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Who picks (y)our waste?

Evidence-based observations and policy priorities for equitable development

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Waste-pickers are one of the most crucial yet often ignored segments of the water, sanitation and hygiene (WASH) programming. These workers often labour in hazardous conditions under the uncertainty of informal employment but are the key to keeping the environment clean and our cities (particularly urban spaces) safe. Challenges these workers face—such as limited earning capacity, increased risk of falling into poverty and insecurities of food, income, work and livelihood—have been further accentuated by the COVID-19 pandemic. These challenges have been noted to be worse for women - who are more vulnerable to significant impacts on their health - with potential intergenerational impacts.[2]

This brief, drawing from broad themes of socio-economic insecurity among informal workers across developing nations, presents on-ground evidence on demographic, employment, identification, housing and social security characteristics of waste pickers from across ten states in India. It also discusses some policy directions to ensure structural transformation towards resilient and equitable development for this cohort.

India has been and is projected to be the fastest-growing large economy despite the pandemic.[3] India's GDP had increased from US$321 billion in 1990 to $2.87 trillion in 2019[4]—an 800 percent increase in under three decades. This historic growth has come on the heels of high potential for economic catch-up, high capital accumulation, accommodative trade policies, and labor-intensive employment[5]—primarily in the informal sector.

Even in 2021, eight out of every ten workers in the country were employed in the informal economy[6] with little to no regulatory oversight and no protection from exploitation or mechanisms for redressal. This shadow-sector employment has been noted to afford limited earning potential, narrow scope for improving skills and constrained access to opportunities for upward mobility[7] for both the current and upcoming generation of

workers. More than nine in ten women workers in India have been noted to be employed informally,[8] making them highly vulnerable to these risks.

The rapid pace of economic growth has been accompanied by a rise in consumer expenditure and, consequently, increased waste production. India generated 277.1 million tonnes of waste in 2016 alone, accounting for 80 percent of what South Asia produced and 13 percent of the global waste production in that reference year.[9] Much of this waste generation has been concentrated in urban areas where the per capita per day waste generated was 3.6 times that of rural areas.[10] This gap will likely widen further, given rapid urbanization, population growth and economic development across the country. Despite this, WASH activities in the country remain largely informal, with workers facing high uncertainties in the unregulated sector.

Waste pickers, broadly defined as individuals working (employed or otherwise) in the cleaning, sorting, collection, transportation and delivery of recyclable waste to aggregator facilities, are the central cog in the wheel of WASH activities. They perform an essential public service by keeping the environment clean and feeding the formal recycling chain. Despite the scale and importance of the work performed by these workers, they continue to exist at the bottom of the solid waste management (SWM) ecosystem—physically and economically invisible.

We present four broad observations on the socio-economic conditions of waste-pickers in India and emerging policy priorities (therein) based on a survey of 9,300 individuals from across 14 cities in ten states. The data, which is non-representative yet indicative, was collected using structured questionnaires between October 2020 and January 2021 in locations where the presence of civil society organizations (CSOs) working on issues of waste-pickers is relatively scarce. Table 1 highlights the geographical spread of the respondents.

Table 1: Geographical spread of survey sample respondents

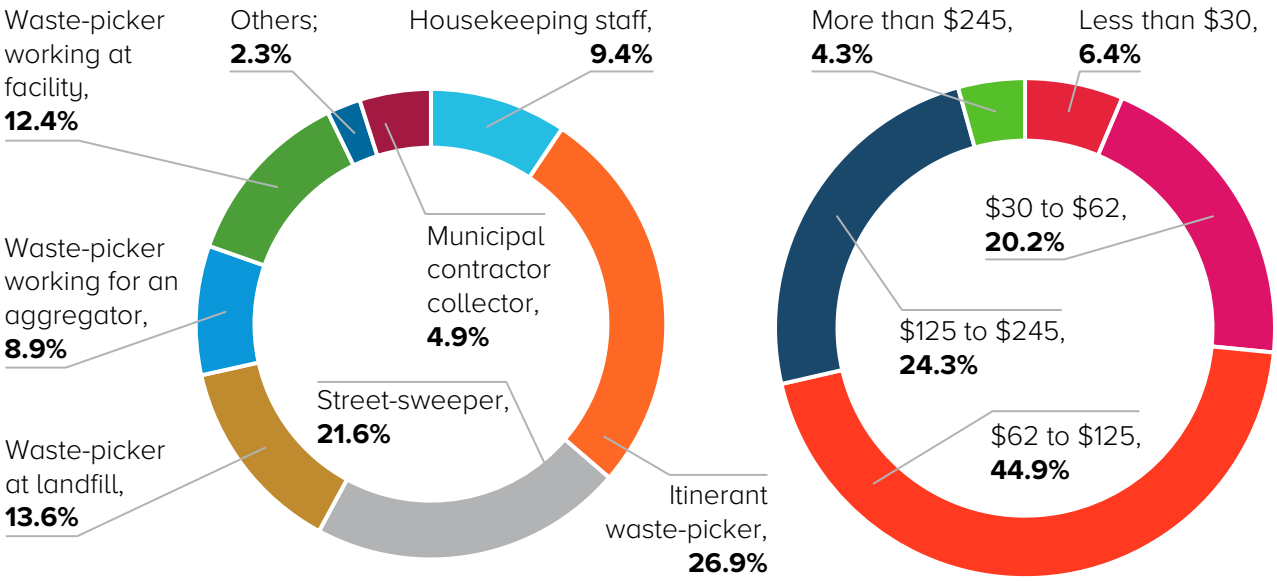
City, State	Female	Male	Others	Total	Percent
Aurangabad, Maharashtra	480	25	0	505	5.4%
Bhubaneshwar, Odisha	284	206	0	490	5.3%
Chennai, Tamil Nadu	278	226	0	504	5.4%
Cuttack, Odisha	213	302	6	521	5.6%
Delhi, Delhi	314	690	0	1004	10.8%
Ghaziabad, Uttar Pradesh	131	400	0	531	5.7%
Jaipur, Rajasthan	263	249	0	512	5.5%
Jammu and Kashmir	105	397	0	502	5.4%
Mumbai, Maharashtra	1024	302	1	1327	14.3%
Panji, Goa	95	253	0	348	3.7%
Patna, Bihar	685	582	0	1267	13.6%
Puri, Odisha	404	198	0	602	6.5%
Rishikesh, Uttarakhand	172	238	0	410	4.4%
Varanasi, Uttar Pradesh	374	405	0	779	8.4%
Total	**4822**	**4473**	**7**	**9302**	**100.0%**

Source: Source: Authors' calculations based on survey data.

Observation 1: High informality and low incomes

Waste-pickers, as mentioned earlier, are among the lowest-ranking members of the urban informal occupation hierarchy. These workers are seldom connected to associations or cooperatives (who focus on their welfare) and are, therefore, additionally vulnerable to livelihood uncertainty. Within the sample, the survey respondents represent a variety of work profiles, as highlighted in Figure 1 (below, left diagram). Itinerant waste-pickers—who collect waste from households—make up more than a quarter of the sample, with street-sweepers and waste-pickers working at material recovery facilities (MRFs) being other populated categories. It is important to note that none of the recorded work profiles is a part of the formal recycling chain—characterized by regulatory oversight, protection from exploitation and mechanisms for redressal—but are all highly informal.

Figure 1: Distribution of work profiles (left) and monthly income ($) (right)



Source: Authors' calculations based on survey data. Note: Sample composition is not representative.

A direct consequence of this informality is the low-income levels among waste-picker households (Figure 1 above, right diagram). More than 70 percent of respondents reported their average household monthly income below $125, with nearly a tenth of such households earning less than $30 per month. In addition to this limited household budget, a high number of individuals per household shared this pool of money (an average of four members), further reducing the potential per capita expenditure. Differentials also highlight that a higher share of women (33 percent compared to 20 percent of men) and a greater share of socially disadvantaged groups (29 percent compared to 21 percent of those from the general category) reported household earnings of less than $62 per month.

Observation 2: Mixed ownership of identification documentation

Enabling ownership of identification documentation is among the first steps towards implementing welfare interventions—particularly for economically vulnerable cohorts such as waste-pickers. These documents make it possible for individuals to be identified and assessed vis-à-vis their eligibility for receiving government services and access to entitlements. The ownership of some of these documents within the sample is highlighted in Table 2 below. Results highlight that while the ownership of the biometric identification (Aadhaar) card is widespread, that of basic identifier certification such as birth and caste is lacking.

Table 2: Ownership of identification documentation (% of sample respondents)

City	N	Birth Certificate	Caste Certificate	Income Certificate	Voter Card	Aadhaar 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
Panji	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
Sample (N) weighted average		**5.6**	**0.5**	**0.5**	**62.6**	**90.4**	**11.6**

Source: Authors' calculations based on survey data. Note: Sample composition is not representative.

On average, only 5.6 percent and 0.5 percent of individuals reported having birth and caste certificates, respectively. Some geographical variation is apparent, but the general lack of ownership of these documents is concerning, given that they are often used as proof for access to government programmes.

Regarding employment, only 11.6 percent and 0.5 percent of individuals reported having an occupation card and an income certificate, respectively—two essential documents that catalogue employment history and determine the employment-based benefit eligibility of workers. The severity of the absence of ownership of employment identification is intensified when seen in tandem with the findings on informality and low monthly household incomes above. Women waste-pickers were less likely to own an occupation card and an income certificate by 4.6 and .3 percentage points, respectively.

On the other hand, nearly nine in ten respondents reported having an Aadhaar card, a universally unique identifier for everyone in the country. Further, 62.6 percent of individuals reported having voting cards that allow them to operationalize their fundamental right to vote. While far from universal coverage, the widespread ownership of both Aadhaar and voting cards is indicative of the recent strides by the country in enumerating its citizens and can present valuable lessons in expanding the coverage of other forms of identification documentation among waste-pickers.

Observation 3: Imperfect access to social protection and essential services

Considering observations 1 and 2 above, the role of social protection schemes in providing a safety cushion—particularly for vulnerable waste-pickers—assumes increased importance. On social protection, the data paints a mixed picture:

1. The Public Distribution System (PDS) is the primary vehicle through which the Indian government ensures the food security of its population. This vehicle is operationalized through a ration card—a type of beneficiary documentation that allows the cardholder to buy rations at subsidized rates from fair-price shops across the country. Only six in every ten respondents in the sample reported having a ration card. Those who did not report ownership indicated not possessing supporting documentation and unawareness regarding the registration procedure as a critical hurdle. On the other hand, about 86 percent of individuals who reported owning a ration card indicated that they could use it to procure rations.

2. Health cards, which are instruments for delivering health insurance benefits to beneficiaries, were reportedly possessed by less than 5 percent of surveyed individuals. This finding is especially worrisome, considering the limitations it imposes on the waste-pickers' access to health benefits, especially as they have been at the forefront of India's COVID-19 response. It is also worrying since a lack of access to medical benefits increases out-of-pocket expenses on health for such households, increasing their likelihood of taking on more debt and perpetuating a debt trap.

3. Proper housing was also limited among respondents, with 30 percent reporting living in rental accommodation and 24 percent in temporary huts/structures. Temporary and unregistered settlements often intersect, as is the case among the survey respondents, with the informality of their occupation and with low household income levels.

4. Despite limited housing security, 90 percent of the respondents reported access to drinking water. An equal proportion of individuals reported regular supply through home taps, municipal taps and borewell hand pumps. Similarly, 83 percent of the respondents reported a continuous electricity supply. Access to drinking water and electricity varied by characteristics, with those belonging to disadvantaged communities and those with lower educational attainment reporting lower levels of access than their counterparts. Access to proper sanitation was reported by only 60 percent of the respondents, with women forming a large share of those who did not report access to such facilities. This lack of access to sanitation facilities has been linked to a higher risk of non-partner sexual violence among women in India.[11]

5. One in two individuals continued to use fossil-based fuels, such as coal and wood, to prepare meals, while the other half reported using safer methods, such as liquified petroleum gas (LPG). This finding indicates waste-pickers' limited access to and use of clean cooking fuels, the absence of which has been documented to have negative consequences ranging from respiratory diseases to lung infections and from neonatal stillbirths to deaths—particularly among children.

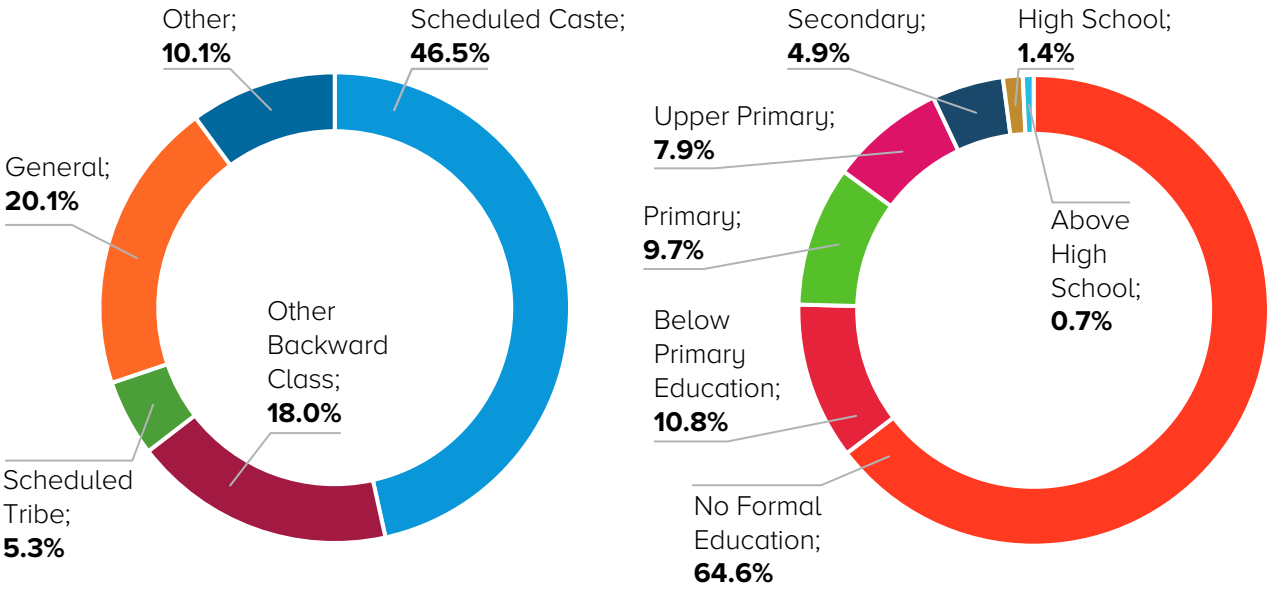
Observation 4: High concentration of socially backward communities with low-educational attainment

Nearly seven in every ten respondents surveyed reported belonging to socially marginalized groups, as depicted in Figure 2 (left diagram) below. The scheduled castes comprised 46.5 percent of the sample, with other backward castes comprising 18 percent and scheduled tribes making up 5.3 percent of the sample respondents. A fifth of the respondents reported belonging to the open general category, while 10 percent self-identified as 'others'.

On the education front, individuals with no formal education made up 64.6 percent of the sample, with an additional 11 percent reporting having only below-primary education. Only 2 percent

of respondents had completed high school or higher education. Women were found to be worse off in educational attainment, with 72 percent (as compared to 56 percent of men) having no formal education. Figure 2 (right diagram) highlights the educational distribution of the sample respondents.

Figure 2: Distribution of social category (left) and educational attainment (right)



Source: Authors' calculations based on survey data. Note: Sample composition is not representative.

The concentration of socially disadvantaged communities and those with low levels of formal educational attainment in the waste-picking profession is doubly concerning. First, in the context of observations 1 through 3, this concentration highlights the economic plight and the inadequacy of public safety mechanisms in helping the current generation of waste-pickers maintain a living. It underlines the existence of a perpetuating cycle of low income and low living standards, which is exacerbated given low educational attainment. Second, and more generally, this concentration also represents a reinforcing inter-generational lack of upward mobility. The children born to the current generation are—due to the lack of education, opportunities and existing circumstances—more likely to continue working in the waste-picking profession, and this cycle is, inadvertently, likely to continue for future generations as well.

Policy priorities

The observations mentioned above clearly highlight the nature and quantum of work that remains to be done to ensure that waste-pickers are not left behind. 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 waste-pickers as crucial players in the country's development trajectory and aim to reduce their vulnerabilities while bolstering their growth prospects. Some priorities that emerge from the observations above are as follows:

First, it is crucial to strengthen and provide easier access to work infrastructure to waste-pickers from the source of generation until the delivery of waste to aggregators across the country. The setting up of a decentralized waste management system, which streamlines and fast-tracks collection, segregation and sorting of waste, can act as a starting point. Existing legislation, such as the Solid Waste Management Rules (2016)[12] and the Plastic Waste Management Rules (2016)[13] can function as guiding frameworks for urban local bodies (ULBs) to increase the efficiency of land use, capital allocation and physical infrastructure at the grassroots.

Second, a significant impediment in formulating and implementing policies for the welfare of waste pickers is the absence of reliable and up-to-date data that reflects this cohort's on-ground realities. Under the ambit of the Swachh Bharat Mission—the government's flagship programme for ensuring

progress on WASH initiatives—the enumeration of waste-pickers by partnering with informal sector organizations and civil society can help jump-start data processes. Such enumeration can in turn assist in establishing regulatory norms vis-à-vis minimum pay, ULB-endorsed identification, safety procedures and access to waste management and allied services which can be the first steps in safeguarding the lives and livelihoods of waste-pickers. It will be pertinent to build gender-responsive measures such as equal pay, infrastructural support for women and equal access to facilities to mitigate the risk of segregation. A one-size-fits-all approach to account for the differential needs may result in reinforcing existing inequities.

Third, the pandemic has shown the importance and necessity of social protection schemes, especially for vulnerable cohorts like waste-pickers. Existing ownership levels of identification documentation can be built upon to ensure that no individual is denied the right to eat, earn, live and vote or be denied the issuance of beneficiary identification for acquiring social security benefits. Amending enrollment processes into schemes for food security (such as the One Nation One Ration Card), wage guarantees and health insurance—by reducing barriers to entry and allowing self-enrollment in cases of omission—can bring a larger swathe of waste-pickers under the umbrella of social protection. Further, exploring the integration, consolidation and upgradation of existing beneficiary databases under various schemes can help strengthen the last-mile delivery of entitlements and reduce systematic redundancies. Creating a social protection framework for waste-pickers can significantly improve their welfare standards.

Finally, implementing skill-training programmes that focus on technological advancements in waste management can expand the employment horizons of waste-pickers within the SWM ecosystem, especially for women workers who can leverage these opportunities to break out of existing inequality structures. A concentrated effort is required to explore alternative livelihoods for potential next-generation workers. In the same vein, mobilizing resources to provide better and greater support to children of waste-pickers can act as a deterrent to poverty cycles, an instrument for upward mobility, and a platform for higher standards of dignified living for this community.

Key Insights for the Operationalization of UNDP's Gender Equality Strategy 2022–2025

UNDP has the potential to act as a critical partner to government institutions in alleviating waste-pickers' poverty and ensuring a structural transformation towards their resilient and equitable development. The following are some insights to this end:

- UNDP can assist ULBs in the localized implementation of existing frameworks around waste management, ensuring adequate protection of the lives and livelihoods of waste-pickers. Given UNDP's focus on working with underserved communities, it can work with ULBs to provide technical support to integrate gender considerations into implementation plans.
- At the same time, UNDP can also help develop institutional capacity among ULBs to systematically collect and store gender-disaggregated enumeration information and use it to devise policy actions and fine-tune on-ground implementation and monitoring.
- UNDP can build on its ongoing work in connecting beneficiaries—particularly from vulnerable populations such as women, migrant workers, waste-pickers, etc.—with social protection schemes, ensuring an expanded coverage of schemes related to employment, education, health and shelter.
- UNDP can simultaneously continue and expand its efforts in establishing sustainable waste management practices across the country by operationalizing material recovery centres and employing various socio-technical models for plastic waste management. Given the differences in perceptions and experiences of women while working in such facilities, UNDP can build on its ongoing progress to work towards a gender-sensitive approach in the design and implementation of waste management practices and policy guidelines.
- By partnering with both public sector institutions and the private sector (for example, UNDP India's ongoing project Utthaan with Hindustan Unilever), UNDP can continue to further the dialogue on the immediate need to holistically support waste-pickers in their journey towards a better life.

Endnotes

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