Analysis of the Livelihoods of Waste Pickers across the Global South

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Introduction

Consistent and effective waste management is paramount to ensure a high standard of public sanitation along with improved environmental sustainability. Even though waste management is the government's responsibility, methods differ significantly between the Global North and South (Portes and Schauffler, 1993). In the Global North, perhaps because of adequate financial and physical resources, governments are able to invest in formal waste services by having employees, equipment, and contemporary technology such as sanitary landfills. In contrast, governments of the Global South are under immense pressure to "develop" quickly, leaving essential services such as solid waste management neglected (as cited in Archer, 2014). This can be attributed to widespread inequality, lack of infrastructure, scattered urbanisation, and rapid population growth (Portes and Schauffler, 1993). In the absence of formal waste management systems, the informal workforce is instrumental in the larger chain of resource recovery, performing both environmental and public services.

There is no definitive data about the number of informal waste pickers worldwide but estimates suggest that there are around 15 million people involved in this line of work (Medina, 2007). Informal waste pickers collect recyclable items from illegal dumpsites, unsanitary landfills, households, commercial centres, and along streets. Since waste pickers constitute the informal workforce they are not regulated by governments in any capacity. This leaves them without identity cards, uniforms, safety equipment, and social benefits (Godfrey et al., 2017; Colombijn et al., 2017; Nzeadibe et al., 2012). Being from disadvantaged groups that are often disorganised, waste pickers

do not have a collective voice to demand rights or respect. Waste pickers are systemically discriminated against because of the unhygienic nature of their work and its close association with disease (Dias, 2016). Their livelihoods are riddled with various vulnerabilities such as unpredictable incomes, occupational hazards, appalling living conditions, and social stigma including violence from law enforcement officials (Nzeadibe et al., 2012). As Malinowski (2008) succinctly explains, "separating refuse is stigmatised as an activity of the poor" (as cited in Kruljac, 2012). Sen (2003) contributes that the poor employ survival strategies such as waste picking to sustain their basic livelihoods- making money from what others have discarded (as cited in Parizeau, 2015). This process can be understood as an interplay between assets and vulnerabilities (Parizeau, 2015).

This summary paper analyses the livelihoods of waste pickers across the Global South by using the Sustainable Livelihoods Framework (SFL) developed by DFID (1999) and modified by Baumann and Sinha (2001) (as cited in Uddin et al., 2020). The analysis considers the impact of the following assets and vulnerabilities: human, financial, natural, physical, social, and political by comparing research done in South America, Africa, and India.

Human assets encompasses gender, age, literacy level, labour, skills, and past work experience. Human vulnerabilities include health related issues, socio-economic status, and hindered access to facilities (water, sanitation, education, and housing). Waste pickers' financial asset is their income. Debt and the global market of recyclables pose financial vulnerabilities. The primary natural asset is garbage. Physical assets include but are not limited to protective equipment, carts, vehicles, bicycles, sacks, space for sorting, and their shelters. Limiting waste pickers' access to garbage, sorting spaces, shelters, and from getting equipment are the primary natural and physical vulnerabilities. Social assets are the relationships they use to sustain their livelihoods while social vulnerabilities include stigma, discrimination, and conflict. Political assets reflect their positions

within current solid waste management systems. Their exclusion from this system and lack of recognition are political vulnerabilities.

Terminology

In South America, the umbrella of informal waste pickers are locally known as *catadores* and *cartoneros*. There are distinctions based on specific materials collected. In Aba (Nigeria), Medina (2007) notes that there is no local word for the waste picking occupation which might speak to how "new" a job it is. In South Africa, they are called 'reclaimers' or '*bagerezi*' (Dias et al., n.d). In the state of Maharashtra (India), waste pickers are called '*Kachra-vechak*', meaning garbage pickers. In the media,'rag pickers' is used as an alternative term for waste pickers. In Bangalore, NGOs such as *Hasiru Dala* have advocated for them to be known as 'green collar workers' who beautify cities by managing waste. Such terminologies are indicative of the levels of respect and legitimacy accorded to waste pickers and their livelihoods. Academically, the term 'waste picker' is accepted because it clearly encapsulates their primary activity in this occupation, which is picking up waste from various locations (Dias et al., n.d).

Profiles

The profile of a typical waste picker includes someone with very low formal education, who is excluded socially and economically. Upon interviewing landfill waste pickers, Schenck et al. (2019) found that "financial difficulties, persistent poverty, family problems, and behavioural problems" were common reasons for discontinuing education. It would be realistic to assume the number of informal waste workers worldwide is higher than 15 million as statistics of the informal sector are limited and constantly affected by unemployment rates. For some, this job is seasonal while others depend on it permanently. Fearing harassment and abuse, waste pickers refrain from participating in research. Despite this, there are a few reliable studies of their livelihoods.

South America

As of 2019, the lives of 77 million Brazilians were negatively affected by approximately 3000 illegal landfills (Cruvinel et al., 2019). According to Marello et al. (2018), between 500,000 and 4 million people are involved in collecting and segregating garbage as a livelihood in Latin America. As of 2012, in Brazil, there were nearly 400 organisations to support *catadores* (Kruljac, 2012). Primary research at the largest open dump in Brazil indicated that of 1025 participants, 67% were women, aged between 36-45 years. 96% of them had children dependent on them. 27% of all respondents has not been to school at all. Most participants had worked upwards of 5 hours a day, 6 days a week, for 15 years (Cruvinel et al., 2019). Medina (2010) notes that in South America, despite overall low-income levels in this line of work, waste pickers earn 3-5 times the minimum wage. Some made roughly USD250 per month (USD8 per day) (Cruvinel et al., 2019).

Africa

Africa has a very large informal workforce. The examples used in this analysis are based on data from South Africa and Nigeria. A study by Linzner and Lange (2013) stated that South Africa has an informal workforce of 215,000 members (0.6% of the urban population). Estimates (World Bank, 2016) suggest that South Africa generates 54.4 tonnes of waste per day, of which only 10% is recycled. Data from a case study (of a landfill in South Africa) by Schenck et al. (2019), indicated that the average age of waste pickers was 39, with the rest ranging from 18-71. Age-related data should be analysed with caution, because globally there is a legitimate concern of child labour in this line of work (Medina, 2007). Based on data from Aba (Nigeria), it was found that 95.8% of waste pickers were male and more than 200 participants had been waste pickers for 3-5 years. The mean daily income was USD11 (Nzeadibe et al., 2012).

India

The Alliance of Indian Waste Pickers (AIW) estimates that there are between 1.5 and 4 million waste pickers in India. According to the municipal corporation, Bangalore generates almost 3000 tonnes of waste every day, of which 600 tonnes are recycled by the informal sector which has at least 20,000 members. Of 264 waste pickers surveyed in Bangalore, there were almost equal numbers of men and women. In a study by Sandhu (2015), in Amritsar (Punjab), 67% of the households interviewed had child waste pickers. Only a quarter of children below the age of 14 had attended school, while close to 40% had not attempted school at all. Of the adults interviewed, 64% had not had formal education (Sandhu, 2015). On average, a waste picker worked 8-10 hours a day, during which they collected between 60-90 kgs of waste, and earned between $1-$2 USD (as cited in Sandhu, 2015).

Analysis of Assets and Vulnerabilities

Human

Across South America, Africa, and India, waste picking is a job that individuals are pushed into due to financial hardship. While there are many independent waste pickers, most work as family units and pool their incomes (Schenck et al., 2016). This makes it a job for children, women, and the elderly if they are physically capable. As Dias (2012) notes, this occupation is not demanding in terms of initial training and skills which also makes it a livelihood option for vulnerable groups such as migrants, the disabled, and the unemployed (Coletto and Bisschop, 2017). Despite this, it is very laborious and dangerous which does require numerous unconventional skills (as mentioned later).

In India, pervasive casteism results in lower caste citizens (Dalits, formerly known as *Untouchables*) being bound to certain identities and occupations that are considered “impure”-

waste picking being one of them. The roots of casteism are deep and lead many Dalits to flee from powerful Hindu village landlords to cities where they hope to live somewhat anonymously (Gidwani and Sivaramakrishnan 2003). Once they reach cities, however, their lack of skills and qualifications prevent them from securing steady jobs, nudging them into waste picking (Viljoen et al., 2016).

Across South America and Africa, economic instability is responsible for strengthening the informal workforce (Godfrey et al, 2017). Pochman (2008) explains that the economic crisis of 2008 caused massive formal unemployment, which preceded a boom in the number of "self employed" informal waste pickers (as cited in Coletto & Bisschop, 2017). While educated waste pickers have a chance of eventually getting assimilated back into the formal economy, illiterate pickers have no such option but to continue waste picking.

The physical health of waste pickers is a significant human vulnerability with this occupation. Low socio-economic status, lack of access to sanitation facilities, and poor housing further deteriorate their health (Singh & Chokhandre, 2015). With improper disposal of medical waste, organic matter, and solid waste, waste pickers are at risk of contracting diseases and sustaining life threatening injuries from items they come into contact with. 73% of waste pickers in a study by Cunnigham et al. (2012) relied on finding their daily food in the garbage they sort which puts them at risk of getting infected from consuming contaminated/decomposed food (Schenck et al., 2019). As noted by those who work in dumpsites, due to the chaotic layout, they are even at risk of being run over by garbage trucks (Schenck et al., 2019). Lack of protective equipment (gloves, boots, reflective outerwear, and masks) also leaves them with lacerations and fractures that make them prone to infections. Due to the repetitive nature of their work such as spending long periods in crouched positions and carrying heavy loads, they develop musculoskeletal issues (Binion and Gutberlet, 2012).

To grow on human assets, experts explain that waste pickers need to work on developing their capacities. This includes skill building, language proficiency, and searching for alternative full-time employment (Viljoen et al., 2016).

Financial

Trapped between urban poverty and low education levels, waste pickers make their livelihoods at the lowest level in the recycling industry, collecting whatever they have learnt has value in the market and making "quick money" (Schenck et al., 2019). Their labour (which determines how long they can work and hence the volume of waste they collect) is a significant human asset which directly informs their financial assets. If they are not healthy or strong enough to do the strenuous physical work required, they cannot earn their daily wages (Godfrey et al., 2017). While they have low bargaining power as compared to middlemen who dictate the price of the goods and earn large profits, they do use strategies to maximise their income. Despite their techniques, they rarely earn enough to escape poverty.

The income of landfill waste pickers is extremely unpredictable. It is based on quantity and composition of materials deposited at the landfill, the competition, the facilities (such as drinking water, public toilets, and protection from the sun), the distance from their shelters, their ability to work in difficult conditions, and the global market of recyclable goods (Schenck et al., 2019). Street waste pickers are equally vulnerable, but one key difference is that they depend excessively on physical strength and mobility (walking long distances with heavy loads). Since it is informal work, waste pickers do not have the luxury of taking a "holiday" meaning they cannot get compensated for maternity/paternity/sick leave. Nor do they receive employment benefits, medical relief, or pensions.

An analysis of the expenses of middle-aged waste pickers indicated that food was of first priority, followed by materials to smoke (tobacco etc.) and cleaning products. Gangopadhyay and

Wadhwa (2004) explain that many low income groups rely on substances to cope with the difficult conditions they find themselves in- making alcohol and smokable substances a constant feature amongst their expenditures (as cited in Viljoen et al., 2016). Due to financial constraints, waste pickers avoid seeking healthcare. Aside from income and expenditure patterns, the impact of debt and saving patterns also illuminate waste pickers' financial positions (Sandhu, 2015). In India, hosting social affairs (weddings), unexpected medical setbacks, and building permanent structures were the biggest financial stressors for waster pickers. Almost 80% of the waste pickers in the study population (in Amritsar) had borrowed money and been left with crippling debt (Sandhu, 2015). Despite other pressing expenditures, all waste pickers said that education for their children was a high priority because it meant they could move out of this "dirty and poorly paid occupation" (Sandhu 2015). The deterrent was that it required long term investments of time and money. Due to the expense, it is likely that the short term returns of their children's labour outweighed the long term benefits of getting them an education.

The financial strategies used by street waste pickers include picking up trash from higher up in the chain of waste and from high income neighbourhoods since the waste from this region is most lucrative (Colombjin & Morbidini, 2017). They also collect different types of recyclables which have different prices to maximise their incomes (Schenck et al., 2019). Amongst waste-picker cohorts, they have verbal agreements about territories where they collect waste if they know they will be travelling or unable to work (Gidwani, 2015). This involves maintaining good relations with regular suppliers and middlemen, providing some financial security (see social/political section). Some middlemen in Nigeria have credit systems with trusted waste pickers while some also store waste pickers' money to prevent them from getting robbed. A few middlemen in Nigeria also advocate for child waste pickers to get educated, preparing them for formal employment which would guarantee a secure income (Adama, 2012). Landfill waste pickers at uncontrolled landfills (without restrictions) chose to work on weekends and some even chose to sleep near the landfills to

get an early start (Schenck et al., 2019). A 55 year old grandmother in Soweto (Johannesburg) noted that there is immense competition between waste pickers which has driven her to wake up at 3AM for over 10 years to get the best pick of the day (Cocks, 2020).

Natural and Physical

For waste pickers, garbage is their primary natural asset which they collect, sort, or dismantle to find items of value to sell to middlemen, private firms, or keep for their own use (Oduro-Kwateng, 2011). According to Marwan, the manager of a Dry Waste Collection Centre (DWCC) in Bangalore, there are 72 categories of segregation (including clothing, furniture, shoes, mattresses, electrical goods) of which the most lucrative categories are cardboard, PET plastic, scrap metals, and parts of electronics (personal communication, July 27, 2020). In South Africa, Schenck et al. (2019) found that of 90% waste pickers interviewed, they only collected items that buy-back centres would buy from them. Once waste pickers earn enough some would invest in a cart or bicycle to ease their physical burden while collecting waste.

A significant vulnerability of informal waste pickers is limited access to the resources they need to earn an income (waste stream/landfills/waste dumps). An example of this, as noted by Parra (2015) is widespread incineration as a modern waste management solution (as cited in Dias, 2016). Not withstanding the physical dangers of their job and the “exploitative arrangements” they are in (as cited in Adama, 2012), some municipal governments and public bodies are actively hostile towards them. They are treated as thieves, restricted from entering landfills, and harassed by the public for their work and because of how they look. Additionally, in Amritsar, this group has low social status which excludes them from access to affordable housing and sanitation services (Sandhu, 2015). Their productivity is hindered by their low income range, which prevents them from renting vehicles or storage facilities to segregate (Nzeadibe et al., 2012). The only alternative is to sort waste in their shelters which poses a health hazard (Sandhu, 2015).

Social and Political

The social and political assets of waste pickers share many intersectional characteristics. Existing structures and hierarchies within society frame the inequalities that waste pickers face (Kruljac, 2012). As Adama (2012) notes, social assets include their families, others in the recycling chain (private firms, NGOs, co-operatives, middlemen, and other waste pickers), and governments. Vulnerabilities such as stigma impedes their access to waste as a resource, quality education, adequate health care, affordable housing, access to public amenities, and basic respect from society (Parizeau, 2015). In a survey conducted in Buenos Aires, 54% of waste pickers stated that violence was a common occurrence. To avoid harassment, waste pickers employed strategies such as dressing in better clothes and carrying identity cards (Ogando et al, 2017). Their primary political asset is involvement in the current solid waste management framework. If they were included, perhaps they would benefit from having a stable livelihood, with social security and higher levels of economic security. Parizeau (2015), explains that macro-level vulnerabilities such as economic upheaval, political instability, and unequal gender relations also affect their livelihoods.

Family members can be a source of financial and emotional support. Conversely, having many dependent members can also be a vulnerability since they are an added expense for families already battling chronic poverty. Waste pickers often depend on each other in medical emergencies, and for food and shelter. The network of middlemen and waste pickers within the value chain is a sheer necessity for waste pickers to survive (as citied in Adama, 2012). As explained by Putnam (1993) “bonding social capital” is crucial in that it secures a strong working relationship between waste pickers, and those higher up in the chain of resource recovery (as cited in Coletto and Bisschop , 2017). Across all three geographic locations analysed, the relationship between independent waste pickers and middlemen is usually characterised by exploitation, leaving the waste pickers with meagre earnings and the middlemen with excess profit. For example, in Aba, per day waste pickers

earned $11 while waste dealers earned almost twice the amount (Nzeadibe et al., 2012). Despite the hierarchy, many waste pickers had a functional relationship with middlemen (see financial section). This can be attributed to sympathy from the middlemen because many started off as waste pickers before moving up the recycling chain (Adama, 2012).

Governments have welfare schemes and education programs to alleviate poverty but the vast majority of waste pickers do not benefit from them. In South America, Dias (2006) notes that to eradicate child labour in this field, a program called Familia Bolsa provided money to families that educated their children (as cited in Colombjin, 2017). Increasingly, some governments have had success with privatising waste management, allowing firms to conduct doorstep collection, transport waste, manage landfills, and use waste-to-energy technologies (as cited in Gidwani, 2015). Firms have adequate financial capital and promise to manage waste more cost effectively and faster.

In the absence of effective waste management by governments, public-private partnerships (PPPs) and membership-based organisations (MBOs- co-operatives and NGOs) can be seen as extensions of waste pickers' social and political empowerment as they aim to improve their livelihoods. PPPs are particularly successful because they build on financially incentivising waste pickers. Co-operatives and NGOs work to integrate assets using short-term and long-terms interventions (Kruljac, 2012). Short term plans include training modules, providing safety equipment, increasing access to quality healthcare, distributing ID cards, and running awareness campaigns. Long term plans include education programs, policy advocacy, and formalisation of this occupation to increase social inclusion.

Co-operatives have established themselves as vital forces that unite waste pickers in South America and India. As of 2012, Brazil had 400 MBOs for *catadores* (Colombjin, 2017). Co-operatives protect waste pickers from exploitative arrangements with middlemen because they deal directly with recycling industries. *Catadores* are given safety equipment, legal aid, and uniforms which increase their social status because the public acknowledges them for their environmental

contribution (Colombjin, 2017). In Brazil, the fact that multiple MBOs exist gives *catadores* a choice of joining them or 'being their own bosses' and operating autonomously. A significant victory is that waste picking is recognised as an occupation in Brazil, giving the *catadores* agency and legitimacy (Medina, 2007).

In India, a leading NGO in Bangalore called Hasiru Dala is in a partnership with the municipal government of Bangalore (BBMP) and works with 15,000 pickers. This enables trained waste pickers to manage DWCCs that are scattered across the city's zones. Their modules include teaching waste pickers basic managerial skills so that they are able to empower themselves. The BBMP also has schemes to alleviate poverty in urban centres, provide health insurance, and provide scholarships to children of waste pickers. This is one example of successful integration which was accomplished through consistent dialogue with waste pickers, by engaging the government to some extent (Chengappa, 2013). Examples from South America and India illustrate that co-operatives are an irreplaceable source of support and inclusion for those in informal recycling.

In Africa, despite governments encouraging the formation of co-operatives for poverty reduction and job creation, internal corruption and improper bookkeeping resulted in an 91.8% failure rate (Godfrey et al., 2017). Statistics from a 2009 DTI report indicated that of 22,619 co-operatives, only 2398 were functioning in some capacity (as cited in Godfrey, 2017). Mismanagement of finances, low techno-managerial skills, and unsatisfactory infrastructure were cited as common reasons for the high failure rate. Godfrey et al. (2017) explain that initial investment is required to finance co-operatives and up-skill waste pickers. But in order to make such MBOs sustainable and productive, mentorship and incubation programs are essential. This is one area where governments can actively enhance the livelihoods of waste pickers.

Conclusion

Solid waste management is a multidimensional issue that is being tackled differently across the Global South. In the interest of environmental sustainability, social inclusion, and poverty alleviation, interventions are needed to improve the livelihoods of waste pickers and protect them from the vulnerabilities they face. Some governments have launched programs and made policies friendlier towards them but there is still much progress to be made. As a vulnerable group, they deserve to work in conditions that are economically stable, environmentally safe, and socially respected.

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