Ouroboros (WM)

Ouroboros Waste Management

Living Income Study Peshawar Pakistan
Fair Circularity
Sama Verte & Systemiq

September 2025

CASE STUDY REPORT PESHAWAR

Study location	*Peshawar, Kyber Pakhtun, Pakistan*
Organization that developed the case study	*Ouroboros (WM) Pvt. Ltd.*
Dates	*July 2025 to September 2025*

Introduction to the document:

Context

In 2024, the study "A living income for the informal waste sector" piloted a methodology with local NGOs to assess the concept of a "living income" for informal waste workers with the goal to create a practical methodology to promote the provision of a living income within these supply chains.

Acknowledgements

1. *Sama Verte, Study Partner and Sister Concern of Ouroboros (WM).*
2. *KPK Senior Public Sector Individuals and CEO Mardan and Peshawar (MSW) and (WASH)*
3. *Water & Sanitation Services Peshawar - WSSP.*
    3.1. *Dumpsite and Landfill Manager*
    3.2. *Zone A & B Manager*
    3.3. *Zone C & D Manager*
    3.4. *Plastic Management Expert*
    3.5. *Zones A-D Operations Supervisor*
    3.6. *Zone A-B - Transfer Station / Temporary Collection Point Contractor and Manager*
4. *Institute of Architects Pakistan President, Ex-President and Peshawar Chapter Lead*
5. *President EAROPH International*
6. *Private Firm Paper Recycling Manufacturer - Punjab.*
7. *Ouroboros Materials Circularity Team (Recycling & Manufacturing) – Peshawar/Lahore (Paper, PP, PET and HDPE)*
8. *Ouroboros Recycling Vendor Glass Recycling and Collection.*

Introduction and Approach[1]

This study forms part of the *Living Income for Informal Waste Sector* initiative, which applies the Systemiq and Anker methodologies to assess whether informal waste pickers in Pakistan's major urban centres earn enough to secure a decent standard of living. The Peshawar case study was conducted during July–September 2025 **and is one of three urban case studies undertaken,** Lahore and Karachi. Its purpose was twofold: first, evaluating both the income levels of waste pickers and the household-level costs of securing essential needs such as food, housing, healthcare, education, and safe working conditions and second, and second, to identify most pronounced self-identified systemic barriers that constrain their ability to secure stable and dignified livelihoods. By linking income data with cost-of-living benchmarks, the study provides an evidence-based framework for identifying gaps between actual earnings and the living income threshold.

---

[1] Check Table 1 in references for full definitions of our typology.

Peshawar, with a metropolitan population of over 2 million, produces more than 1,200 tons of waste per day, of which only around 70% is formally collected by the Water and Sanitation Services Peshawar (WSSP) (WSSP, 2024). The remaining gap is filled by informal waste pickers, who recover recyclable materials from streets, transfer stations, households, and dumpsites. These workers provide a vital environmental service to the city's waste management system but do so without contracts, legal recognition, protective gear, or access to minimum-wage protections guaranteed under Khyber Pakhtunkhwa's labour regulations (Government of KP, 2023).
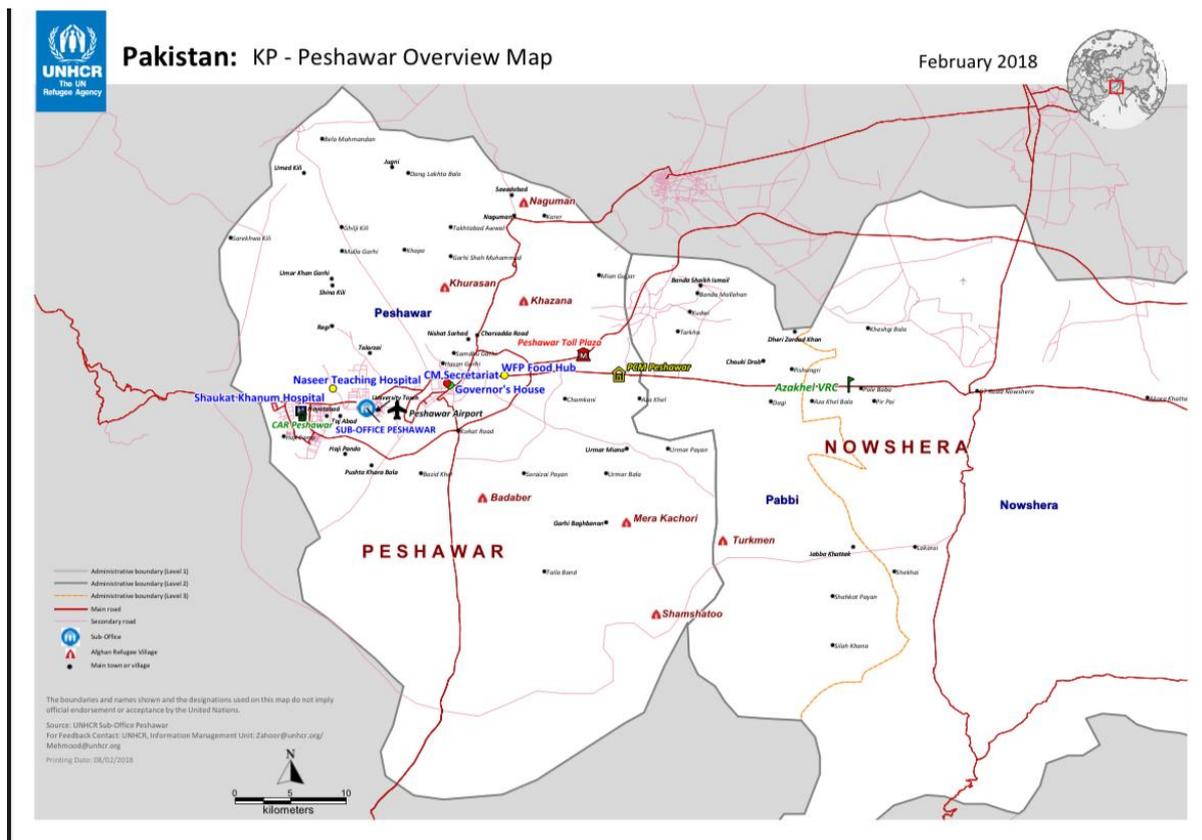
The survey covered **45 respondents**, sampled across four typologies: transfer station workers, dumpsite pickers, street pickers, and door-to-door (D2D) household collectors. Within these groups, **26 respondents identified as independent waste pickers**, while **19 were informally organised** through local contractors, family-based neighbourhood systems, or structured door-to-door service routes. Importantly, no cooperatives or formally organised associations were found in Peshawar, reflecting the fragmented and largely unrecognised nature of the city's informal recycling economy.

Field observations revealed that while men dominate visible collection and sorting, women and children remain active at landfills and junk shops, though they were not captured within this survey sample due to cultural sensitivities and safety concerns. This mirrors national evidence on gender roles in Pakistan's waste economy, where women's participation is usually restricted to back-end sorting rather than street-level or household collection (World Bank, 2018).

The study design combined structured household surveys with Cost of Decent Living (CDL) add-on modules, enabling the collection of quantitative data on income streams and household expenditures across food, housing, healthcare, and education. Enumerators also consulted stakeholders, including WSSP officials, local contractors at dumpsites and transfer stations, and intermediaries such as junk dealers who remain essential in the recycling chain by purchasing and consolidating materials. Secondary data from the Pakistan Bureau of Statistics (PBS), FAO, World Bank, and WHO were triangulated to validate assumptions about food costs, housing standards, healthcare spending, and education expenditure. This mixed-method approach ensured that the findings reflect both the lived experiences of waste pickers and the broader economic context of Peshawar.

Peshawar Waste Pickers Mix and Map

Peshawar has a main dumpsite and landfill (non-engineered) called Shamshatoo, with up to 5 temporary collection points (TCPs) that are referred to as Transfer Stations in literature out of which one main TCP was visited under the guidance of WSSP to unearth the variations and spectrum of typologies and professionalization. The MSW system consists of a primary, secondary and tertiary collection system covering five distinct zones and the main metropolitan area out of which all were visited for surveys. (See Below and Table 1).

A – Current Waste Picker Earnings[2]

Waste pickers in Peshawar operate under some of the harshest conditions among the three study cities. The survey covered 45 respondents, representing both independent and informally organized workers. No cooperatives or formally registered groups were found in the city, but field observations confirmed that semi-organised groups of around 30–35 workers operate at transfer stations and landfill sites, pooling resources informally to share transport, negotiate access, and sort materials. Door-to-door (D2D) collectors also represent a structured subgroup within the informally organised category, operating through fixed neighbourhood routes and often charging households small monthly service fees. Incomes across these typologies, however, remain far below a living wage and are shaped by daily fluctuations in material prices, dependence on intermediaries, and household size pressures.

Survey results show that independent workers earned an average of PKR 42,576/month, while informally organised groups (including D2D collectors) averaged PKR 43,287/month. These earnings place both groups slightly above the Khyber Pakhtunkhwa statutory minimum wage of PKR 37,000/month (Government of KP, 2024), but still around 28 - 30% below the living wage benchmark of PKR 60,434/month required to secure a decent standard of living in

---

[2] Government of Punjab. (2024). *Minimum rates of wages notification, Punjab 2024–25.* Labour & Human Resource Department. Retrieved from https://labour.punjab.gov.pk

Government of Punjab. (2025). *Unskilled minimum wage 2025–26.* Retrieved from https://sessi.gov.pk/Unskilled%20Minimum%20Wage%2025-26.pdf

Government of Sindh. (2025). *Minimum wages notification.* Retrieved from https://labour.punjab.gov.pk/minimum-wages-notification

5

Peshawar (Anker Research Institute, 2025). Daily realities confirm this precariousness. Children working at landfill sites were observed earning as little as PKR 150/day, while adult pickers typically earned PKR 700–900/day. A handful of workers combining household contracts or access to high-value recyclables could reach PKR 1,700 - 1,800/day, but these remained exceptional cases.

Field interviews highlighted further challenges. Field interviews highlighted further challenges. Buyers or "kabariyas" remain the main intermediaries in the recycling chain, and they commonly adjust purchase prices to account for factors such as contamination, moisture, or transport distance. This structure leaves waste pickers as price-takers with limited bargaining power, but it also provides them with a guaranteed and immediate market for their materials. For example, PET bottles were sold by pickers for PKR 20 - 40/kg, well below the market rate of PKR 80 - 90/kg, while cardboard was sold at PKR 20/kg compared to a market rate of PKR 25 - 32/kg. This price distortion reduces real incomes and forces many to rely on daily or weekly advances from buyers, which lock workers into cycles of dependency. On average, waste pickers reported collecting 100 kg/day of mixed recyclables, but only 40–50 kg/day could actually be sold because of contamination or low demand. These inefficiencies highlight the structural constraints of Peshawar's waste economy: while volumes are high, resale value is undermined by market access, bargaining power, and infrastructure gaps.

Typology Analysis – Peshawar [3]

Transfer Station Pickers

Transfer station workers in Peshawar displayed the highest stability in material access, since secondary collection points concentrate recyclables already removed from mixed waste streams. According to the typology sheet, rigid plastics accounted for nearly 70% of their earnings, followed by paper and carton (22%) and metals (5%), while low-value materials like glass contributed negligibly. This concentration of plastics allowed transfer station pickers to average between PKR 44,000 and PKR 46,000 per month, placing them just above the city-wide independent average. Their reliance on plastics, particularly PET and HDPE, links them directly to global commodity markets, exposing them to price fluctuations. Yet, the concentration of high-value fractions also means they are structurally better positioned than landfill or street pickers.

Dumpsite and Landfill Pickers

Landfill and dumpsite workers in Peshawar exhibited the most heterogeneous material mix. They collected higher volumes of paper/carton (25% of kilos) and "other low-value materials" (20–22%), but these translated into relatively low-income shares because of depressed resale values. Plastics, particularly PET and rigid plastics, still contributed around 56% of income, while metals contributed 13%. Despite handling heavier volumes, their average earnings hovered around PKR 38,000–40,000/month, only marginally above the statutory minimum

---

[3] Check Table 1 in references for full definitions of our typology.

wage and 35–37% below the living wage requirement. Dumpsite conditions compounded these challenges: field notes recorded workers operating in hazardous environments without protective gear, often spending two days per week sorting waste after five days of working under arrangements allegedly supported by a NGO–funded community initiative. Workers reported uncertainty over the contracting entity but confirmed that service-related employment opportunities, while short-term, supplemented their otherwise unstable earnings.

Street Pickers

Street pickers in Peshawar occupied an intermediate position between landfill and transfer station workers. Their material profile showed rigid plastics making up 55–60% of earnings, with "other materials" accounting for 18–20% and metals around 12%. Because they collect dispersed fractions directly from bins and neighborhood streets, they depend heavily on mobility and stamina but face significant inefficiencies compared to transfer station workers. On average, street pickers earned PKR 41,000–42,000/month, slightly higher than dumpsite workers but still 20–25% below the FTWE living wage benchmark. Interviews suggested that their income stagnation was primarily due to reliance on small-volume, low-value fractions, which limited bargaining power with junk shop buyers.

Door-to-Door Household Collectors

Household collectors in Peshawar represented a distinct subgroup, combining service fees with recyclable sales. On average, about 70% of their income came from monthly service fees, while the remaining 30% came from recyclables such as rigid plastics and paper/carton. This combination insulated them from commodity price volatility and provided more predictable monthly earnings, averaging PKR 46,000–48,000/month. This places them significantly above the city-wide average and nearly double the statutory minimum wage, though still 15–20% short of the FTWE living wage threshold. Importantly, household collectors in Peshawar, like their counterparts in Lahore, appeared to benefit from targeting higher-income neighborhoods[4] such as University Town, Hayatabad, and parts of Saddar. These areas generated richer waste streams and, in some cases, included direct service payments from households, substantially raising earning potential. Comparative studies confirm that door-to-door waste services in South Asian cities provide the most reliable income streams for informal workers because they combine service provision with material recovery (Wilson et al., 2012; GAIA, 2018).

Material Mix

Material mix plays a central role in shaping income outcomes for Peshawar's waste pickers. Plastics, particularly PET bottles and rigid HDPE, form the backbone of their earnings, but contamination, moisture, and distance from markets significantly reduce resale prices. Field interviews revealed that plastic bottles were typically sold to kabariyas at PKR 20–40/kg, compared to prevailing market rates of PKR 80–90/kg. This pricing adjustment, while

---

[4] Earnings of household waste pickers are directly linked to neighborhood affluence, with service fees and recyclables both rising in wealthier localities. (Ouroboros Services - Operational Teams, 2025)

frustrating for pickers, reflects both quality concerns and the costs borne by buyers to transport and process materials. A typical picker reported collecting nearly 100 kg/day of mixed recyclables, including 4–5 kg of plastics, 10–12 kg of cardboard, 9–10 kg of glass, and as much as 65–70 kg of textiles. Yet only 40–50 kg/day was actually sold, with the remainder left unsold or purchased at depressed rates "because it is smelling." This discrepancy explains why incomes remain stagnant despite the heavy physical labour and large volumes handled.

For independent workers, plastics contributed nearly 60% of total monthly earnings while accounting for only around 25–30% of collected volumes, highlighting the premium attached to this category in local recycling markets where demand from packaging and consumer goods industries remains strong (GAIA, 2018; Wilson et al., 2012). However, independents were also heavily burdened by low-value fractions. Paper and carton made up nearly one-quarter of volumes collected but contributed less than 15% of income, while glass, aluminium, and textiles generated minimal returns despite significant labour. This imbalance left independents dependent on volatile plastics markets and vulnerable to daily price adjustments at junk shops.

Informally organised workers, including door-to-door service providers, displayed a similar profile but with slight advantages. Those working in neighbourhood-based groups or at transfer stations gained access to more concentrated waste streams, which increased the share of plastics in their income profile to nearly two-thirds. Door-to-door collectors further benefitted from combining service fees with material sales, often targeting higher-income households in areas such as University Town or Hayatabad, where recyclables are cleaner and more abundant, and families are more willing to pay for collection services. These strategic approaches provided some insulation against market volatility, though average monthly incomes of PKR 43,287 for informally organised workers and PKR 42,576 for independents still fell 28–29% short of the living wage benchmark of PKR 60,434/FTE/month (Anker Research Institute, 2025). Metals such as tinplate and aluminium cans offered valuable "spikes" in earnings, contributing around 10–12% of income for both groups despite representing a small fraction of collected kilos. Yet these were not sufficient to offset the overwhelming dominance of plastics and the continued burden of low-value fractions like glass and textiles. In practice, this means that while certain workers can occasionally increase their income through high-value finds or stable household contracts, the majority remain tied to insecure and fluctuating markets.

Beyond the material profile, insecurity pervades waste picker livelihoods. All 45 surveyed respondents reported having debt obligations to Kabariyas, underscoring their role not only as buyers but also as lenders who provide advances during illness or work stoppages. While these arrangements ensure continued market access, they also reduce flexibility in setting sale prices until debts are cleared. Transport constraints exacerbate these issues: 34 respondents had no vehicle, one had a pushcart, one had a bicycle, five used chaand cars, and four owned loader rickshaws. Limited transport reduces access to higher-value waste streams and forces reliance on nearby, often lower-quality, collection sites.

These structural constraints translate into severe food and housing insecurity. Despite reported household food expenditure averaging PKR 209,198 per month, 98% of respondents

8

said they worried about not having enough to eat, 78% could not access a nutritious diet, and 93% consumed only a few types of food. Housing indicators were similarly bleak: only 13% lived in structures built with acceptable materials, while just 36% had safe sanitation and 4% had adequate ventilation. These findings illustrate that earnings, even when plastics dominate, are insufficient to cover essential needs, largely due to high dependency ratios, escalating costs, and structural exclusion from formal protections.

In summary, Peshawar's material mix analysis confirms that plastics and metals are the primary income drivers, but access to these categories is uneven. Independent pickers bear the heaviest burden of low-value fractions, while informally organised workers, especially door-to-door collectors, benefit from slightly higher and more stable incomes by targeting concentrated or cleaner waste streams. Nevertheless, average earnings for both groups remain significantly below the living wage threshold, reinforcing the conclusion that without targeted interventions such as collective organisation, better tools for segregation, or integration into municipal systems—waste pickers will remain locked in cycles of poverty despite their indispensable contribution to Peshawar's recycling economy.

B – Living Income Estimate

The Peshawar case study applies the Anker methodology to estimate the income required for a decent standard of living among waste picker households. This framework goes beyond food to include housing, healthcare, education, decent working conditions, and a buffer for savings. Data were drawn from the Cost of Decent Living (CDL) modules in the survey and cross-verified with national and international benchmarks. The required monthly living income for a household in Peshawar was calculated at PKR 92,465 (USD 1,383 PPP). With an average of 1.53 full-time equivalent (FTE) workers per household, this translates into a living wage of PKR 60,434 (USD 904 PPP) per worker.

B1 – Healthy Diets

Housing costs were estimated at PKR 12,200/month (13% of living income), based on typical rents in low-income urban areas of Peshawar and corroborated by PBS expenditure data (PBS, 2023). Waste pickers often reside in katchi-abadis or informal settlements, where overcrowding, poor ventilation, and unsafe sanitation prevail. Survey evidence showed that only a minority of households lived in durable structures, while access to electricity and sanitation was below half of respondents. This suggests that the PKR 12,200/month benchmark reflects the minimum cost for rental housing but falls short of addressing the significant deficits in housing quality and services that these households endure.

B2 – Decent Housing

Housing costs were estimated at PKR 12,200/month (13% of living income), based on typical rents in low-income urban areas of Peshawar and corroborated by PBS expenditure data (PBS, 2023). Waste pickers often reside in katchi-abadis or informal settlements, where overcrowding, poor ventilation, and unsafe sanitation prevail. Survey evidence showed that

only a minority of households lived in durable structures, while access to electricity and sanitation was below half of respondents. This suggests that the PKR 12,200/month benchmark reflects the minimum cost for rental housing but falls short of addressing the significant deficits in housing quality and services that these households endure.

B3 – Healthcare Costs

Healthcare was estimated at PKR 4,831/month (5% of living income). WHO reports that nearly 60% of health costs in Pakistan are covered out-of-pocket (WHO, 2023), and this pattern was evident in survey responses. Waste pickers face heightened health risks from daily exposure to hazardous materials and sharp objects but reported limited use of formal healthcare, particularly among Afghan-descended migrants who often lack documentation. Many rely on low-cost private clinics or avoid treatment altogether, resulting in poorer outcomes and financial vulnerability even at low expenditure levels.

B4 – Education Costs

Education costs were estimated at PKR 7,200/month (8% of living income). While households frequently expressed the desire to educate their children, field interviews confirmed that children often participate in waste collection, particularly at dumpsites. Expenses such as uniforms, books, and transport remain prohibitive. PSLM data confirm that education costs in urban Khyber Pakhtunkhwa have continued to rise (PBS, 2023). This cost burden explains why schooling is often deprioritised, perpetuating cycles of child labour and limited upward mobility, consistent with ILO evidence linking informal work and child labour (ILO, 2020).

B5 – Costs of Decent Work

The cost of ensuring safe and productive work was estimated at PKR 7,688/month (8% of living income). This includes daily transport, maintenance of bicycles or motorbikes, and minimum protective gear. Yet, survey responses revealed that most workers lacked adequate tools or transport and often walked long distances to sites. For those with motorbikes or loader rickshaws, transport costs were significant, especially when carrying loads for other workers. This highlights a major gap between the calculated requirement for decent work and the unsafe, resource-constrained conditions in which most waste pickers currently operate.

B6 – Savings

Savings were estimated at PKR 8,406/month (9% of living income), calculated as 10% of other household costs plus contingency. In reality, nearly all respondents reported having no savings. Instead, many relied on advances or informal loans from buyers, which entrenches financial dependency and reduces long-term security. Without the ability to build even modest savings, households remain highly vulnerable to shocks from illness, accidents, or income disruptions.

Overall, this cost structure demonstrates why most waste pickers in Peshawar remain far from achieving a dignified standard of living. Independent workers earn on average PKR

42,576/month, while informally organised workers average PKR 43,287/month, leaving a shortfall of nearly PKR 17,000 compared to the PKR 60,434/FTE living wage. This persistent gap underscores the structural inequities of the informal recycling economy: despite sustaining the city's waste system, these workers are unable to secure even the minimum costs of dignified living.

C – Comparable Incomes or Minimum Wage

Benchmarking earnings against other sectors underscores the precariousness of waste picking in Peshawar. The statutory minimum wage in Khyber Pakhtunkhwa is PKR 40,000/month (Government of KP, 2024). Independent and informally organised waste pickers earn on average PKR 42,576 and PKR 43,287/month, placing them only 6–8% above this legal threshold. However, both remain nearly 30% below the estimated living wage of PKR 60,434/month. When compared with agricultural labour (PKR 24,233/month) and construction work (PKR 22,166/month), waste picking does appear more remunerative, with average incomes 75–95% higher. Yet this apparent advantage is significantly eroded once essential expenses—such as transport, rent, and loan repayments—are factored in, leaving net disposable income at little more than subsistence level.

Qualitative evidence from field interviews illustrates how easily incomes are reduced by structural constraints. For example, Wasif Ali, a 27-year-old picker, reported earning PKR 700–900/day, but nearly half of this went toward loan repayments, since buyer-linked credit arrangements required him to sell materials at reduced rates until debts were cleared. He explained that if repayment terms were more favourable, his earnings could reach PKR 1,400–1,800/day, with an additional PKR 10,000/month possible through household service contracts. Similarly, transfer station workers described paying PKR 2,000–3,000/month in "access fees" to contractors managing entry, further cutting into low margins.

Thus, while waste picking generates higher gross earnings than agricultural or construction work, these incomes are volatile, easily eroded by structural costs, and rarely allow households to move beyond survival. Without targeted reforms to improve market access, reduce debt burdens, and lower work-related expenses, waste pickers in Peshawar will remain trapped in a cycle of subsistence, despite their central role in sustaining the city's recycling economy.

Key Learnings and Recommendations

The Peshawar case study reinforces that waste pickers are indispensable to the city's recycling chain yet remain among the most vulnerable urban workers. The clearest finding is the persistence of a significant income gap: independent workers reported an average of PKR 42,576/month, while informally organised groups earned PKR 43,287/month. These levels sit only slightly above the statutory minimum wage of PKR 40,000/month (Government of KP, 2024) but fall nearly 30% below the living wage benchmark of PKR 60,434/month (Anker Research Institute, 2025). This means that even with long working days of 8–12 hours, most households cannot consistently cover the costs of healthy food, adequate housing, healthcare,

and education. Survey responses revealed that up to 70% of daily income is spent on food, leaving very little for rent, transport, or savings. Almost all respondents reported having no financial reserves, living hand-to-mouth and relying on cash advances during periods of illness or work stoppage.

Another critical insight relates to how market dynamics shape incomes. Materials, particularly plastics, form the backbone of earnings, yet quality and location significantly affect resale value. Field interviews revealed that plastic bottles often sold at PKR 20–40/kg when collected in poor condition or contaminated, compared to cleaner market rates of PKR 80–90/kg. Such price reductions are not arbitrary but reflect how intermediaries account for moisture, transport, and contamination costs. While junk dealers provide consistent market access and liquidity, these dynamics mean that waste pickers act largely as price-takers, with limited bargaining power to improve returns. This situation is compounded by widespread reliance on advances, where repayment obligations further constrain net disposable income. For example, Wasif Ali, a 27-year-old worker, described how loan-linked sales reduced his daily cash income by nearly half until obligations were settled. With fairer repayment terms, his income could double to PKR 1,400–1,800/day, alongside additional earnings from household contracts.

Family and intergenerational participation is another defining feature. Children were visibly engaged at dumpsites, with some earning as little as PKR 150/day. Families often pooled income from multiple members, with women participating in back-end sorting or assisting with collection. This dependence reflects both high household dependency ratios and the exclusion of many Afghan-descended families from formal labour markets due to lack of identification documents. Without CNICs, households face barriers to education subsidies, health services, or credit facilities, reinforcing cycles of economic vulnerability.

Opportunities for Improving Livelihoods

Opportunities to improve livelihoods emerge from both local practices and targeted interventions. Basic improvements, such as provision of gloves, masks, carts, or safe transport, would reduce health risks and raise productivity. Cooperative pooling of materials, particularly at transfer stations where groups of 30–35 already collaborate, could secure better rates and reduce transport costs. Household contracts already exist, with some pickers charging PKR 250/month per household, demonstrating willingness to pay for reliable collection services. If scaled and supported by local authorities, this model could create more predictable income streams less dependent on volatile commodity markets. Similarly, kinship-based networks at dumpsites could be supported to evolve into semi-formal associations, giving workers stronger collective bargaining power.

Debt reform and access to fair credit are also critical. Instead of relying on advances from intermediaries, which constrain future earnings, microfinance schemes tailored for waste pickers could provide loans for bicycles, motorbikes, or emergency needs at predictable repayment rates. NGO or government-backed savings and credit products would help break cycles of dependency and allow families to build resilience against income shocks.

The absence of formal recognition remains a central challenge. Local authorities, particularly the Water and Sanitation Services Peshawar (WSSP), could adopt inclusive policies to register waste pickers, issue ID cards, and integrate them into official collection systems. International precedents—such as Brazil's National Solid Waste Policy and India's cooperative models—demonstrate that legal recognition and municipal contracts can raise incomes while improving waste recovery rates (UN-Habitat, 2010; Chikarmane, 2016). Extending municipal services like water, sanitation, and electricity to informal settlements where pickers live would directly reduce household costs, while subsidies for school uniforms or transport could ease education barriers and reduce reliance on child labour.

Private sector actors also have a role to play. Recycling companies, packaging firms, and FMCGs already depend on waste pickers for material flows but provide little direct support. Establishing buy-back centres with transparent pricing, offering co-branded protective equipment, or developing contracts with picker groups under Pakistan's emerging Extended Producer Responsibility (EPR) framework could stabilise incomes while advancing corporate sustainability commitments (WWF Pakistan, 2023).

The Peshawar case study ultimately shows that waste picking is structurally insecure, with incomes undermined by volatile commodity markets, debt dependency, and exclusion from formal systems. Yet it also highlights actionable opportunities. By supporting cooperative organisation, improving access to credit, scaling successful local practices such as household contracts, and formalising recognition through municipal and private-sector engagement, waste picking could be transformed from precarious survival labour into dignified work. Without such systemic interventions, however, most waste pickers will remain below the living wage threshold, trapped in cycles of debt and vulnerability despite their essential role in sustaining Peshawar's recycling economy.

References

Anker Research Institute. (2025).
Living Wage and Living Income Estimates Database.
https://www.ankerresearchinstitute.org/ari-country-index

Government of Khyber Pakhtunkhwa (2024).
Minimum Wages Notifications – Labour Department KP.
http://labour.kp.gov.pk

Food and Agriculture Organization (FAO). (2024).
Cost and Affordability of Healthy Diets – Pakistan Country Profile.
https://www.fao.org/platform-food-loss-waste/monitoring/healthy-diets/en/

Pakistan Bureau of Statistics (PBS). (2023).
Pakistan Social and Living Standards Measurement (PSLM) Survey 2022–23.
https://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement

World Health Organization (WHO). (2023).
Global Health Expenditure Database – Pakistan.
https://apps.who.int/nha/database

International Labour Organization (ILO) (2020).
Cooperatives and informal workers: Pathways to formalization.
https://www.ilo.org/global/topics/cooperatives/publications/WCMS_747946/lang--en/index.htm

UN-Habitat. (2010).
Solid Waste Management in the World's Cities: Water and Sanitation in the World's Cities 2010.
https://unhabitat.org/solid-waste-management-in-the-worlds-cities

Chikarmane, P. (2016).
Informal Economy Monitoring Study: Waste Pickers in Pune, India. Women in Informal Employment: Globalizing and Organizing (WIEGO).
https://www.wiego.org/publications/waste-pickers-pune-india-informal-economy-monitoring-study

World Bank. (2018).
What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050.
https://openknowledge.worldbank.org/handle/10986/30317

Government of Punjab. (2024).
Minimum rates of wages notification, Punjab 2024–25. **Labour & Human Resource Department.** .
https://pwwb.punjab.gov.pk/minimum_wages

World Salaries Database. (2024).
Average Salaries for Agricultural and Construction Workers in Pakistan.
https://worldsalaries.com/pakistan

WWF Pakistan (2023).
Extended Producer Responsibility (EPR) and plastic waste management initiatives in Pakistan.
https://www.wwfpak.org/our_work/forests/plastics/

Pakistan Social and Living Standards Measurement (PSLM) Survey.
https://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement

World Bank (2023).
South Asia Urban Informal Economy Report (informality & livelihoods).
https://www.worldbank.org/en/region/sar/publication/south-asia-economic-focus

Ouroboros Matrix Typologies of Waste Pickers and Guidance

Table 1: Typology of waste pickers in Pakistan based on formality and organizational structure, illustrating independent, informally organized, and formally organized groups. Sub-categories are included to capture variations in operational scale, coordination, and bargaining strategies within each group, reflecting the diverse socio-economic and institutional contexts of waste collection.

Ouroboros Fair Circularity Living Income Waste Picker Typology Matrix Pakistan and Spectrum				
Category	**Definition**	**Sub-categories / Spectrum**	**Notes**	**Comments**
Independent Waste Pickers	Individuals who collect recyclables on their own, without affiliation to any group or organization.	- Casual/Part-time: Collect occasionally for supplemental income. - Full-time: Rely solely on waste collection for livelihood.	Flexible, work across areas, income highly variable.	
Informally Organized Waste Pickers	Groups of waste pickers who collaborate loosely, often community-based, collaborating to improve efficiency, bargaining, or safety.	- Neighborhood Cooperatives / Family Networks: Families or local groups collaborating for collection, sorting, and selling recyclables. Transfer Station Groups: Collectors working at transfer stations, often organized along ethnic or social lines, appointing an elder as representative for negotiation with authorities, police, or buyers.	Moderate coordination: benefits include shared collective / stronger bargaining	Collects and sorts streets, or dumps. Part-time or full-tim Fixed (street, bin) o
	Structured groups of waste pickers without formal registration, often entrepreneurial	- Door-to-Door waste collection service providers: Operate as small-scale service providers, collecting and sorting waste on the go, often with defined routes.	Structured coordination, efficient and flexible business/service model, yet lack legal recognition.	
Formally Organized Waste Pickers	Waste pickers recognized by municipalities, NGOs, or private companies, typically under cooperative, association, or contract frameworks.	- Registered Cooperatives / Associations: Legally registered entities negotiating contracts or service agreements. - Public-Private Partnership Workers: Employed or contracted by municipalities or private firms.	Stable income, formal recognition, better access to equipment and social protection.	

Ouroboros Consolidated Ventures (OCV) **Pvt Ltd**
formerly **Ouroboros Waste Management (OWM)**
Head Office: 6A, Block L Sir Syed Road, Gulberg 2 Lahore Pakistan
Registered Address: 97 A Model Town, Lahore, Pakistan
SECP Company Registration Number: 112561 (CUI)
Year of Incorporation: 2017
info@ouroboroscv.com, https://ouroborosx.com

Annex A: Ouroboros Matrix Typologies of Waste Pickers

Stages	Stream	Actors/Type of Waste Pickers	Activities
Source	Segregated /Mix	Waste Picker as Collection Service Provider	Collect waste from different sources, separate the saleable components, and sell them to scrap/junk dealers.
Source	Segregated Waste Stream	Barterers	Exchange saleable waste components for goods.
Source	Segregated Waste Stream	Itinerant Buyers	Purchase separated waste from the households and other sources and sell it to middle dealers
Source, streets	Segregated /Mix	Permanent Contracted Waste Picker	Sweep or/and collect waste from different sources, separate the saleable components, and sell them to scrap/junk dealers. Permanent contracted waste-pickers are also identified as sanitation workers[20] and employed or contracted by municipalities or private waste management or recycling companies.
Source, streets	Segregated /Mix	Waste Pickers as Daily Wager	Work as daily wage workers, sweep, collect waste, separate the saleable components, and sell them to dealers.
Source, streets	Segregated /Mix	Contracted/Salaried Waste Pickers as Temporary Worker	Work as temporary workers hired by contractors or the municipality, sweep, collect waste, separate the saleable components, and sell them to dealers.
Streets/ Open Spaces	Mix	Street Waste Picker	Separate the saleable waste components from the waste on streets, alleys, and public spaces and sell them to their group leaders or dealers.
Transfer Points	Mix	Waste Pickers at Transfer Station	Separate the saleable waste components from the waste at transfer points and sell them to their group leaders or dealers.
Landfills	Mix	Landfill Waste Picker	Separate the saleable waste components from the waste at the landfill and sell them to their group leaders or dealers.

DATA COLLECTED FROM THE SURVEY SHOULD BE SEGMENTED BY THE TYPOLOGY OF THE WASTE PICKERS INTERVIEWED

Informal / Formal

Independent / Organized

Independent waste pickers

Description: Waste pickers that are informal and not organized

Examples:
- Waste pickers working independently e.g., in the streets or dumpsite
- Independent collection worker picking up waste from households for a fee

Waste picker or worker _informally_ organized

Description: Waste pickers or informal workers that have no contracts or agreements with the cooperative or organizations that they operate with.

Cooperatives and other organizations may or may not be registered businesses.

Examples:
- Street or dumpsite waste pickers organized in an informal cooperative or similar
- Waste pickers / workers working in an informal junkshop or local aggregator
- Informal entrepreneur with a team picking up waste from households for a fee

Waste picker or worker _formally_ organized

Description: Waste workers that have contracts or agreements with the cooperative they operate with.

Cooperatives and other organizations are generally registered.

Examples:
- Street or dumpsite waste pickers organized in a formal cooperative or similar
- Registered organization hired by council to pick up waste from households or businesses
- Workers of a formal waste bank

The above categories serve as a guidance for the typologies that could be used to when surveying informal waste pickers but the local organizations implementing these cases are free to chose the typology classification that works best in their context.
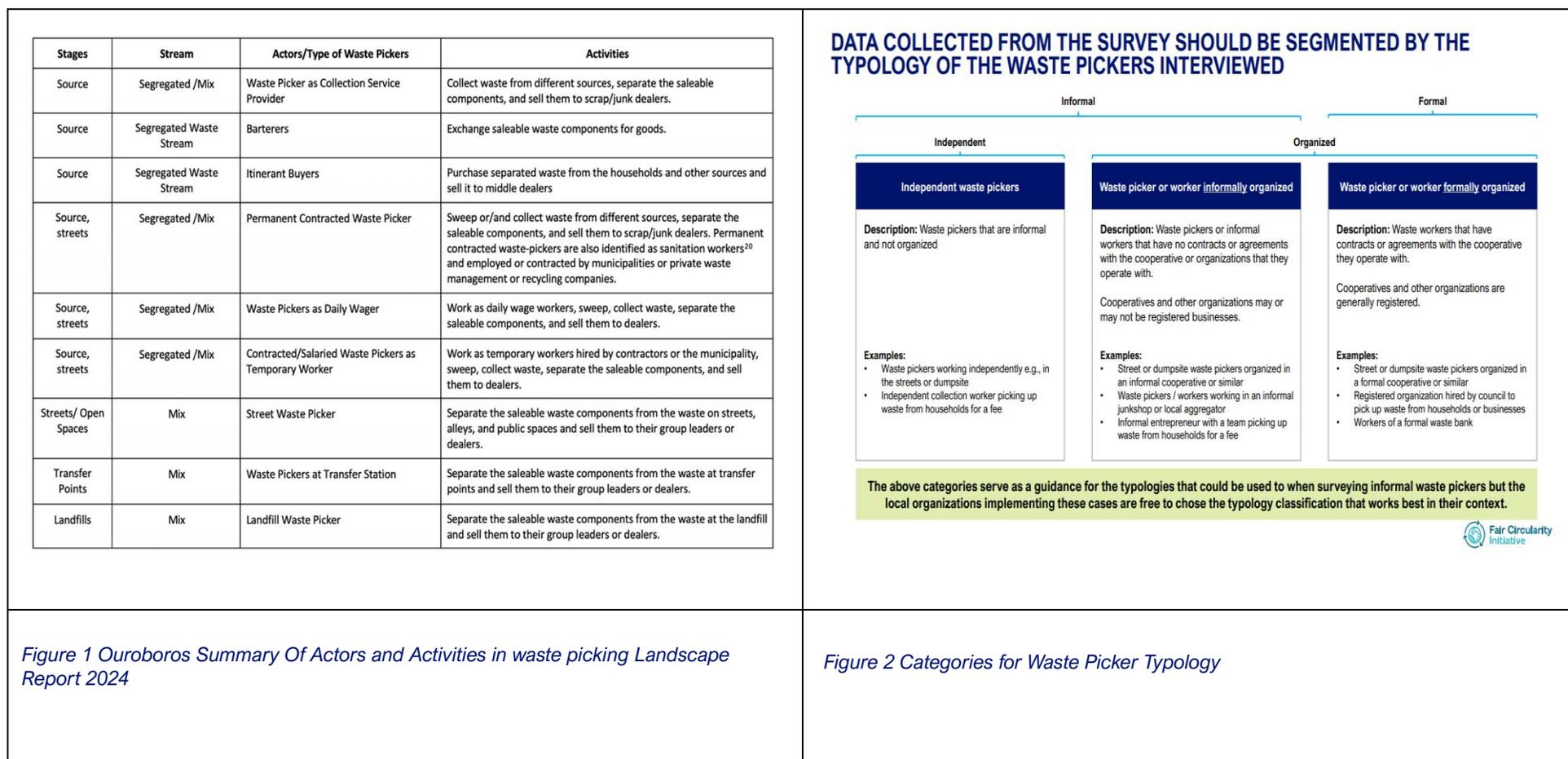
Fair Circularity Initiative

Figure 1 Ouroboros Summary Of Actors and Activities in waste picking Landscape Report 2024

Figure 2 Categories for Waste Picker Typology

Ouroboros (CV)

Consulting & Advisory
Waste Collection & Recovery
Materials Circularity

Where Sustainability Meets Innovation. Powering Endless Cycles