography
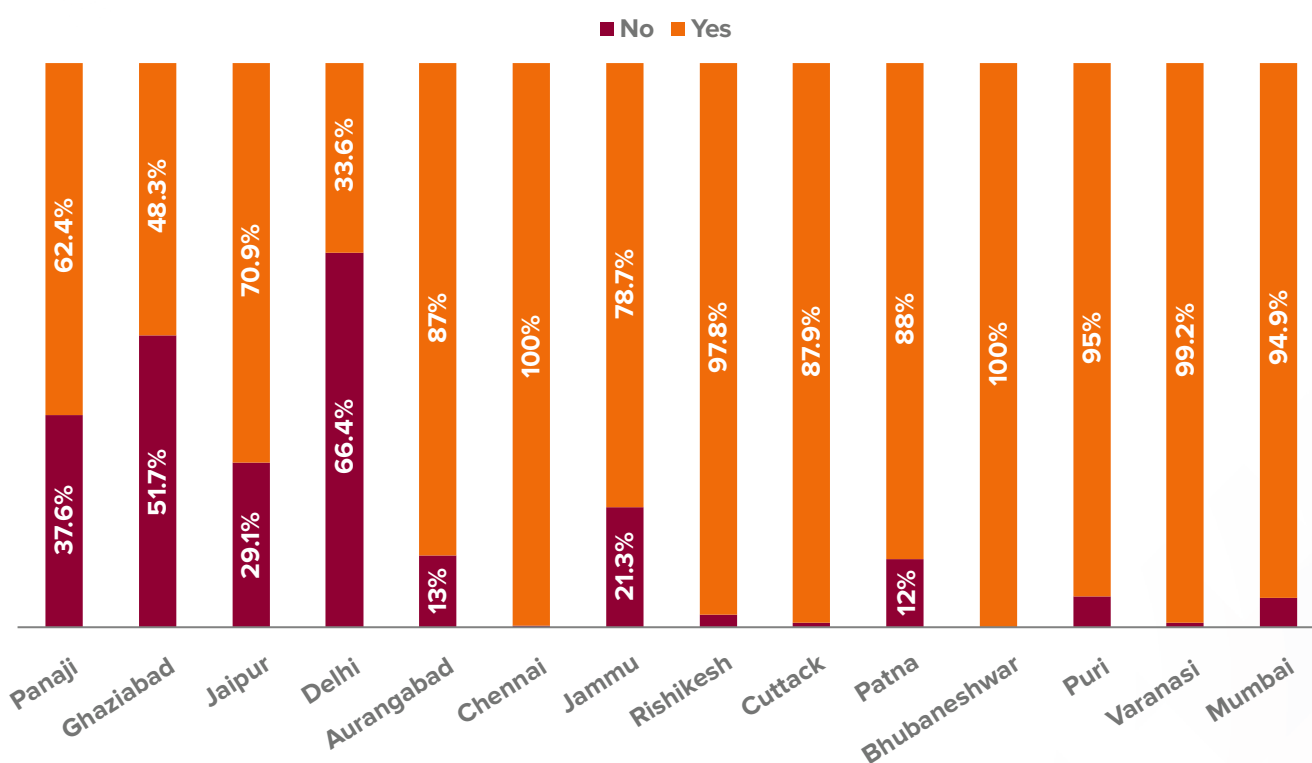
Source: Authors' calculations based on survey data. Note: frequency of sample respondents for each geographical location can be found in Table 1.

The results on the use of ration cards to procure ration coincide acutely with the proportion of native and migrant workers in these geographical areas. Those locations that have more migrant Safai Sathis reported lower levels of access to rations. This intersection calls for expedited and inclusive implementation of the 'One Nation, One Ration' scheme to ensure food security for migrant workers.

Contrary to the high ownership and use of ration cards, the ownership of health cards was reported by less than 5 percent of the surveyed individuals. This finding is consistent across most geographical regions with the exceptions of Rishikesh, Chennai, Puri and Panaji, where respondents reported 24, 17, 10 and 10 percent ownership respectively. This finding is concerning considering the limitations it puts on the Safai Sathis' access to health benefits, especially as they have been at the forefront of the

country's COVID-19 response. It is also worrying since a lack of access to medical benefits increases out-of-pocket expenses on health for these individuals, therefore increasing their likelihood of taking on more debt.

Key takeaways

The ownership of ration cards was not reported by four in 10 respondents. This is alarming since Safai Sathis are amongst the most vulnerable communities in the country. Not having supporting documents and being unaware of the procedure to obtain a ration card were among the most cited reasons for not having one. Among those who did have ration cards, more than 8 in 10 individuals reported using them at varying levels across geographical regions. Unlike ration cards, the ownership of health cards was scarce across Safai Sathis, which can have negative implications on the welfare of their households.

4.6: Children of Safai Sathis

Data on the children of Safai Sathis was also collected during the survey, with specific focus on their education. Of the 10,609 children under 14 years surveyed, around seven in 10 were eligible to attend

school. Of these, around 80 percent of the girls were reported as going to school as compared to 76 percent of the boys. Table 4 presents a gender break-up of the type of schools that the surveyed children attended. Formal government and private schools were noted to be the most common type of education institutions with around 76 and 21 percent enrolment.

Table 4. Type of school by gender

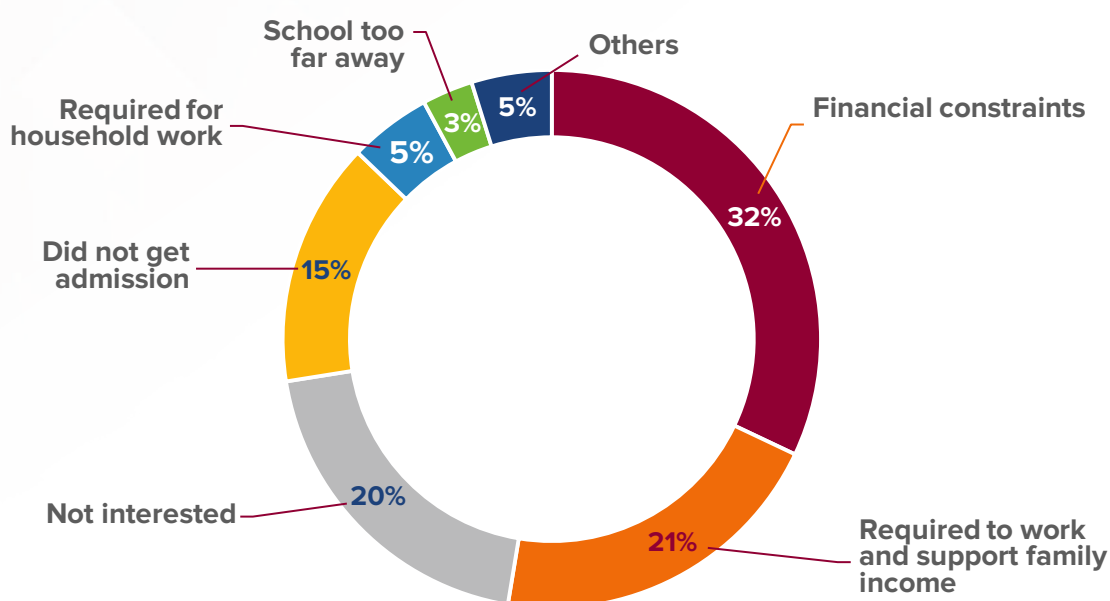| Type of school	Girl Child	Boy child	Total	Percent
Formal government school	2199	2230	4429	76.24%
Formal private school	588	617	1205	20.74%
Informal private tuition	44	50	94	1.62%
Formal semi-aided trust school	41	36	77	1.33%
Do not know	1	3	4	0.07%
Total	2,873	2,936	5,809	100%

Source: Authors' calculations based on survey data.

Geographically, cities such as Aurangabad (70 percent), Mumbai (77 percent) and Rishikesh (68 percent) observed the highest proportions of children attending school, whereas those in cities such as Jaipur (38 percent) and Patna (33 percent) lagged behind in terms of school attendance.

Of the eligible children, around 23 percent were not going to school at the time of the survey. The reasons for their absence from school is represented in figure 12. Financial constraints and the need for children to work and support the family emerged as the most common reasons.

Figure 12. Reasons for absence from school

School too far away — 3%
Others — 5%
Required for household work — 5%
Financial constraints — 32%
Did not get admission — 15%
Not interested — 20%
Required to work and support family income — 21%

Source: Authors' calculations based on survey data. Note: others category includes education not considered necessary, got married, non-availability of transportation, no proper facilities for girl child, recurrent failures and required to care for siblings.

Key takeaways

A majority of the children eligible to attend school were receiving schooling, with formal government and private institutions being the most common places to study. A marginally greater proportion of girls were attending school as compared to boys. Of those who were not attending school, financial constraints and the requirement of children to work and support the family emerged as the most commonly reported reasons for their absence.

4.7: Basic services

Adequate housing, access to safe drinking water, uninterrupted electricity and proper sanitation are the basic tenets of development and growth. The presence of these utilities supports and strengthens the daily activities of individuals and provides them with a sense of security. This section presents the findings on the Safai Sathis' access to these basic services.

Decent and affordable housing has been limited for informal workers in India (Choudhury and Rao, 2020). Temporary and unregistered settlements often intersect with the informality of their

occupations and low levels of household income. Both these propositions are reflected across the sample with around 30 percent and 24 percent of the individuals surveyed reporting that they lived in rented housing or in temporary huts respectively. Figure 13 provides a geographical split of the type of accommodation and highlights that attractive locations for migrants – such as Delhi and Panaji – have a large proportion of Safai Sathis living in huts/temporary sheds or in rented accommodation.

Figure 13. Type of accommodation by geography
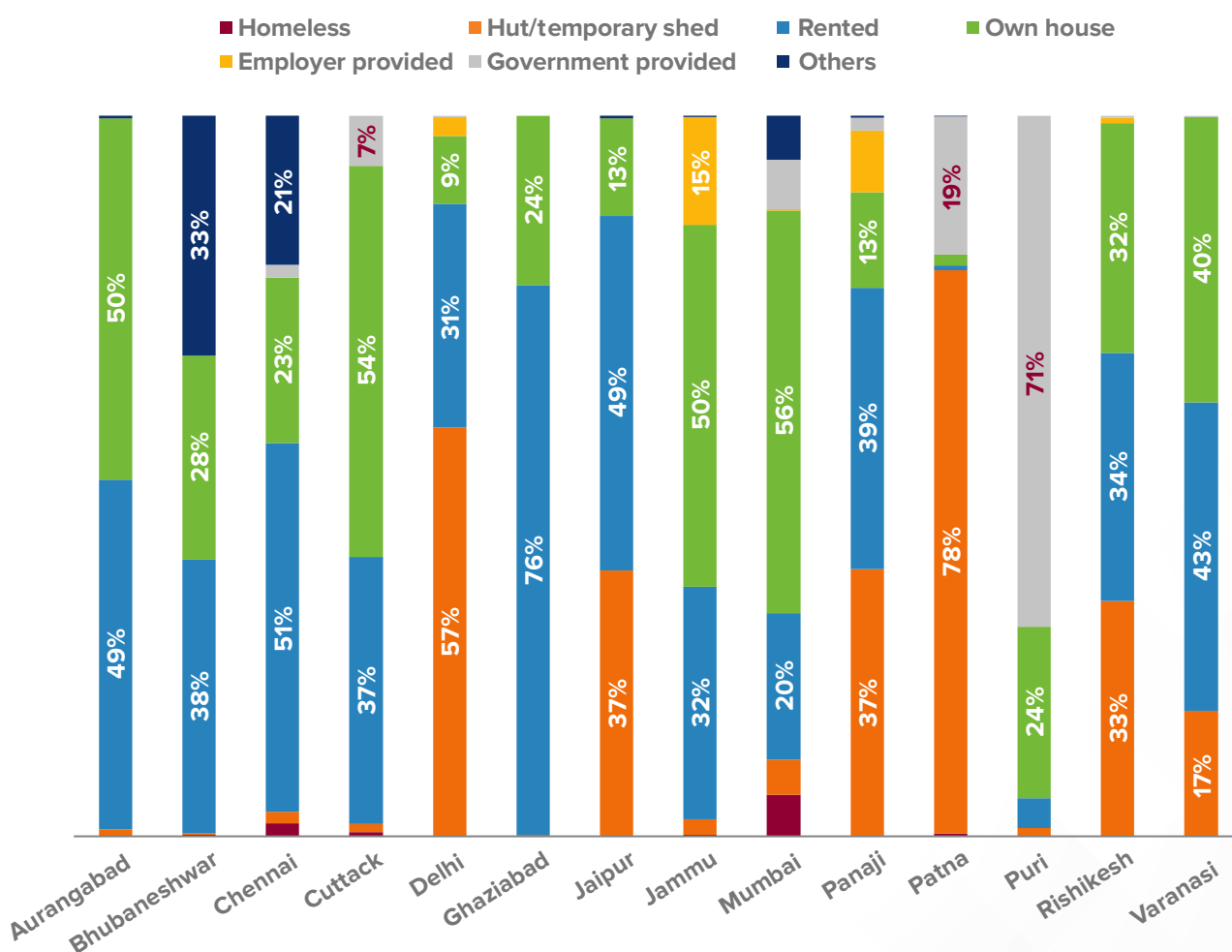
While a proportionally greater number of women workers reported living in their own houses as well as living in accommodation provided by the government, the proportion of individuals from socially disadvantaged backgrounds living in temporary huts was more than twice that of those in the general category (30 percent vs 12 percent). This differential is also noted among those with no formal education as compared to those some formal education (30 percent vs 13 percent) and those with monthly household income below Rs. 10,000 as compared to those with monthly income household above Rs. 10,000 (28 percent vs 14 percent).

Despite the limited housing security, access to drinking water was reported by 90 percent of the respondents with equal proportion of individuals reporting regular supply through home taps, municipal taps and borewell hand pumps.

Similarly, 83 percent of the respondents also reported a continuous supply of electricity. However, a higher proportion of individuals belonging to social disadvantaged groups reported not having access to electricity as shown in figure 14A. An increasing level of income is found to have a monotonically positive link with access to electricity as shown in figure 14B.
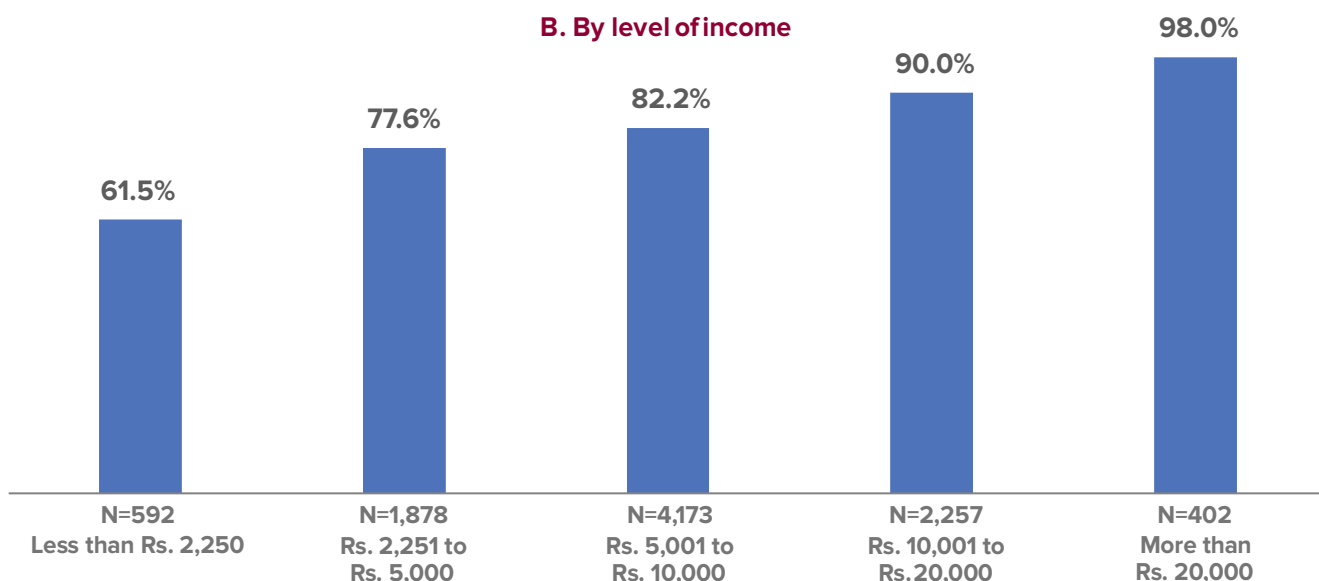
Figure 14. Access to continuous supply of electricity

A. By social category
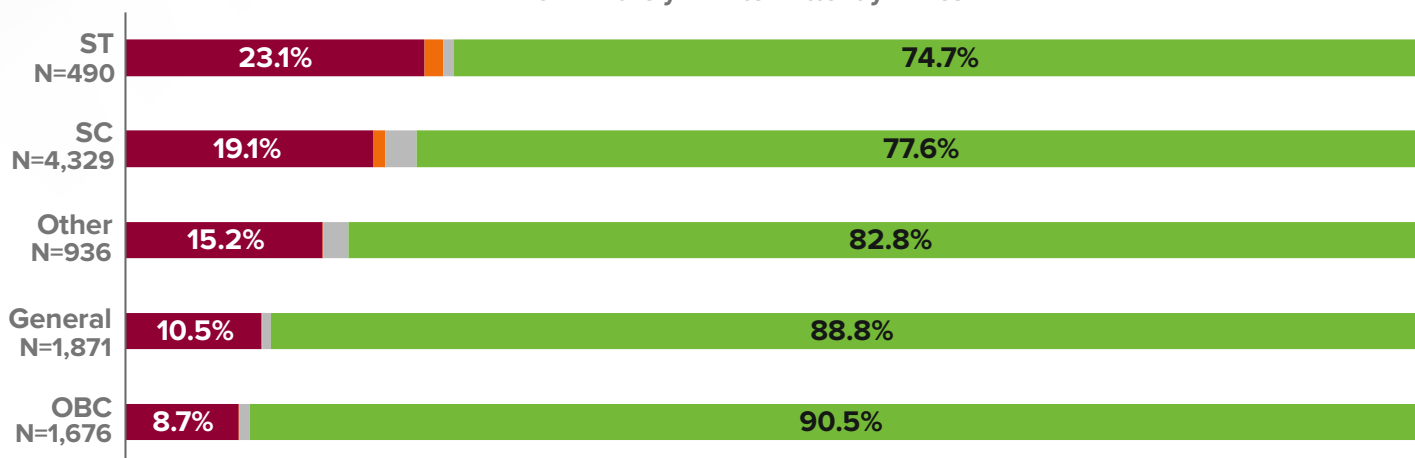
B. By level of income

Source: Authors' calculations based on survey data.

As opposed to high levels of access to drinking water and a continuous supply of electricity, access to proper sanitation was reported only by 60 percent of the respondents. Further, a higher proportion of women and those with no formal education indicated the absence of proper sanitation facilities. These differentials suggest that those who are more likely to be involved in the sanitation ecosystem are the same cohort of individuals who do not have proper access to sanitation themselves, therefore, exacerbating their vulnerabilities.

Finally, findings on cooking fuel demonstrated that one in two individuals still use fossil-based fuels, such as coal and wood, to prepare meals, while the other half reported using LPG. The proportion of individuals using coal- and wood-based fuels is higher among socially disadvantaged groups (55 percent vs 37 percent), those with no formal education (56 percent vs 38 percent), and those with monthly household income less than Rs. 10,000 (59 percent vs 25 percent). This is indicative of vulnerable populations' limited access to clean cooking fuels, the absence of which has been documented to have negative consequences. The consequences of pollution arising from such cooking fuels range from respiratory diseases to lung infections, and from neonatal stillbirths to even deaths. Children have been documented (Smith, 2017; Pattanayak, 2017) to be highly susceptible to health issues arising from the use of wood-based fuels.

Key takeaways

Respondents across the sample reported various provisions of accommodations with less than 1 percent reporting being homeless. A majority of the respondents reported living in temporary and unorganized accommodation, indicating a lack of housing security. The availability of utilities, such as drinking water and electricity, were reported by most individuals, while sanitation remained limited especially to vulnerable groups such as women and the socially disadvantaged. The use of wood-based fossil fuels (or the coal-powered chullha) was reported by half of the respondents with the other half using cleaner sources such as LPG.

The next section presents some policy aspects and concludes this report.

Chapter **5**
Policy aspects

India's Safai Sathis play a critical role in the country's Solid Waste Management (SWM) economy. To provide insights on the socio-economic circumstances surrounding Safai Sathis in India and to inform programmatic interventions regarding their welfare, UNDP India surveyed more than 9,000 Safai Sathis across 14 cities and 10 states between October 2020 and January 2021.

The findings from this baseline assessment provide insights into four major policy points. Two of these stem directly from the analysis presented in this report, while the other two are synthesized based on the amalgamation of operational experience and study findings. This section sheds light on these policy narratives.

First, social protection schemes act as a crucial safety net for vulnerable communities like Safai Sathis during crises. It is therefore, essential that the various instruments of social protection be enhanced in terms spreading awareness about these schemes, expanded in terms of their eligibility and extended in terms of provision of benefits. Continued support through public delivery systems can ease expenditures and debt burdens for Safai Sathis households, allowing them to increase spending in other crucial areas such as child education and nutrition.

For this, the existing level of ownership of identification documents can be built upon to ensure that everyone has documents relating to birth, income, caste and voting rights. These certificates often function as requirements in the creation of other beneficiary documents and are therefore, indispensable while registering Safai Sathis in other schemes. A concentrated effort to **map existing document availability across workers in the waste management ecosystem** is required a long with a **large-scale push to inform the Safai Sathis about the importance of such documents.**

A similar exercise is also necessary with regard to increased issuance of beneficiary identifications such as Aadhar cards, ration cards and Jan Dhan accounts. This exercise can help bring a greater number of Safai Sathis under social safety nets. Concrete steps in these directions can include **allowing beneficiaries to enrol themselves into schemes in case they have been omitted** from prepared beneficiary lists. Further, **easing enrolment procedures,** such as submitting multiple identification documents, can be undertaken to ease the burden of proof on beneficiaries (especially for non-native workers). In addition to these beneficiary documents, the importance of ownership of health cards and insurance has been highlighted by the COVID-19 pandemic, and targeted efforts on increasing their uptake are necessary considering the frontline nature of the Safai Sathis' work.

On a different track, the first step towards the improvement of identification and targeting beneficiaries can be to **explore the integration, consolidation, and upgradation of existing beneficiary databases under various social protection schemes.** This exercise can improve the expanse of public protective mechanisms in the country by reducing the proportion of eligible beneficiaries who have been currently excluded from various schemes. This can also increase benefit delivery efficiency by supporting the last-mile linkages and reducing redundancies and complexities within public distribution systems. This can be enormously beneficial to cohorts who are at a higher risk of deprivation within the Safai Sathis community such as women, socially disadvantaged groups, those with no formal education and those with low levels of household income.

Considering that around three in 10 Safai Sathis surveyed were migrants, the call for **'One Nation, One Ration'** assumes increased importance. This portability of access to grain across district and state borders can be a crucial step in ensuring food security for migrant workers at destination locations as well as for their family members at home. **The inclusion of work performed by Safai Sathis in wage guarantee programmes,** especially in urban areas, can provide added financial security and reduce the impact of external shocks, such as the COVID-19 pandemic, on this cohort.

Second, the concentration of vulnerable populations such as SCs, STs and OBCs in the Safai Sathis community is indicative of their disproportionately higher representation in such informal job categories. **Skill training programmes focusing on re-training workers on the use of technological advancements** in waste management can provide enhanced opportunities and expand their employment horizons. Moreover, a broader effort must be made to **explore alternate livelihoods for potential workers, both within and outside the waste management ecosystem.**

Low levels of education, high dependence among households, limited earning capacities and omission from vital social protection programs increases the vulnerabilities of this section of workers. This has detrimental implications on their physical, mental, and emotional welfare. **Positive intergenerational mobility in employment and living standards** is a possible instrument to prevent Safai Sathis from falling back into poverty. While the survey results on schooling for children of Safai Sathis is encouraging in this regard, there is a need to **mobilize and strengthen resources to provide greater educational support to eligible children within Safai Sathis households.**

Third, recognizing Safai Sathis as recycling managers, who contribute to local economies, public health, safety and to environmental sustainability, can act as a fundamental step in legitimizing their contributions. The informality of their work (characterized by low job security and un-secured employment contracts) coupled with low levels of average monthly family income highlights their lack of financial security. This is further compounded by constrained access to credit markets, low levels of past savings, higher household density and the absence of work opportunities other than in the waste

management ecosystem. These constraints restrict the earning capacities of Safai Sathis and prevent them from transitioning to higher standards of living.

To these ends, **enumerating and registering Safai Sathis** is the central and foremost step towards an inclusive waste management system as mandated by the Swachh Bharat Mission of the Government of India. **Partnering with informal sector organizations** is the key to providing recognition and legitimacy to Safai Sathis. Other critical processes of formalizing their work **include establishing regulatory norms vis-à-vis minimum pay, identification to be endorsed by ULBs, authorizing their access to waste and allied services, and regulating safety procedures.** Registering Safai Sathis with formal bodies such as ULBs or local public institutions will not only address the lack of information among institutions, but also assist in the designing, budgeting, implementation and monitoring of (occupational and other) schemes related to this cohort.

Finally, setting up a decentralized waste management system that enables Safai Sathis to have easy access to the collection, segregation and sorting of recyclables from the source of generation can be fast-tracked to strengthen their work infrastructure. Municipalities can take cues from the existing rules and policies applicable in India. Two such policies include the following:-

The Solid Waste Management Rules, 2016[5], which entrusts municipal authorities with the following duties: "establish a system to recognize organizations of waste pickers or informal waste collectors and promote and establish a system for integration of these authorized waste pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste"; "setup material recovery facilities or secondary storage facilities with sufficient space for sorting of

[5]The rules can be accessed at **http://moef.gov.in/wp-content/uploads/2017/08/SWM-2016-English.pdf**

recyclable materials to enable informal or authorized waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities" and "provide training on solid waste management to waste-pickers and waste collectors".

The Plastic Waste Management Rules, 2016[6], which apply to the management of plastic wastes, specifically plastic carry bags and multi-layered plastic pouches or sachets, assign municipalities the responsibility for "setting up, operationalization and co-ordination of the waste management system and for performing the associated functions, namely...engaging civil societies or groups working with waste pickers" and assign responsibility on the waste generators to "....ensure segregated storage of waste at source and handover segregated waste to....registered waste pickers', registered recyclers or waste collection agencies".

Towards this end, land use, development plans or master plans of ULBs could **make provisions for amenity spaces in every neighbourhood to undertake secondary sorting by organizations in the informal sector.** Through these spaces, waste pickers can be given access to capital and infrastructure facilities such as designated space (MRFs), collection vehicles or tricycles, uniforms, and personal protective gear. ULBs can also **implement extended producer responsibility (EPR)** to reduce the waste burden of specific streams by engaging Safai Sathis in a city's plastic waste management plan.

Overall, it is essential that future development frameworks and interventions – by various stakeholders such as government institutions, industry associations, civil society organizations and development partners – emphasize the inclusion of Safai Sathis as key players in the development trajectory of the country and aim to reduce their vulnerabilities while bolstering their growth prospects. Skill training programmes can boost employment opportunities while the exploration of alternate livelihoods – both within and outside the waste management ecosystem – can broaden their employment horizons. Safety trainings and provision of additional safety gear, especially in the context of the pandemic, can reduce the health risks faced by Safai Sathis (particularly women) who have been among the nation's frontline workers during COVID-19. Finally, enrolment in and access to social protection benefits can ensure maintenance of food, work, wage, educational and health security, and reduce the likelihoods of Safai Sathis falling into poverty.

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[6]The document can be accessed at **https://cpcb.nic.in/displaypdf.php?id=cGxhc3RpY3dhc3RlIL1BXTV9HYXpldHRlLnBkZg==.**

Service providers

Mumbai	Stree Mukti Sanghatana supported by Parisar Bhagini Vikas Sangh (PBVS)
	Aasra Welfare Association (AWA)
	Aakar, Mumbai
Patna	Nidan
	Nav Jagriti
Aurangabad	Center for Applied Research and Peoples' Engagement (CARPE)
Cuttack	Centre for Cooperation and Rural Excellence (CORE)
Bhubaneshwar	Centre for Cooperation and Rural Excellence (CORE)
Ghaziabad	Basix Municipal Waste Ventures Limited
Chennai	Paperman Foundation of India
	Tamil Nadu Urban Livelihoods Mission (TNULM)
Puri	Odisha Development Management Programme (ODMP)
Jaipur	Cutpaste
Varanasi	KGN Trading Company
Jammu	Regional and Urban Development Agency (RUDA)
Delhi	Trashonomy

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