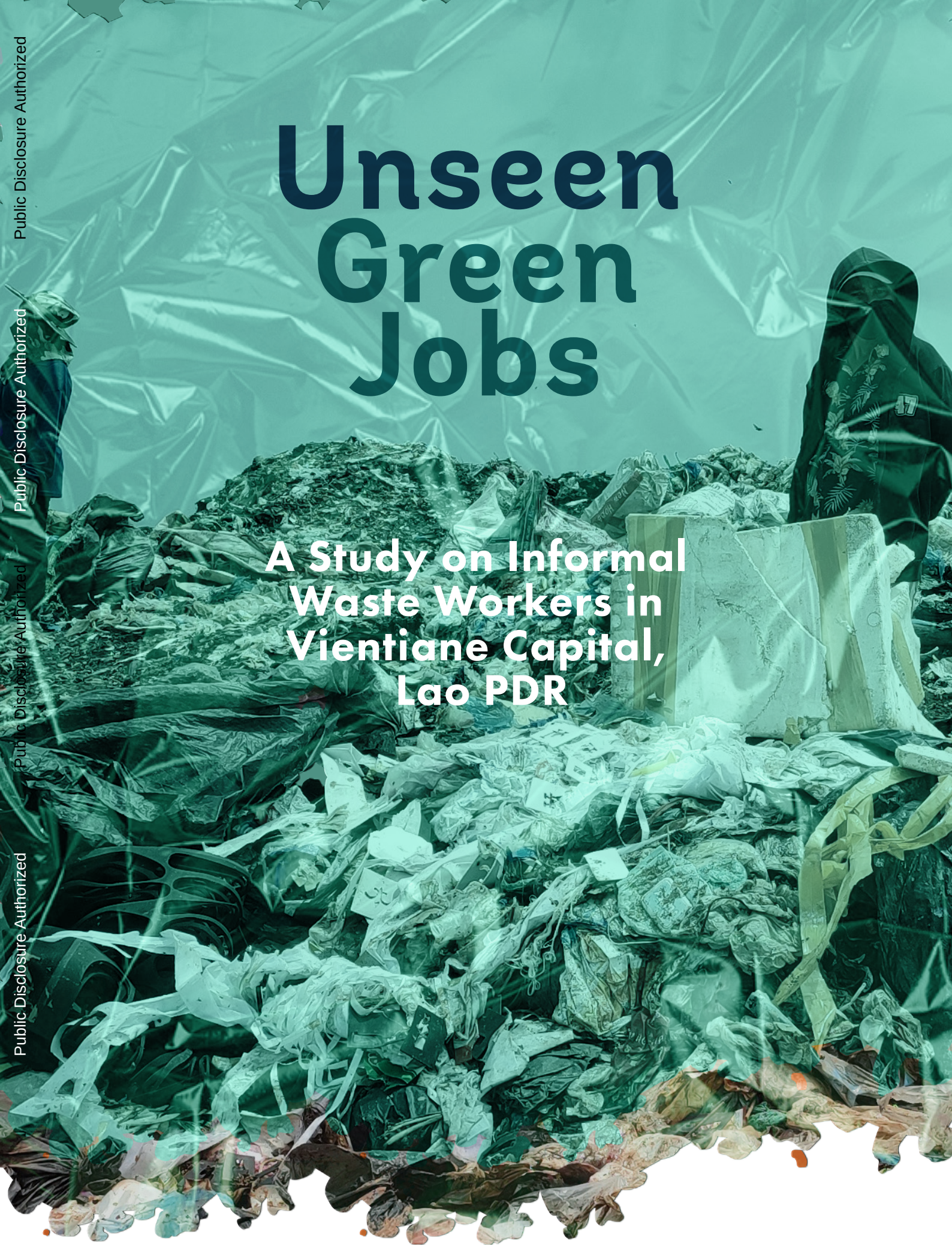
Unseen Green Jobs

A Study on Informal Waste Workers in Vientiane Capital, Lao PDR



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Acknowledgments

This report is the synthesis report of a study on informal waste workers (IWWs) in Vientiane Capital, Laos. *Unseen Green Jobs—Study on Informal Waste Workers (IWWs) in Vientiane Capital, Lao PDR,* is a World Bank Group Advisory Services and Analytics (ASA) study led by Rieko Kubota (*Senior Environmental Engineer*) and Maurice Andres Rawlins *(Senior Environmental Specialist)* of the World Bank. The core team included Kaysone Vongthavilay (Environmental Consultant). The report builds on analytical inputs that were managed by the World Bank, provided by SSAFE Consult, National University of Laos, especially, Vatthanamixay Chansomphou, and Solomon K.M. Huno.

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Abbreviations

3Rs	Reduce, Reuse, and Recycle
DP	Development partner
GGGI	Global Green Growth Institute
ILO	International Labour Organization
IWWs	Informal waste workers
ISWPs	Informal Street Waste pickers
JICA	Japan International Cooperation Agency
Lao PDR	Lao People's Democratic Republic
MOES	Ministry of Education and Sports
MOH	Ministry of Public Health
MOIC	Ministry of Industry and Commerce
MOLSW	The Ministry of Labor and Social Welfare
MONRE	Ministry of Natural Resources and Environment
MPWT	Ministry of Public Works and Transport
PPE	Personal protective equipment
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
VCOMS	Vientiane City Office for Management and Service
WP32s	Waste pickers at KM32 landfill
$	All dollar amounts are US dollars unless otherwise indicated[1]
LAK	Laotian Kip

1 Conversion rates in this report were made at the July 2023 exchange rate of $1 to 19,335 kip.

Definitions

In this study, the term 'informal waste workers (IWWs)' refers to the ecosystem of waste workers whose activities are carried out outside of the legally and formally recognized solid waste management system in Vientiane Capital.[2] The IWW ecosystem consists of individuals or groups of individuals who engage in sorting and collecting of recyclable materials. The study excluded middlemen and waste dealers, large scale aggregators and consolidators, and factory hands or workers who sort and clean recyclable materials at recycling companies.

The IWWs in this study are defined as follows:

Primary Actors	Key Role of Actors in the Recycling Value Chain
Informal street waste pickers (ISWPs)	ISWPs are the front-line actors of the recycling value chain. They collect recyclable materials in relatively small quantities, from households, retail shops, public spaces, institutions, and small businesses that place their waste at designated collection points and sell the materials to junk shops. Currently the population of ISWPs in Vientiane Capital is estimated at about 520.
Waste pickers at the Km32 landfill (WP32s)	At the KM32 landfill[3], waste pickers are stationed to scavenge through waste piles, and take out recyclable materials, and sell to a community waste management center established in the landfill. The population of this category of waste pickers is estimated at about 265 adults.
Waste collectors	Waste collectors are officially employed by waste collection companies and work along waste collection trucks. However, they separate and collect valuable materials from waste bags and bins during their regular collecting rounds to earn additional income (separate from their salary).
Waste truck drivers	Waste truck drivers are officially employed by waste collection companies. However, in addition to their formal work, they informally separate and collect valuable materials from waste bags and bins during their regular collecting rounds to earn additional income from their salary.
Junk shops	The recyclable materials collected by waste pickers and waste dealers are mainly sold to junk shops. The junk shops sell the recyclable materials to materials to exporters or recycling companies (World Bank 2021). In Vientiane Capital, there are many junk shops scattered around the city. Junk shops then sell these materials to material recovery centers and exporters or recycling companies. There are about 116 junk shops in Vientiane Capital.

2 The term 'informal waste workers' (IWWs) is an umbrella term that often covers many more actors within the informal waste sector than the ones considered in this study.

3 KM32 landfill is situated at 32 km away from the city's center. It is the only landfill in Vientiane Capital and is operated by VCOMS. It is currently an open dump without proper lining and leachate treatment facility.

Photo: Rieko Kubota / World Bank

Executive Summary

The contribution of informal waste workers (IWWs) to the green growth agenda in the Lao PDR is understated and unrecognized. This 'unseen' and formally unrecognized group of workers plays a critical role in the enhancement of waste recycling efforts.

They actively reduce the amount of waste dumped in landfills and help to extend the lifetime of landfills while also promoting the circular economy. To some extent, their participation in the waste management sector helps to bridge the gap in inadequate policy guidance, financial investment, infrastructure development, and human resource availability for scaling recyclable waste collection (USEPA 2021). In addition, their collaborative effort supports the livelihoods of a large informal and unregulated sector. It is crucial that steps are taken to develop immediate and mid-term solutions to recognizing the waste picking role as an important contributor to the green economy. Taking these actions will provide more recognition and dignity to the work of IWWs and improve their working conditions.

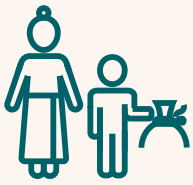
Within the informal waste sector in Laos, there is a hierarchy of roles and opportunities. Some IWWs work on the streets picking recyclable waste from domestic and commercial waste—informal street waste pickers (ISWPs). Others work primarily on the landfill based 32 kilometers from the city center—waste pickers at KM32 landfill (WP32s). In addition, there are waste workers who are formally employed as waste collectors and waste truck drivers but supplement their income by picking recyclable waste during their work. In addition, junk shops are the link between the waste pickers and the recycling market.

ISWPs and WP32s are the most marginalized and financially insecure of the groups, with WP32s facing the hardest challenges. This is because they are positioned at the very end of the waste value chain, where they have no option but to collect more contaminated and lower quality recyclable waste. Table ES.1 shows some of the key facts about ISWPs and WP32s.

Despite their marginalized status, their role is increasingly important in the context of rising levels of solid waste and limited collection services. Over the past decade, Vientiane Capital has recorded a consistent rise in solid waste generation. By 2022, it was estimated that levels of municipal solid waste levels had reached about 144,000 tons per year and an average of 970 tons per day (VCOMS 2022). However, these estimates are not representative. Only around 31 percent of households have access to municipal solid waste collection services in Vientiane and recycling rates remain low (GGG1 2020).

Work and Social Profiles of ISWPs and WP32s in Vientiane Capital

	 Education	 Waste picking as full-time occupation	 Average daily income
ISWPs	**44.7%** elementary school education only	**75%**	**117,500 Kip** ($5.5)
WP32s	**44.7%** elementary school education only	**71%**	**88,00 Kip** ($4.4)

	 Average collection volume	 Bringing children to work	 Previous training received
ISWPs	**43 Kg** per day	**20%**	Less than **10%**
WP32s	**117 Kg** per day	**30%**	Around **50%**

To ensure that IWWs are recognized and supported in their role, reliable data and information is needed. Reliable data specific to waste management improves the ability to respond to social and environmental issues and informs decisions on design and implementation of interventions.[4] In the context of Laos, there have been studies of the waste recycling practices of IWWs. However, none of these studies focused on the working and livelihood conditions of IWWs. This World Bank study was conducted to fill the evidence gap on the working and living conditions of IWWs in Vientiane Capital. This data can be used to support the development of interventions designed to improve the working lives of this particularly vulnerable working group. See Box ES.1 for information on the design of this study.

Box ES.1 Study Design and Methodology

The study set out to profile the working and livelihood conditions of IWWs in Vientiane Capital engaged in waste recycling practices. It focused on collecting primary voices from the IWWs.

Five groups of IWWs were targeted: (1) informal street waste pickers (ISWPs); (2) WP32s—informal waste pickers located 32 kilometers outside Vientiane; (3) waste collectors; (4) waste truck drivers who also engage in informal activities; and (5) junk shops who buy recyclable materials from the other IWWs.

A mixed method was used to collect data including primary and secondary data. This included surveys, focus group interviews with IWWs and relevant officers, and a desk review of peer-reviewed and grey literature. These were supplemented by a series of one-on-one meetings. In August 2023, a stakeholder consultation meeting was organized to validate the study findings and discuss policy recommendations with relevant government agencies, nongovernmental organizations, and academic researchers.

At national level, the responsibilities of solid waste management are divided among a range of different governmental agencies. These include: (1) Ministry of Natural Resources and Environment (MONRE); (2) Ministry of Public Works and Transport (MPWT); (3) Ministry of Industry and Commerce (MOIC); and (4) Ministry of Health (MOH). In Vientiane Capital, the Vientiane City Office for Management and Service (VCOMS) is responsible for overall waste management including landfill management. VCOMS delegates authority for the collection of solid waste in Vientiane and offers annual contracts to the private companies who provide collection services. There is no institution with explicit responsibility for IWWs.

Over the last few decades, the management of solid waste in Vientiane Capital has been improving. There has been a focus on increasing waste collection coverage and collection rates, upgrading transport and disposal mechanisms, and maintaining a waste data inventory (JICA 2021). However, regardless of these improvements, less than half of solid waste generated in Vientiane Capital is collected and disposed of in the KM32 landfill site (VCOMS 2022).

Most waste collection from households in Vientiane Capital happens door-to-door. When households are inaccessible, waste is brought to designated areas for collection. This patchy access to waste collection services, results in households disposing illegally of their waste in rivers and open spaces or burning it in open-air pits. These illegal waste handling practices cause air and water pollution and pose health hazards to the local communities.

4 See: https://blogs.worldbank.org/sustainablecities/power-data-driving-sustainable-development-solid-waste-low-hanging-fruit

IWWs retrieve about 100 kilograms of recyclable materials per day from post-consumer waste. Through their activities, they promote *reverse logistics*[5] of recyclable waste in the waste value chain. This collaborative effort delivers multiple benefits including reducing waste volumes dumped in the city's landfills, and more importantly, supporting the livelihoods of this informal and unregulated sector. Initially, recyclable materials (such as plastics, glass, metals, and cardboard which would otherwise have been disposed of in landfills or leaked into aquatic environments) are extracted from waste by both ISWPs and WP32s. These IWWs then sell these materials to junk shops who sell on to consolidators and recycling facilities. The junk shops increase the value of the recyclable materials by cleaning and sorting them and then sell them at a higher rate to aggregators, materials exporters, or recycling factories.

Most IWWs are aged between 16 and 65 years and are married with dependents. They engage in informal waste work to earn income to take care of their basic personal and family needs. ISWPs and WP32s are equally male and female, whereas most waste collectors and waste truck drivers are male. IWWs also tend to have only a basic level of formal education, and this contributes to the difficulty they face in finding decent employment within the formal sector. Nearly 20 percent of ISWPs and WP32s had received no education at all. Just under 45 percent of ISWPs and under 60 percent of WP32s had only received primary level education. In addition, literacy rates were low with approximately 30 percent of waste pickers being unable to read and write Laos.

Waste picking work is flexible, and this is a major attraction for people who engage in informal waste picking work. The findings suggest that although some ISWPs and WP32s work most days, some only work for a few days a month. This is different from waste collectors and truck drivers who work full time with just a few days off a month.

Two thirds of ISWPs and WP32s stated that most of their income came from recyclable waste picking and that waste picking was their full-time occupation. The remaining waste pickers earned most of their income from other occupations such as labor, vendors, waste collectors at different companies, car mechanics, drivers, private business owners, makers of handicrafts, students, and security guards. Twenty five percent of WP32s who were not working full time as waste pickers, worked as farmers.

The low-income status of IWWs in Vientiane Capital is a continual challenge. They face limited access to high value waste and collection sites, competition among other waste pickers, and emergency household expenditures keep them in a vicious cycle of indebtedness. The study revealed that the income of IWWs in Vientiane is dependent on multiple factors including the amount of recyclable materials they can trade in a month and supplementary incomes earned from multiple jobs. The total income earning of IWWs in a month ranged between 30 000 LAK ($1.55) to as high as 7.5 million LAK ($388). The average total income earnings for IWWs across the four groups were between 2.5 million LAK and 3.3 million LAK per month ($129 — $388).[6]

Meanwhile, the monthly expenses of IWWs far exceeded their average monthly income. The average monthly expenses of IWWs were between 110 000 LAK ($56.9) and 12 million LAK ($620) meaning that IWWs were dependent on additional sources of income to meet their household expenses. IWWs also were mostly unable to save with 80 percent of IWWs not having the savings to meet emergency needs or to spend on assets such as vehicles and carts for their business. There may be fluctuations of income values in a month because of unstable non-guaranteed constant access to same amount of high-value recyclable materials.

5 *Reverse logistics* implements a sustainable approach to waste management through recycling and reusing waste reducing the pressure on natural resources and landfills.

6 Conversion was made at the exchange rate of US$ equivalent to LAK 19,335 as of August 2023

In addition to financial challenges, IWWs do not have access to basic rights and privileges enshrined in the Labor law of the country. The Lao Labor Law (amended in 2013) defines the principles, regulations, and measures on administration, monitoring, labor skills development, recruitment, and labor protection to enhance the quality and productivity of work in society. It is the Ministry of Labor and Social Welfare (MOLSW) that is responsible for enforcing the Labor Law. However, informal workers (including IWWs) are legally outside of the formal protection of the law.

Without legal recognition, IWWs are unable to access formal social protection safety net schemes, proper support systems for health and safety, health insurance schemes, financial institutions, micro-credit schemes, and capital schemes to enhance their livelihood outcomes. Also, among other challenges they face, IWWs occupy the base of the informal waste recycling hierarchy and as such have limited bargaining power and control over the price and market settings of their services. This exposes them disproportionately to market shocks and other risks such as unjust price settings. These multifaceted challenges, sometimes systemic in nature, undermine the security of their livelihoods and increases their vulnerability to poverty, health, social, and economic risks.

A further challenge IWWs face is the constant risk of injury at work. Most IWWs are at risk of injury from handling sharp objects, contaminated materials, and car accidents. ISWPs are the most at risk from these work-based hazards yet receive the least amount of occupational health training, and do not receive nongovernmental organization support with personal protective equipment (PPE). WP32s are in a better position as many do have PPE available such as gloves and boots.

PPE is less effective without the training provided on how to use it. Yet, about 90 percent of surveyed ISWPs had neither received any sort of training related to their work nor had access to training opportunities. Fifty percent of WP32s suggested that they had received some form of training on safety and PPE use. Further discussions revealed that the waste collectors and truck drivers who had been trained received training from private sector and public sector entities. The training was mostly focused on waste sorting, hygiene, and the use of protective equipment during waste collection. The lack of training opportunities for many ISWPs means that they may not have access to skill development programs that could enhance their waste collection techniques, recycling knowledge, business skills, and overall efficiency.

The children of IWWs are also vulnerable and it is common for the children of IWWs to be involved in waste picking. Nearly 30 percent of ISWPs and WP32s engage their children younger than 14 years old in waste picking. While most of the children of IWWs stay at home, 30 percent of ISWPs and WP32s who are parents stated that this was because they had no caretakers for their children at home and had no choice but to bring their children to work. This was especially the case during school holidays. In addition, enrolment rates at school were varied. According to the WP32s, only about 57 percent of them who had children indicated that their children were enrolled in school and receiving formal education. This exacerbates the childcare challenges faced by IWWs and increases the risk of children being involved in waste picking. The status of children of waste collectors and truck drivers differed from ISWPs and WP32. Between 76 and 89 percent of waste collectors and truck drivers with children confirmed that their children were enrolled in formal education.

However, most IWWs were keen for their children not to become waste pickers. When asked about their vision for their children's future, 90 percent did not want their children to work as waste workers in the future. By contrast, a small fraction (less than 10 percent) of respondents wanted their children to work as waste pickers, waste collectors, and truck drivers because they felt they could earn good income.

It is crucial that support measures for IWWs recognize and support the contributions of informal waste workers in the waste management system of Vientiane Capital. National and local government agencies and other stakeholders can help to create a more inclusive and environmentally friendly waste management system that provides equitable and safe operating space for marginalized actors like IWWs to contribute to resource recovery from waste streams. Policies developed should include measures to provide training and equipment, improve working conditions, and ensure access to welfare, health care, and safety protections.

Based on the results of the survey, two sets of priorities and related actions were developed to guide: (2) the future Lao Pollution and Waste Management Project; and (2) the Lao government and stakeholders involved in the formal waste sector. These priorities and actions were structured using the InteRa framework devised Velis et al (2012). This framework demands that policy on IWWs is structured around four strategic areas: (1) solid waste management; (2) materials and value chain; (3) socioeconomic conditions; and (4) organization and empowerment. For more information, see The InteRa Framework.

Priorities, actions, and intended target groups are listed below. Actions have been rated: **High**; **Medium**; and **Low**.

Lao Pollution and Waste Management Project

	Priority 1 — Establish government consensus on managing IWWs as part of national and local waste management systems *(solid waste management)*		
1	Conduct consultations among government agencies and stakeholders.	**HIGH**	WP32s
2	Conduct regular surveys.	**MEDIUM**	WP32s
3	Integrate strategy for waste pickers in government policy documents.	**HIGH**	WP32s
	Priority 2 — Support measures to increase income for waste pickers from waste value chains *(materials and value chain)*		
4	Promote source separation.	**MEDIUM**	WP32s
5	Provide training for IWWs, waste aggregators, and junk shops on developing equitable agreements for the sale of recyclables.	**HIGH**	WP32s
6	Develop simple templates for contracts between buyers and sellers (IWWs) of recyclables.	**MEDIUM**	WP32s
	Priority 3 — Improve working conditions of IWWs *(socioeconomic conditions)*		
7	Provide regular training on health and safety practices in waste picking, hazardous waste handling, collection, and transport, managing injuries.	**HIGH**	WP32s
8	Provide access to protective gear (such as PPE).	**HIGH**	WP32s

	Priority 4 — Improve organization of IWWs *(organization and empowerment)*		
9	Assess options for registering IWWs and connecting the registration to the provision of basic health care.	**MEDIUM**	WP32s
	Priority 5 — Raise awareness on the valuable contribution of IWWs in waste management *(organization and empowerment)*		
10	Conduct community outreach programs to educate people about the role of IWWs, their contribution to waste management.	**MEDIUM**	WP32s
11	Implement social media campaigns can help reach a broader audience and create awareness about IWWs' issues.	**MEDIUM**	WP32s

Government and Stakeholders

	Priority 1 — Continuous dialogue between government and IWWs in potential integration of IWWs as part of formal waste management systems *(solid waste management)*		
1	Conduct consultations among IWWs, government agencies, and stakeholders to develop a high-level strategy for waste pickers.	**HIGH**	ISWPs and WP32s
2	Conduct regular surveys to monitor changes of IWW's demographics and develop and maintain database of waste pickers.	**MEDIUM**	ISWPs and WP32s
	Priority 2 — Support measures to increase income for waste pickers from waste value chains *(materials and value chain)*		
3	Develop collection points for recyclable waste that IWWs can access, in villages that do not have waste collection services.	**MEDIUM**	ISWPs
4	Develop system for real-time sharing of information on recyclable prices using SMS broadcasting, social media, or digital platforms.	**HIGH**	ISWPs
	Priority 3 — Support capacity building on financial literacy and skills development for alternative livelihoods *(socioeconomic conditions)*		
5	Provide training for IWWs on basic financial literacy and management.	**LOW**	ISWPs and WP32s
6	Provide training for skills-building for engaging in alternative livelihoods.	**MEDIUM**	ISWPs and WP32s
	Priority 4 — Strengthen regulations and develop incentives to prevent children engaging in waste picking *(socioeconomic conditions)*		
7	Conduct comprehensive social needs assessment to help identify the range of solutions (regulations and incentives) needed to prevent children engaging in waste picking.	**MEDIUM**	ISWPs and WP32s
	Priority 5 — improve organization of IWWs *(organization and empowerment)*		
8	Assess feasibility of IWW community-based organizations or cooperatives for strengthening coordination, cooperation, information-sharing among IWWs.	**LOW**	ISWPs and WP32s

1. Introduction

Background and Context

Municipal solid waste management is an increasingly important priority in Vientiane Capital, Lao PDR's Capital City. With a population of about 969,000 people Vientiane Capital is divided into nine districts (Lao Statistics Bureau 2021). The economic growth and urbanization of Vientiane Capital are rapidly changing its traditional consumption characteristics, spurring significant changes in the amount and composition of municipal waste. As economic development progresses and consumption patterns change, waste generated from households, communities, institutions, and public areas has significantly increased. To ensure clean and sanitary living conditions and to create ecologically safe and livable cities nationwide, it is imperative to expand and enhance the delivery of municipal solid waste management services.

In line with the Vision 2030 and the Ten-year Socio-Economic Development Strategy (2016-2025), Laos aims to achieve upper-middle income status by 2025 through green and sustainable economic growth. Despite the gradual nature of Lao's post-COVID economic recovery, significant impacts have been observed across major sectors, leading to distributional challenges for household incomes and living standards. However, the Lao government is committed to a long-term green growth vision, focusing on investment and policy actions to leverage natural capital sustainably and mitigate environmental degradation costs. This strategy aims to drive economic diversification, enhance export capabilities, and elevate value chains while ensuring socio-economic progress and environmental preservation. The transition towards green growth prioritizes inclusive and equitable economic development without compromising environmental integrity, necessitating reliable advisory services to sustain momentum.

Municipal solid waste management practices in Vientiane Capital are rapidly evolving, and various actors and stakeholders are providing key support to improve service coverage in collection, transportation, and disposal. Waste recycling in Vientiane Capital has long been a market-based initiative and does not have systematic waste recycling and recovery system in place. Outcome 4 of the 9th National Social and Economic Development Plan aimed at enhancing environmental protection and reducing the risk of disaster promotes a circular economy to decrease dependence on natural resources and reduce waste amounts (Government of Lao 2023). It also includes targets and priority actions for waste management. With the government strategy to promote a circular economy in place, in recent years there have been initiatives such as source segregation, community-based recycling, and introduction of new waste management technologies.

A key group of actors driving waste recovery in Vientiane Capital is the informal waste workers (IWWs). The work of IWWs reduces the amount of waste that ends up in landfills and this helps to extend the lifetime of landfills and promotes a circular economy. In addition, the role of IWWs activities is evident in their contribution to filling the limited financial investment, infrastructure, and human resource gaps that local governments face in operating waste management (USEPA 2021).

However, legislation and policies provide little to no recognition and social welfare for IWWs, despite their important contribution to a safe environment, society, and economy. IWWs face marginalization and threats to their livelihoods and health because informal waste work is largely done outside of the formal waste management system. IWWs are often subjected to non-standard work arrangements and low pay, without social safety nets, and are excluded from formal decision-making processes. In addition, IWWs are associated with low social status, without well-organized labor fronts. These complicated and multifaceted challenges, which are sometimes systemic in nature, undermine their livelihoods and increase their vulnerability to poverty. For more information on informality at work, see Box 1.1.

Box 1.1 What is Informality?

Within the general context of labor and work, the depiction of the informal economy and labor has garnered extensive deliberations among experts, academics, and policy makers leading to definitions that vary depending on the approach. Despite the diversity of opinions on informality, there are common key elements in the characterization of the informal economy that are embodied in the diverse viewpoints.

Building on the works of Hart (1973) where 'informal' primarily depicted unemployed and underemployed income migrant earners from rural and urban Northern Ghana, various studies have since expanded and included defining parameters in a framework that separate the informal economy from the formal economy. However, the interpretations may vary for different economic or labor units. In recent literature, the elements of informal employment, which considers jobs as entry points to formality or informality, underscores the absence of social security contributions of employees such as paid annual leave and sick leave (ILO 2019).

In Lao PDR, formality means working under conditions that afford the employee or person full access to complete rights and benefits with comprehensive and adequate protection (in law and in practice) under the full provisions of the government under the Labor Law (Amended). No.43/NA, 2013. Informal work can take the form of self-employment in informal enterprises.

Within the context of this study, the informality of the jobs of IWWs is defined by their occupation as recyclable waste material picking on the streets, at the landfill, or during waste collection by waste collectors of waste truck drivers. These activities, whether carried out as a part-time or full-time engagement, self-employment (as in the case of ISWPs or WP32s), or outside formal employment boundaries, can be considered as informal work. In Vientiane Capital, the IWWs who lend vital support to the waste management and recycling industry work under harsh conditions that do not afford them the basic labor protection, social security, insurance, and health insurance. Their ecosystem is characterized as low- to medium-skilled individuals, with limited access to finance and social safety nets compared to formal sector workers.

During COVID-19, the number of IWWs in Vientiane Capital increased due to increased unemployment in other sectors. As a result, competition has risen in the informal waste work landscape. It is also expected that the numbers of unemployed, semi-employed, and employed low-skilled individuals participating in the informal waste sector will increase. Therefore, there is a growing need to formally recognize their role in waste management and potentially provide them with feasible and practical support systems to function synergistically within the city's waste management system.

The Vientiane Capital government has articulated the desire to improve the working conditions of IWWs but lacks the comprehensive data and understanding of IWWs. Owing to the informal nature of IWWs, reliable statistics and information about their work and livelihoods are still limited. Some data have been collected by the Vientiane Capital government, but these have not included comprehensive data collection on IWW livelihoods. Overall, there is no comprehensive set of information on IWWs in Vientiane Capital.

Study Objectives

This study was conducted by the World Bank to support the Lao government develop a more comprehensive information-base and understanding of IWWs in Vientiane Capital. The primary objective of the study was to assess and analyze the working and livelihood conditions and waste recycling practices of the IWWs ecosystems in Vientiane Capital. The study was designed to enhance understanding of IWWs' ecosystem, livelihoods, working conditions, and recycling practices in Vientiane Capital. Supported by the World Bank, it provides relevant findings and recommendations for the Lao government to develop evidence-based policies and investment in municipal solid waste management and social protection for IWWs.

The study focused on IWWs in Vientiane Capital, the capital city of Laos. Five categories of IWWs were researched: (1) Informal Street Waste Pickers (ISWPs); informal waste pickers working at the KM32 landfill site (WP32s); (3) waste collectors; (4) waste truck drivers; and (5) junk shops. See Definitions for more information. Although they are formally employed with a legally registered private waste collection company, waste collectors and waste truck drivers were included because they also participate in informal picking or collection and sales of recyclable materials in the course of their work. In addition, junk shops were included as key stakeholders who have coordinated relationships with IWWs. Consultations were conducted with relevant stakeholders including government agencies, civil society organizations, nongovernmental organizations, and academic researchers.

In the context of this study, the term IWWs refers to the ecosystem of waste workers whose activities are carried out outside of the legally and formally recognized domain of the prevailing waste management set up of Vientiane Capital. The term can be used to include many more actors within the informal waste sector. However, for the purpose of this study, the IWW ecosystem consisted of individuals or who engage in recyclable materials picking and collection. The study excluded middlemen and dealers such as large-scale aggregators and consolidators, factory hands or workers who sort and clean recyclable materials at recycling companies.

Methodology

A mixed data collection approach was used to collect, analyze, and present relevant primary and secondary data and information on the living and working conditions of IWWs in Vientiane Capital. In addition to the available knowledge of the World Bank specialists and authors who helped in the design of the study, an initial scoping exercise and consultation meeting with key stakeholders was carried out to invite comments and inputs in the development of the study design. The study employed a combination of multi-step data gathering techniques, including a desk review, survey and focus group discussions, and expert interviews.

A desk review was conducted to ensure that the work built on the foundations already laid by peer-reviewed and grey literature. The aim was to understand the existing information on the status of solid waste management in Vientiane Capital, the status of the IWWs' livelihood in Vientiane Capital, and the legal framework and regulations relating to the job creation and social security of Laos. In addition, studies on international practices relating to IWWs were also reviewed taking into consideration the relevant context of solid waste management in developing countries.

In total, about 693 interviewees and data points were secured from the survey: (1) ISWPs (226); (2) WP32s (218); (3) junk shops (116); (4) waste collectors (86); and (5) waste truck drivers (47). The field survey was conducted during February, March, April, and May 2023 in Vientiane Capital. Survey questionnaires and interviews were administered face to face.

The key findings of questionnaire surveys were presented to the relevant stakeholders in Vientiane Capital, Laos, as part of the stakeholder's consultation meeting on August 15, 2023. The consultation meeting involved about 50 attendees from various sectors. The survey results were validated and refined with additional inputs and insights provided by the attendees.

Report Structure

This report is divided into four sections.

Section 1 provides an introduction and contextual background to the study. It presents the objectives, the scope, methodologies, boundary, and the limitations of the study.

Section 2 presents a summary of the relevant legal and policy frameworks on IWWs activities, the waste management structures and actors involved in Vientiane Capital's solid waste management services, and a description of the waste recycling value chain.

Section 3 gives an overview of the survey results organized to provide an understanding of the general status of the livelihoods of Vientiane Capital's IWWs. The first section includes the key data as graphs. This is followed by a broader discussion of the findings.

Section 4 proposes the key priorities and actions systematically developed through InteRa framework.[7]

Additional information and more supplementary results, data, and validation are available in the **Annexes.**

7 The recommendations are organized following the structure of the InteRa framework developed by Velis et al (2012). This framework seeks to address the challenges faced by the solid waste management sector in developing countries by using a comprehensive assessment tool to evaluate the integration of informal waste collectors into formal waste management systems. Though there is no current movement to formalize informal waste collectors into the formal waste system in Laos, the authors recognize the InteRa framework to be useful tool to develop policy recommendations to support informal waste pickers.

2. Waste Management in Vientiane Capital

National Legal and Institutional Framework for Waste Management

At national level, the responsibilities of solid waste management are divided among a range of different governmental agencies. These key agencies include: (1) the Ministry of Natural Resources and Environment (MONRE)—responsible for establishing the regulatory framework, developing strategies, policies and guidelines relating to waste and environmental management; (2) the Ministry of Public Works and Transport (MPWT)—finances and advises on planning, design, management and operation of solid waste infrastructure (that is landfills); (3) the Ministry of Industry and Commerce (MOIC)—manages industrial and hazardous wastes, develops regulations, issues permits for waste processing businesses, and controls imports and exports of hazardous waste; and (4) the Ministry of Health (MOH)—responsible for medical waste management. At local level, the Vientiane Capital City Office for Management and Service (VCOMS) is responsible for overall waste management, including waste collection, transfer, and final treatment at the city's landfill.

There is no institution with explicit responsibility for IWWs. Due to the informality of IWWs they are outside the formal legal and institutional system for waste management in Laos. Laos is yet to have waste management legislation that serves as umbrella legal framework on solid waste management. In addition, current legislation on labor, social welfare and social protection does not clearly articulate the support system for informal workers including IWWs. Despite this, VCOMS is developing a regulation for the management of municipal solid waste that will: (1) recognize IWWs as part of the local solid waste system; (2) channel support to IWWs for protection gears; (3) set up a registration system for IWWs; and (4) provide financial support to the IWWs at the KM32 landfill. [8]

IWWs are outside of formal labor protection and social welfare system in Laos. Lao Labor law states in Article 5 that working activities should be covered by an employment contract between an employee and employer (see Table 2.2). However, IWWs usually work as self-employees without an employment contract with anyone. The advantages of this for the IWWs is flexible working days and hours but this comes at the cost of no guarantee of income and no social protection. IWWs are paid according to the market price of the recyclable materials multiplied by the collected volume. In addition, as IWWs work outside of an employee-employer relationship, their income is not secured by the minimum wage defined by the Labor law. This marginalization from the national law protection endangers the basic human rights for IWWs, their family members, and their children.

8 Draft Decision of the Vientiane Capital Mayor on the municipal solid waste management in Vientiane Capital which is currently in development by VCOMS.

The two tables below provide more information on the roles of the institutions and the relevant legislation related to solid waste management. Table 2.1 presents a summary of the roles and responsibilities of different institutions involved in solid waste management. Table 2.2 lists the relevant laws and regulations related to green jobs, welfare, IWWs, and the informal waste sector.

Table 2.1 Summary of Roles and Responsibilities of Institutions Involved in Solid Waste Management

Institution/Agency	Relevant Role and Responsibility
Ministry of Natural Resources and Environment (MONRE)	MONRE develops strategies, policies and guidelines on pollution and waste. The ministry is developing regulations and strategies incorporating the Reduce, Reuse, Recycle (3Rs) principle into solid waste management. Its responsibility is to regulate the use of toxic chemicals, hazardous materials, and hazardous waste as well as other types of waste. Although the ministry formulated the Ministerial Instruction on Hazardous Waste Management (2015), the responsibility for managing hazardous waste belongs to the Ministry of Industry and Commerce (MOIC).
Ministry of Public Works and Transport (MPWT)	MPWT manages, improves, and maintains infrastructure in urban and non-urban areas. The ministry is responsible for constructing all infrastructure relating to solid waste management and wastewater treatment. MPWT also promotes and supports urban waste management by providing technical guidance and advice for the installation of waste disposal facilities such as landfills, incinerators, and transfer stations.
Ministry of Industry and Commerce (MOIC)	MOIC manages the disposal of hazardous waste produced by the industrial sector, especially the discharge of wastewater and waste that may affect citizens' health. The ministry takes responsibility for industrial and hazardous wastes by developing regulations to manage them. MOIC also has the role of issuing permits for plastic production or waste-recycling businesses such as: (1) manufacturers who produce, use, and import and export plastics; (2) plastic recycling factories; and (3) waste recovery centers.
Ministry of Public Health (MOH)	MOH regulates the handling of medical waste, including its collection, storage, and the disposal of medical waste produced at healthcare facilities. According to the decision of the ministry, waste generated in health care facilities needs to be separated into three fractions: (1) infectious; (2) sharp and general waste; and (3) having to be handled separately.

Institution/Agency	Relevant Role and Responsibility
Ministry of Labor and Social Welfare (MOLSW)	MOLSW is responsible for formulating and implementing policies related to labor and social welfare in the country. The key role of the ministry includes: (1) overseeing the administration of labor laws and regulations, including employment conditions, industrial relations, and occupational safety and health; (2) promoting employment opportunities for the people of Laos, particularly for youth and women; (3) providing social welfare services to the people of Laos, including support for vulnerable groups such as the elderly, people with disabilities and victims of natural disasters; (4) developing the skills of the workforce in Laos through vocational training programs and upgrading of skills for workers in various sectors; and (5) collaborating with international organizations and other countries to promote labor rights and social welfare in Laos.
Vientiane City Office for Management and Service (VCOMS)	VCOMS is responsible for managing municipal solid waste in the whole area of Vientiane Capital. The organization was set up in 2013 to replace the Vientiane Urban Development and Administration Authority. VCOMS is responsible for a wide range of functions, including urban administration, waste management, environmental protection and maintenance of public services such as public areas, parks, and recreation facilities. Its aim is to ensure that the city is well-organized, clean, and well-maintained. Currently, VCOMS authorizes private companies to fully provide waste collection services in Vientiane Capital.

Table 2.2 Laws and Regulations Related to Green Job, Welfare, and Informal Sector

Laws and Regulations	Relevant Section Articles
Labor Law (Amended). No.43/NA, 2013	The Labor Law of Lao PDR defines the principles, regulations and measures on administration, monitoring, labor skills development, recruitment, and labor protection to enhance the quality and productivity of work in society. The articles relating to job creation include: › **Article 4 Policy on labor:** The State focuses on promotion of employment for the poor, disadvantaged, disabled, unemployed and for those with social problems, to ensure they receive labor skills development and have access to recruitment services in order to find employment, earn an income and receive fair treatment, with the aim of overcoming poverty. › **Article 5 Principle of labor affairs:** Labor-related affairs shall operate based on an employment contract between the employee and the employer, ensuring both parties benefit without discrimination. The affairs shall ensure that working conditions are safe, with salary or wages paid in full and all responsibilities in regard to social insurance implemented for the employee.

Laws and Regulations	Relevant Section Articles
Labor Law (Amended). No.43/NA, 2013	› **Article 29 Recruitment:** Recruitment is the creation of conditions of employment or career development and having the option to work in accordance with the demand of the labor market. › **Article 32 Creation of employment opportunities:** Creation of employment opportunities is intended to provide employment for employees locally, with the aim of addressing unemployment, the migration of urban labor from rural areas to cities, and illegal trans-border labor. It aims to create conditions providing choice, revenue and poverty reduction for employees. › **Article 51 Hours of work:** Normal hours of work in every labor unit will be no more than six days per week and eight hours per day or no more than forty-eight hours per week, regardless of the type of salary or wage. › **Article 61 Night work:** Night is defined as the hours between 22:00 and 06:00. Employees working at night have the right to at least eleven hours rest before beginning work on a new day. In cases where a night worker is unable to work at night due to health reasons, and possesses a medical certificate, the employer may temporarily move the employee to a more suitable shift with a suitable salary or wage. › **Article 96 Gender equality in the workplace:** Female employees have the right to employment and professions in every sector that do not conflict with the law, including production, business and management, and may participate in training, labor skills improvement and providing expertise. Female employees shall receive a salary or wages equal to that of male employees, excepting some forms of work that have negative effects upon the reproductive health of women, which must be protected in every case. › **Article 105 Minimum wage:** Minimum wage is the level of salary or wages which the government announces each period to ensure a basic livelihood. › **Article 117 Labor occupational safety and health:** Labor occupational health and safety is a joint activity between the employer and the employee in the assurance of occupational safety and health in the workplace, including risk assessment of the work environment, appropriate measures for reducing hazards and risks, methods for protecting against workplace accidents, protection against injury and occupational diseases and the gradual creation of a culture of safety at the workplace at all times. › **Article 128 Treatment of the victims of labor accidents and occupational diseases:** If an employee is injured as a result of a labor accident or occupational disease, the employer or social insurance implementation agency must take responsibility for the cost of treatment as determined in the Law on Social Security.

Laws and Regulations	Relevant Section Articles
Law on Social Security. No. 34/NA, 2013	Law on Social Security defines the principles, rules, and provisions for the organization, implementation, management, and inspection of the social security with a view to systematically strengthen the effectiveness of protecting the rights and interests of employers and employees by paying contributions and providing social security benefits to ensure basic livelihoods, social solidarity and contribute to the socio-economic development of the nation. The relevant articles include: › **Article 2 Social security:** Social Security is a set of benefits guaranteed to ensure persons provided by the National Social Security Fund in case of health care, maternity or miscarriage, employment injury, occupational diseases, invalidity, sickness, pension, death, survivor's benefit and unemployment. › **Article 4 State policy on social security:** The state encourages and promotes the development of social security in line with national economic growth and government, employers, employees, self-employed persons and voluntary insured persons shall contribute to the national social security fund in order to ensure the affordability of social security benefits managed by the state. All social security benefits shall be exempted from tax. The state encourages individual, juristic entities, national and international organizations to contribute financial and technical support for the development of social security. › **Article 10 Target group of social security benefits:** Civil servants, military or police officers and employees in labor units are entitled to all types of benefits. Self-employed persons and voluntary insured persons are entitled to benefits such as: medical care, maternity or miscarriage, pension, sickness, death or invalidity. Dependent spouses and children of insured persons are entitled to medical care, death grant and survivor's benefits. Dependent parents of insured persons are entitled to survivor's benefits. › **Article 13 Health care service:** An insured person and his/her dependents are entitled to health care services at health care facilities as prescribed in the Curative Law. Treatments abroad where necessary for medical reasons, and treatments for chronic diseases shall be prescribed with specific regulation.

Laws and Regulations	Relevant Section Articles
Law on National Hygiene Health Care and Protection. (MOH 2001)	The Law on National Hygiene, Healthcare and Protection (2001) determines the principles, regulations and measures relating to the organization of activities on hygiene, disease prevention and health promotion to maintain the good health, quality of life and longevity of the people thus contributing to national preservation and development. It refers to community hygiene where every citizen has the obligation to dispose of solid and liquid waste, and to preserve the cleanliness of water sources, water for drinking or use in roads, drains and public places. The relevant Articles include: › **Article 11 Community hygiene:** All persons in a community have the obligation to dispose of solid and liquid waste, and to preserve the cleanliness of water sources, water for drinking or use in roads, drains and public places, in order to avoid the occurrence of disease and ensure orderliness and beauty for their own health and the health of the whole society. › **Article 19 Hygiene in production:** Hygiene in production refers to ensuring conditions and standards in the production of consumption goods to avoid the spread of germs and toxic chemicals which could be hazardous to consumer health, especially in relation to goods for daily consumption, children's toys and cosmetics. To prevent risks to human health and the environment, individuals and organizations who produce the aforementioned consumption goods must adhere to technical production standards, waste disposal management techniques and hygiene principles. It is prohibited to release waste, chemicals, or wastewater from manufacturing facilities, as well as other production sites, into water bodies or elsewhere without it first undergoing treatment.

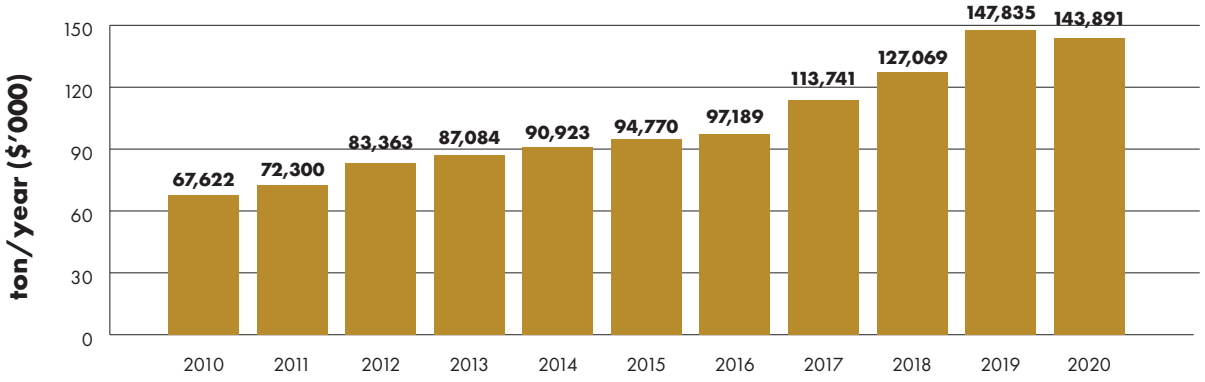
Solid Waste Management in Vientiane Capital

VCOMS directly coordinates with other relevant departments to implement waste management activities. This includes overseeing waste collection services by contracted waste collection companies in Vientiane Capital and day-to-day operation of waste treatment at the KM32 landfill. Presently, municipal waste collection is handled by both VCOMS and outsourced to a state-owned enterprise and 10 private companies. Contracts between the VCOMS and the companies are usually short-term and do not provide incentives to invest in equipment and improve the quality of services (World Bank 2021). Among other responsibilities, VCOMS has the mandate to consider suspending or cancelling the operation of waste management businesses that are found to be non-compliant. VCOMS is responsible for collecting tipping fees and the receipt of commission fee of 50,000 LAK ($2.6) per contract from private waste collection operators. VCOMS also retain the waste fees that are paid through the contract.

Along with the changing socio-economic landscape of Vientiane Capital, a consistent rise in annual solid waste generation has been observed over the past decades. According to estimates, Vientiane Capital produces an average of 970 tons of solid waste per day and is collected from households, commercial entities, and public spaces. The waste is composed of high amounts of organic waste (65 percent), plastics (12 percent), paper and cardboards (8.8 percent) and other materials including glass, cans, textile, metal, and aluminum (GGGI 2022).

The management of solid waste in Vientiane Capital has been improving in recent decades. These improvements in the waste management landscape have been focused on addressing existing challenges relating to ramping up waste collection coverage and collection rate, ensuring proper waste transport and disposal mechanisms, and maintaining waste data inventory (JICA 2021). Nonetheless, less than half of solid waste generated is collected and disposed of in the KM32 landfill (VCOMS 2022). According to official data, in 2022 only about 31 percent of the municipal waste generated in Vientiane Capital was collected and disposed of in the city's landfill.[9] However, the rate of collection and disposal more than doubled between 2010 and 2020. Figure 2.1 shows that 67,622 tons of waste was disposed of in 2010 compared to 143,891 tons in 2020 (VCOMS 2021).

Figure 2.1 Amount of Waste Disposed in KM32 Landfill, 2010-2020



Source: VCOMS 2021

9 The actual volume collected may be higher as multiple households often share one waste collection contract to share the waste collection fee (VCOMS 2022).

Waste collection from households in Vientiane Capital is mostly door-to-door and service provision is variable, especially in the outer city districts. For households that are inaccessible, waste is brought to designated areas for collection. There is currently no legal obligation on waste generators to use the waste collection service and public awareness of appropriate waste disposal remains low in Vientiane Capital. Waste collection contract rates differ by urban districts with 49 percent of inner-city district households having service contracts, and only 14 percent of households in outer city districts having service contracts. Outer city districts have lower population density and are more dispersed, which increases transportation costs, reduces cost-effectiveness, and probably contributes to the lower service coverage by waste operators in the outer districts. Yet, without access to waste collection services, these households are more likely to dispose illegally of their waste in rivers and open spaces or burn it in open-air pits. These illegal waste handling practices cause air and water pollution and pose health hazards to the local communities.

Waste collection mostly happens on weekdays and Saturdays. Official services are operated once a week for households (scheduled on the same day every week) and every day for restaurants and hotels. The frequency of collection for other commercial entities is based on negotiation. Payment is made directly to the operators. The operators work Monday to Saturday, as Sunday is a day off for the drivers and waste collectors (GGGI 2022). Decentralized waste collection services are currently being piloted to increase door-to-door collection rates in inaccessible areas.

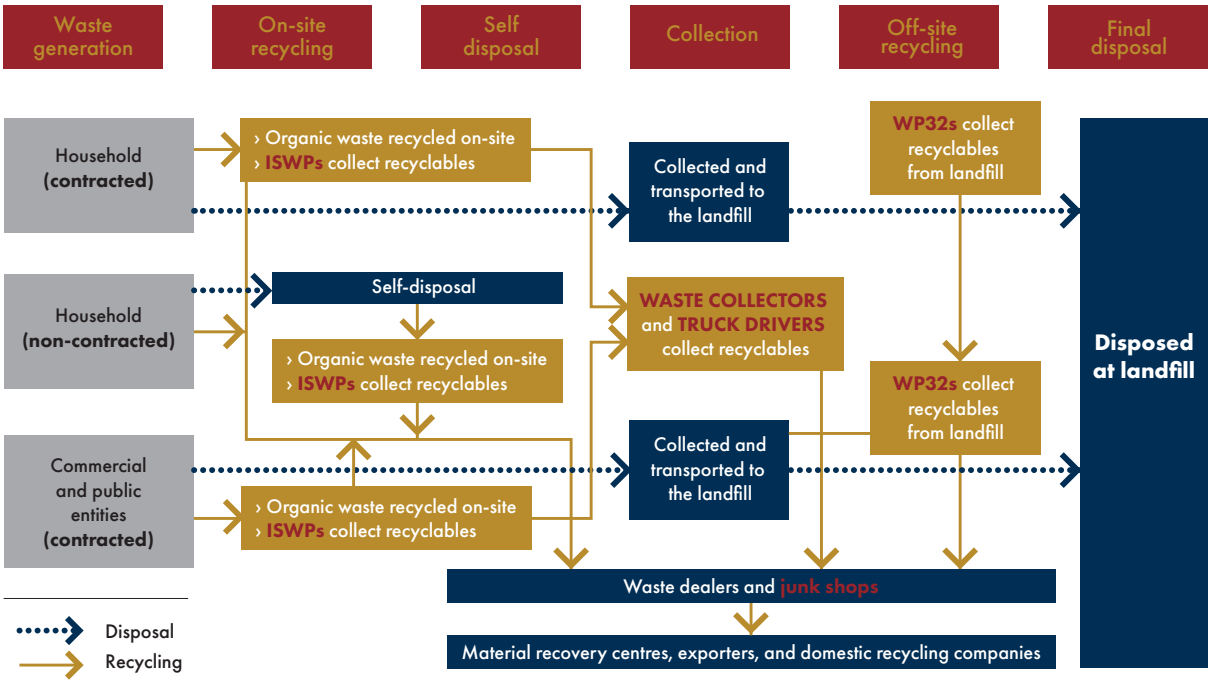
Waste Recycling Value Chain

Solid waste management in Vientiane Capital is undergoing a transition from waste shifting to integrated waste management systems.[10] The aim is to move towards prioritizing the resource recovery from traditional basic waste collection and disposal toward an integrated resource recovery approach that preserves natural resources, helps extend the lifespan of waste infrastructure, and sustains the long-term benefits of heavy investments required to put up waste disposal infrastructures. These changes in waste management will alleviate the growing concerns of the government regarding the increasing amount of waste, and the lack of available land area in the landfill and resources needed to dispose of waste.

Despite the importance of resource recovery in waste management, there is no formal or strong legal enforcement of waste separation in Vientiane Capital. The retrieval and collection of valuable recyclable materials from waste generated by households, commercial areas and institution is mostly carried out by IWWs. They are the vital link in the waste recycling value chain, driving the reverse logistics of valuable recyclable materials from waste for income. ISWPs extract recyclable materials from household mixed waste that is placed at collection points or in front of households. They then sell these materials to junk shops or waste dealers scattered around the city (GGGI 2018). Similarly, waste collectors and waste truck drivers, during waste collection, extract recyclable materials from waste bound for disposal and later sell them to junk shops or waste dealers. At the disposal sites, KM32 landfill, WP32's pick recyclable materials from the waste piles before the residuals are disposed of. Separated recyclable materials are then sold to the material recovery center at the KM32 landfill. Figure 2.2 shows how waste flows in Vientiane Capital (JICA 2021).

10 Waste shifting is a linear approach to management waste where waste is collected from one location and moved to another. An integrated waste management approach is circular and involves reusing, repairing, and recycling waste. See: https://contec.tech/linear-economy-vs-circular-economy-differences-how-to-make-the-change/

Figure 2.2 Waste Flows in Vientiane Capital



Source: Adapted from JICA (2021) and the survey findings.

Waste recycling in Vientiane Capital involves the participation of multiple actors including IWWs who, though upstream in the recycling value chain, are key links to retrieving recycling materials from waste streams. They interact with other actors to transfer recovered valuable recyclable materials along the value chain. In Vientiane Capital, the primary actors involved in the waste value chain are ISWPs, waste truck drivers, waste collectors, waste dealers, landfill waste pickers, junk shops, material recovery centers, material exporters and recycling factories, and government regulatory agencies. A recently introduced informal waste recovery effort in Vientiane Capital is the waste bank that has been set up in some villages and schools. This is part of a waste separation initiative by MONRE and VCOMS supported by the Global Green Growth Institute (GGGI) (see Box 2.1).

WP32s are among the most marginalized of these groups. This is primarily because they are positioned at the very end of the waste value chain, where they have no option but to collect more contaminated and lower quality recyclable waste. This occurs after ISWPs have already extracted the higher quality recyclables. Consequently, this impacts the earnings of WP32s due to the lower buying prices for the materials they collect. While it may seem that WP32s choose to be waste pickers, it is important to recognize that they often have limited occupational choices available in their neighborhoods. Their level of expenditure indicates that the income derived from waste picking is insufficient to cover their household expenses. Their lower levels of education and vocational skills likely contribute to their involvement in informal waste picking. However, it is worth noting that in recent years, WP32s have been the recipients of significantly more training and support from non-profit organizations compared to other IWW groups.

Box 2.1 Waste Recycling Bank

A waste recycling bank is a form of informal waste collection, where individuals and businesses can bring their recyclable materials such as paper, plastics, glass, and metals to be sorted and processed.

In 2018, the Faculty of Environmental Sciences, National University of Laos, established a waste recycle bank. In parallel, in 2019, the Global Green Growth Institute (GGGI) established 10 waste recycle banks to collect glass from students and to build the concept of the Reduce, Reuse, and Recycle (3Rs) with school students (JICA 2021). In addition, GGGI, in collaboration with the Vientiane City Office for Management and Service (VCOMS), are planning to expand introduce a further 100 waste recycle banks at target schools at target schools in Vientiane Capital by 2024 with the aim to collect different types of recyclable materials (GGGI 2022).

Recyclable materials are initially retrieved from waste by IWWs and initiatives such as waste banks. These are then sold to material recovery centers, including junk shops and waste recovery centers. After that, the material recovery centers clean and sort the materials and sell them to other buyers at a higher price.

Table 2.3 Map of Recycling Value Chain Actors and Primary Role describes the roles of some of the actors in the waste value chain in Vientiane Capital.

Table 2.3 Map of Recycling Value Chain Actors and Primary Role

Primary Actors	Key Role of Actors in the Recycling Value Chain
ISWPs	ISWPs are the front-line actors of the recycling value chain. They collect recyclable materials in relatively small quantities, from households, retail shops, public spaces, institutions, and small businesses that place their waste at designated collection points and sell the materials to junk shops. It is estimated there are around 520 IWSPs in Vientiane Capital.
Waste Collectors and Waste Truck Drivers	Waste collectors and waste truck drivers are officially employed by waste collection companies. However, in addition to their formal work, they informally separate and collect valuable materials from waste bags and bins during their regular collecting rounds to earn additional income from their salary.
WP32s—Waste Pickers at the KM32 Landfill Site	At the KM32 landfill, waste pickers are stationed to scavenge through waste piles, and take out recyclable materials, and sell to a community waste management center established at the landfill. The population of this category of waste pickers is estimated at about 265 adults.
Waste Dealers on the Streets of Vientiane Capital	Waste dealers roam the streets of Vientiane Capital in motorized pushcarts and vehicles and proactively collect recyclable materials directly approaching households and small businesses for valuable recyclable materials. Some waste dealers are self-employed, while many of them have a contractual or non-contractual working relationship with junk shops. After collecting the recyclables, they sell off the collected materials to material recovery centers and material exporters, or to recycling companies (Switch Asia 2022).

Primary Actors	Key Role of Actors in the Recycling Value Chain
Junk Shops	The recyclable materials collected by waste pickers and waste dealers are mainly sold to junk shops. Junk shops sell the recyclable materials to materials to exporters or recycling companies (World Bank 2021). In Vientiane Capital, there are many junk shops scattered around the city. Junk shops then sell these materials to material recovery centers and exporters or recycling companies. There are about 116 junk shops in Vientiane.
Material Recovery Centers, Consolidators, and Materials Exporters	In Vientiane, there are a few material recovery centers and materials exporters. There are about 13 material recovery centers in Vientiane Capital who also act as exporters (World Bank 2020). They aggregate recyclable waste by purchasing from junk shops, street waste workers, and waste dealers. After having accumulated an appreciable quantity, the recyclable wastes are pre-processed to add value. The pre-processing operations may vary depending on the final product type and quality to be sold or exported. However, the typical pre-processing operations carried out include cleaning, sorting (into different material streams by quality, color, and grades), shredding, grinding, or compacting into bales (depending on the types of materials). After that, different types of waste are sold to domestic recycling companies or exported to Thailand and Vietnam. One such center is Wongpanit Company which acts as a material recovery center. This company buys recyclable materials from junk shops, waste banks, and collects from designated drop-off points, households, and businesses. After being recovered, the materials are exported to Thailand or to sell to domestic waste recycling companies. Some other material recovery centers sell recovered materials domestically or export to Vietnam and Thailand (Switch Asia 2022 and interview with Wongpanit 2023).
Waste Recycling Factories and Companies	There are a limited number of waste recycling companies in Laos. They are mainly plastic waste recycling companies, paper recycling companies, glass companies, and steel factories. In Vientiane Capital, there are four operational plastic recycling companies. These companies perform some processing of plastics, such as the removal of labels and the lids of drinking-water bottles, washing materials, sorting, shredding, compacting, and bailing to produce plastic granules (Switch Asia 2022). For paper recycling companies, there is no definitive information on the exact number of the companies in Laos. Nevertheless, some junk shops and material recovery centers sell used paper and cardboard to the Sun Paper Holding Lao Co. Ltd., which is the first modern pulp mill in Laos, located in Xepon district of Savannakhet province. Metals are mostly sold to Vientiane Steel Factory and other junk shops, while glass is sold to Lao Glass Company in Vientiane Capital (JICA 2021).

ISWPs and WP32s have the most informal status within the IWW ecosystem, yet they are responsible for a significant amount of waste recycling. The WP32s collect the greatest number of recyclable materials in a day—around 117 kilograms. ISWPs collect around 43 kilograms, and waste collectors only collect around 16 kilograms. ISWPs have better access to high-value waste such as metals and plastics and WP32s tend to collect lower-value waste. Most WP32s do not face direct competition from other individuals or groups who collect recyclable materials in their daily activities. The low presence of competitors suggests that WP32s may have relatively better access to the waste materials in the landfill. This provides them with the advantage of continuous and unhindered access to recyclable materials. ISWPs, waste collectors, and truck drivers compete for waste with waste dealers who roam around the city with motorbike and pick-up truck to collect recyclable materials.

WP32s are among the most marginalized groups within the IWW community. This is primarily because they are positioned at the very end of the waste value chain, where they have no option but to collect more contaminated and lower quality recyclable waste. This occurs after ISWPs have already extracted the higher quality recyclables. Consequently, this impacts the earnings of WP32s due to the lower buying prices for the materials they collect.

While it may seem that WP32s choose to be waste pickers, it is important to recognize that they often have limited alternative occupational choices. Their level of expenditure indicates that the income derived from waste picking is insufficient to cover their household expenses. Their lower levels of education and vocational skills likely contribute to their involvement in informal waste picking. However, when it comes to training and support, WP32s receive significantly more training and support from non-profit organizations compared to other IWW groups.

The livelihoods of IWWs are highly dependent on the price they receive for the waste they collect. Yet, although over 40 percent of ISWPs state that purchasing price is a significant factor when deciding where to sell, other factors include trust and relationship, and proximity to home. Building and maintaining trust with buyers or regular junk shops is essential for IWWs to ensure reliable transactions and a steady market for their recyclable materials. Similarly, half the number of ISWPs also consider the proximity of the selling place to their home as a priority influencing factor of where they sell their recyclable materials. This indicates that a significant portion of IWWs value convenience and accessibility when choosing where to sell their recyclable materials.

Junk shops play a crucial role in the IWW ecosystem as the key intermediatory players between waste pickers and larger buyers. Out of the total 116 junk shops across eight districts of Vientiane Capital that were surveyed, 62 percent were formally registered with business operation licenses, whereas 38 percent were operated in unregistered shops without a business operation license. Previously, junk shops were only operated by foreigners, but more recently, Lao citizens have been involved in operating junk shops in Vientiane Capital. In terms of land area, the smallest facility surveyed was about 491 square meters and the largest shop measured an average of 2400 square meters.

Junk shops are generally reasonably stable businesses—the average period of operation of the surveyed junk shops was 8 years. Although some had been in operation for as little as three months, many had been functioning for up to 30 years. In terms of staffing, junk shops owners rely on shop assistants and other staff to run their daily operations with a maximum of eight employees. They employ a mix of nationalities with 42 percent of employees being Lao citizens and 58 percent being Vietnamese.

There are many junk shops in Vientiane Capital, but few recyclers. Most junk shops act as middlemen, purchasing post-consumer high value recyclable materials and forwarding them to larger buyers or aggregators, and to recyclers in Laos or abroad. Thailand, Vietnam, and China are the major destinations for many recycling materials from Vientiane Capital. Almost all PET plastic bottle waste is exported abroad, while steel is processed in the country, for example in the steel factory of the Vientiane Capital Co. in Xiengkhuan village. However, aluminum cans are exported to Thailand and Vietnam. For transportation, trucks are used to bring the recyclable items from the junk shop to the recycling factories, but occasionally, the recycling factories pick up the materials itself. Table A1 in Annex shows the destination of various recyclable materials from Vientiane Capital. The top two influencing factors that affect who junk shops purchase their recyclable materials from are, quality and cleanliness of the collected materials, prices of materials. Few junk shops indicated trust and relationship building with IWWs matter when making transaction with the IWWs.

Photo: Rieko Kubota / World Bank

3. Key Findings

This chapter presents the key findings from data and information collected on IWWs in Vientiane Capital. There are two sections offering: (1) the key data sets presented in graphs; and (2) a discussion of the livelihood profiles identified by the survey. More detailed information captured in this study is available in the Annexes.

Data in Graphs

Age and Gender

Figure 3.1 Age and Gender of ISWPs

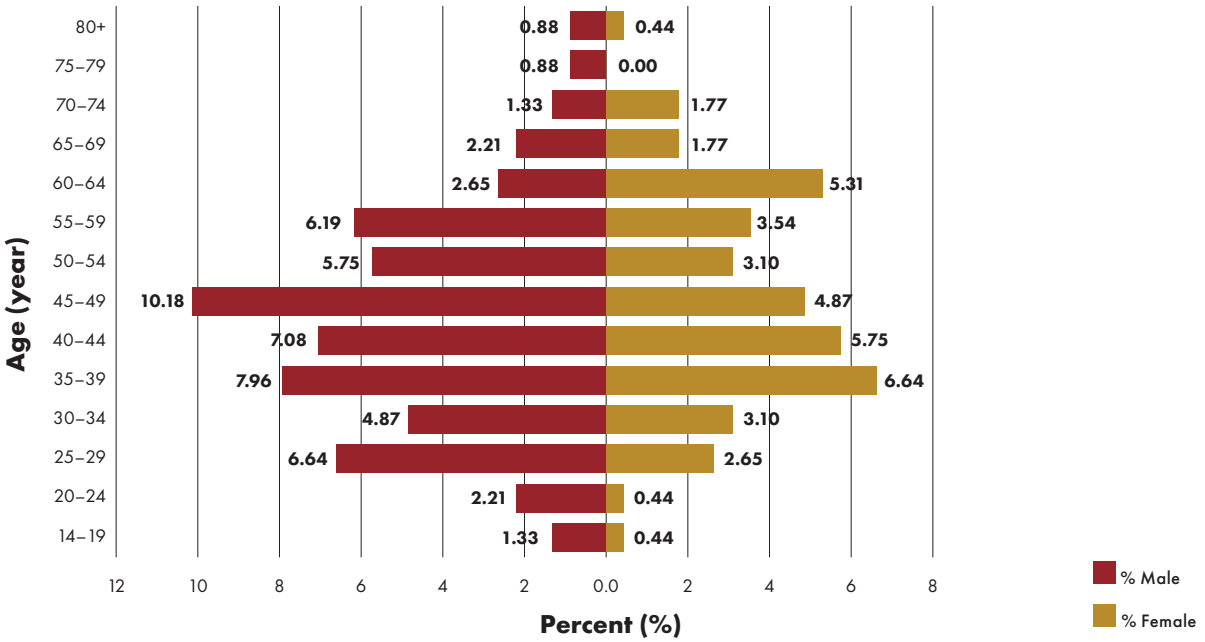
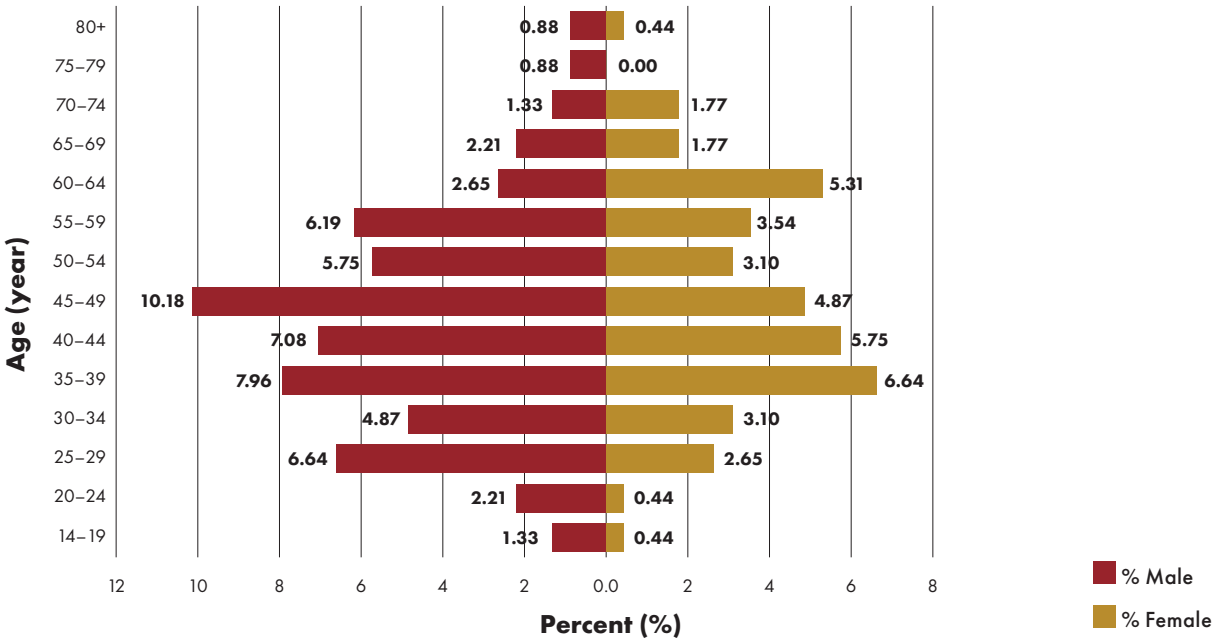


Figure 3.2 Age and Gender of WP32s



Approximately 60 percent of ISWPs were male mostly aged between 25 and 69. WP32s showed a different profile and with over 50 percent being female and over 13 percent aged between 30 and 34.

Figure 3.3 Age of Truck Drivers

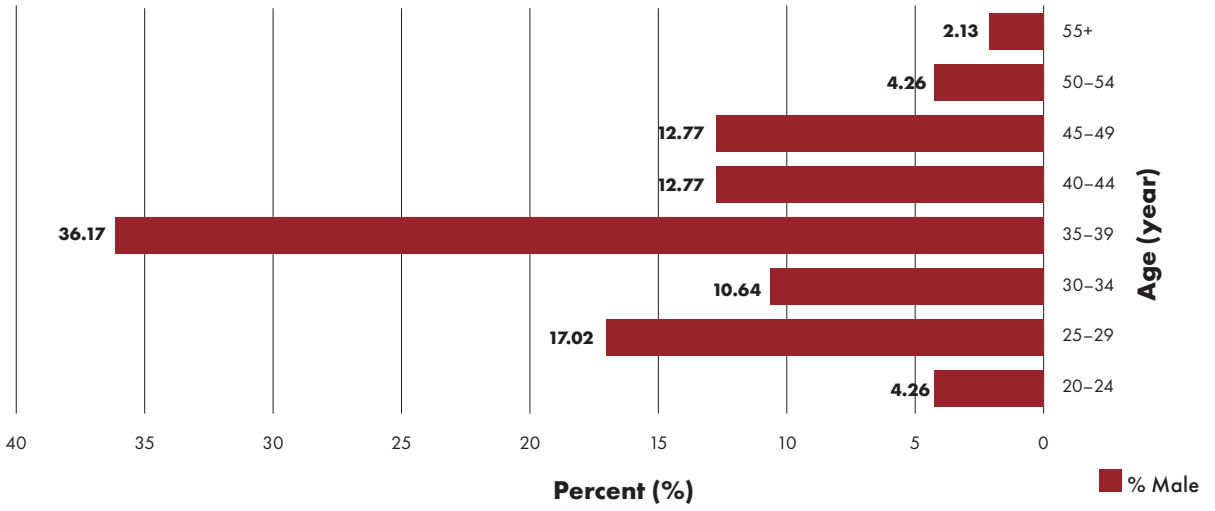
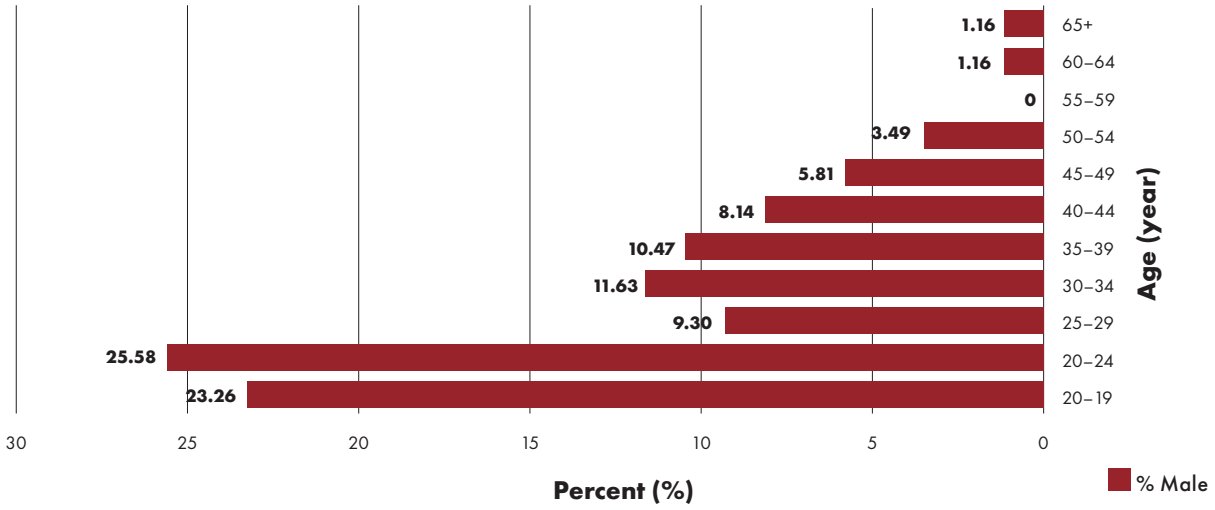


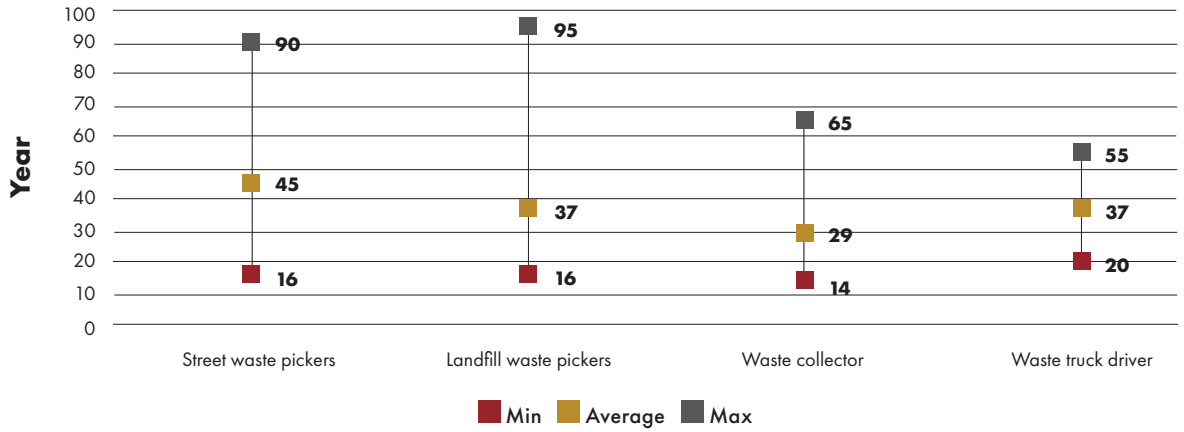
Figure 3.4 Age of Waste Collectors



Unlike waste pickers, waste collectors and truck drivers were predominately male. Among the 86 waste collectors who participated in the survey, nearly 98 percent of the respondents were male. This may be due to the nature of the work which needs physical strength to carry heavy waste bags and bins.

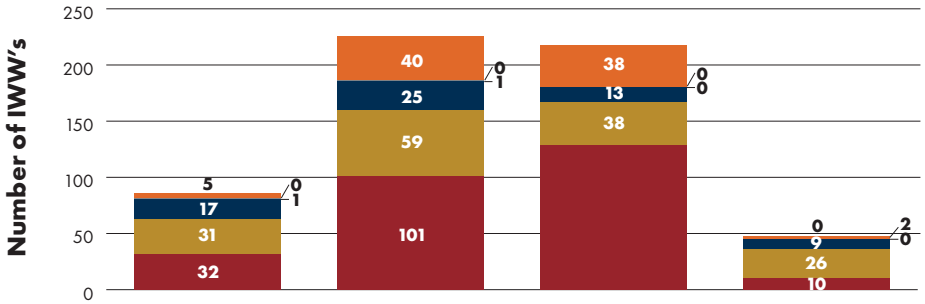
The average age of truck drivers was 37 years, and most truck drivers were between 25 and 39 years old. Waste collectors were predominately younger. The average age was 29 years, and the majority were between 14 and 24 years. Few waste collectors were aged more than 54. See Figure 3.3 and Figure 3.4 Age of Waste Collectors.

Figure 3.5 Age of Surveyed IWW Groups Surveyed



The age of IWWs varies immensely across the groups. Amongst the ISWPs and WP32s there was a wide age range starting at 16 and the oldest WP32 being 95 years old. Waste truck drivers were the least diverse with the youngest being 20 years old and the oldest being 55 years old. Waste collectors were similar but started slightly younger at 14 and the oldest being 55 years old. The reason for these differences is likely influenced by the fact that waste truck driving and waste collecting are formal jobs.

Figure 3.6 Educational Background of Surveyed IWW Groups

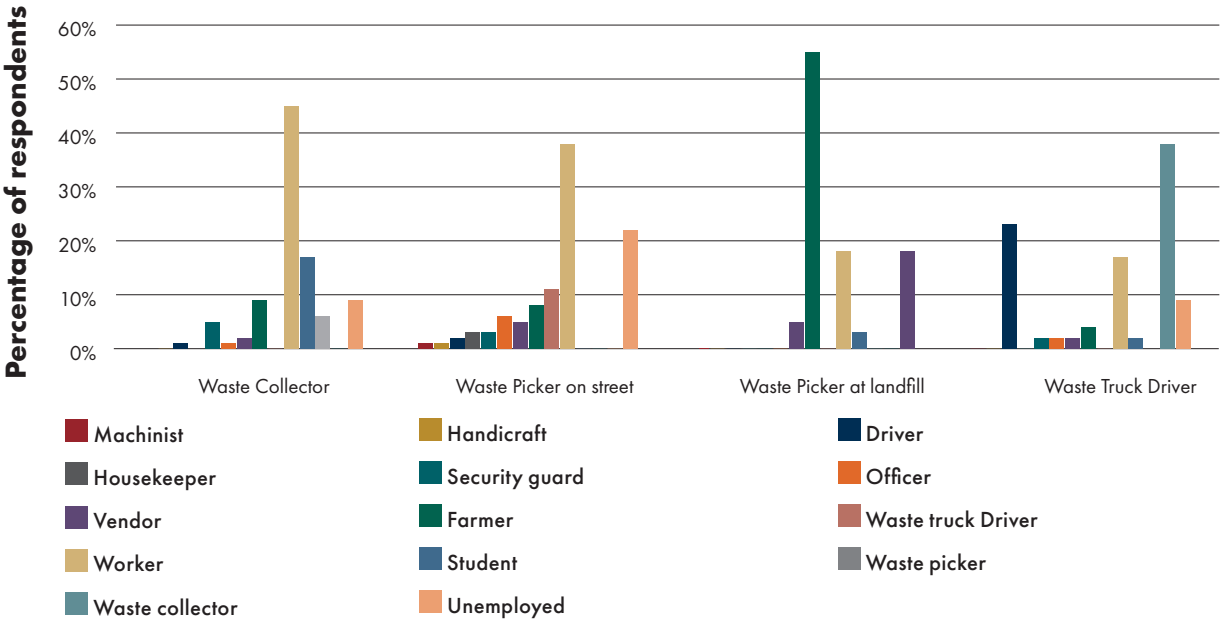


	Informal Waste collector	Informal Street waste picker	Informal wastepickers at Km 32 Landfill	Waste truck driver
Primary school	5	40	38	0
Lower secondary	0	0	0	2
Upper secondary	1	1	0	0
Sub-Degree	17	25	13	9
Bachelor	31	59	38	26
Uneducated	32	101	129	10

ISWPs and WP32s were found to have the lowest educational attainment. A significant proportion (about 17 percent) of ISWPs and WP32s had no formal education, and about half of this group had only primary school educational attainment. See Figure 3.6 Educational Background of Surveyed IWW Groups. Waste collectors and waste truck drivers had higher proportions with secondary education levels.

Previous Employment

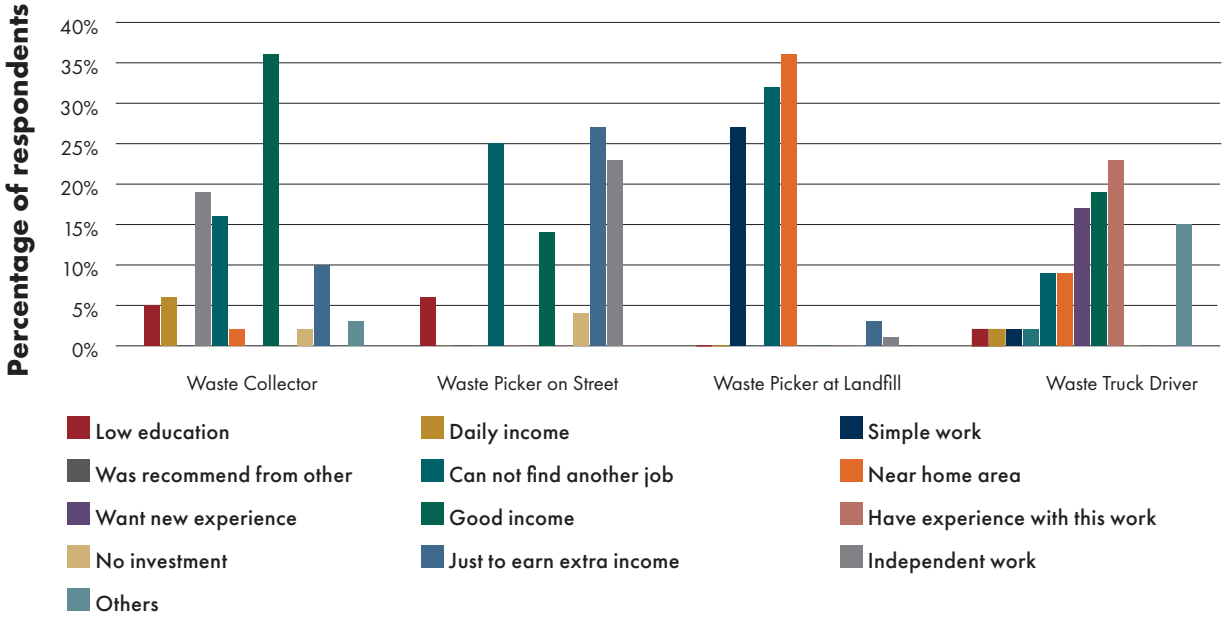
Figure 3.7 Occupation Prior to Working as IWWs



The previous work experience of IWWs varied. Before working as IWWs, waste collectors and WP32s had worked at construction sites or in other physically demanding jobs and many WP32s had also had previous farming experience. The previous experience of waste truck drivers tended to be as security guards or as drivers of other types of vehicles. See Figure 3.7 Occupation Prior to Working as IWWs.

Reasons for Working

Figure 3.8 Why People Work as IWWs

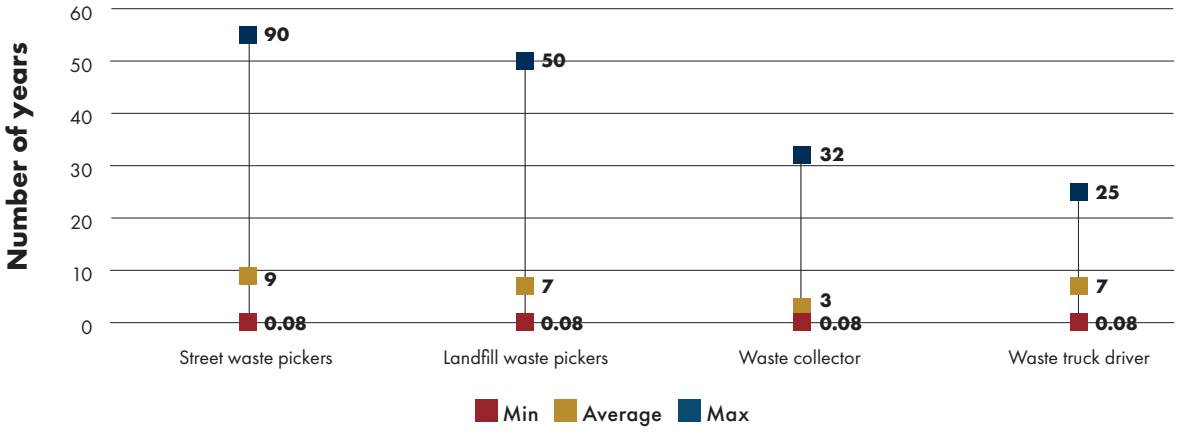


The data show that ISWPs and WP32s had the least agency when choosing to work as an IWW. ISWPs and WP32s mainly became waste pickers because they were not able to find another job. WP32s also chose the job because it was close to home.

However, waste collectors worked in the sector because they believed the job was a good source of income. In addition, waste truck drivers chose their job for more proactive reasons. Waste truck drivers usually had previous driving experience with other types of vehicles and were seeking a new experience.

Years Worked as IWWs

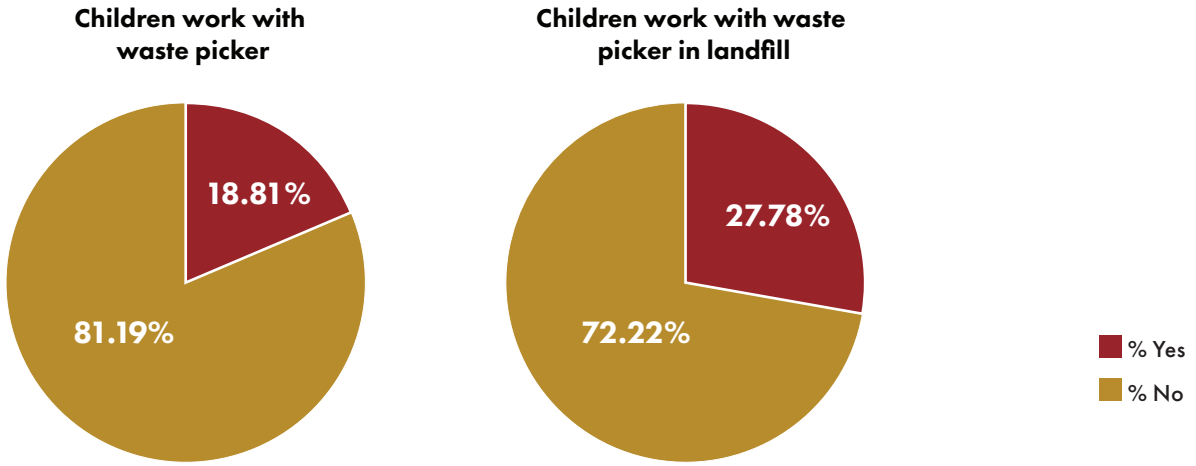
Figure 3.9 Number of Years Working as IWWs



ISWPs tended to work for the longest time in the same job—an average of 9 years. WP32s and waste truck drivers did the job for an average of 7 years. See Figure 3.9 Number of Years Working as IWWs. However, waste collectors stayed in the job for a shorter period—an average of 3 years. This suggests that waste collecting is the most transient job in the sector.

Children at Work

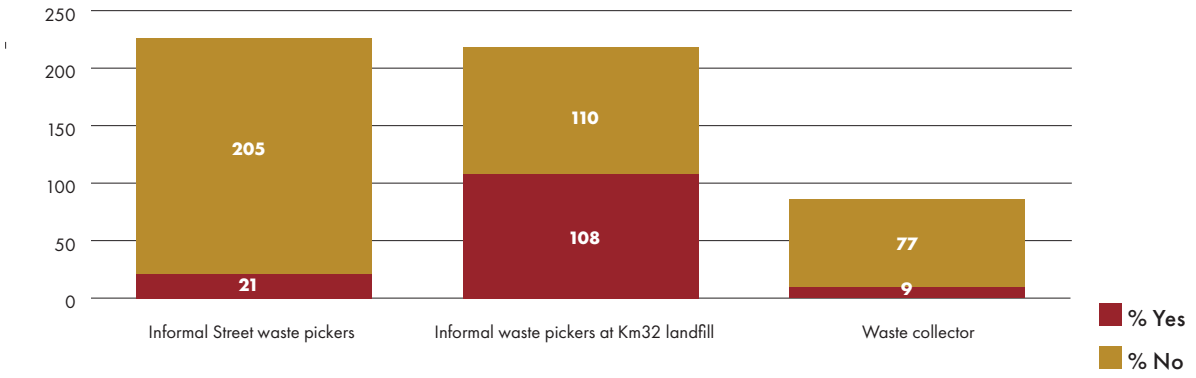
Figure 3.10 Percentage of Children at Work



Nearly a quarter of ISWPs and WP32s (around 23 percent) involved their children under the age of 14 in waste picking (Figure 3.10 Percentage of Children at Work). This was due to the absence of caretakers and childcare support at home.

Access to Training

Figure 3.11 Distribution of IWWs with Access to Training Programs

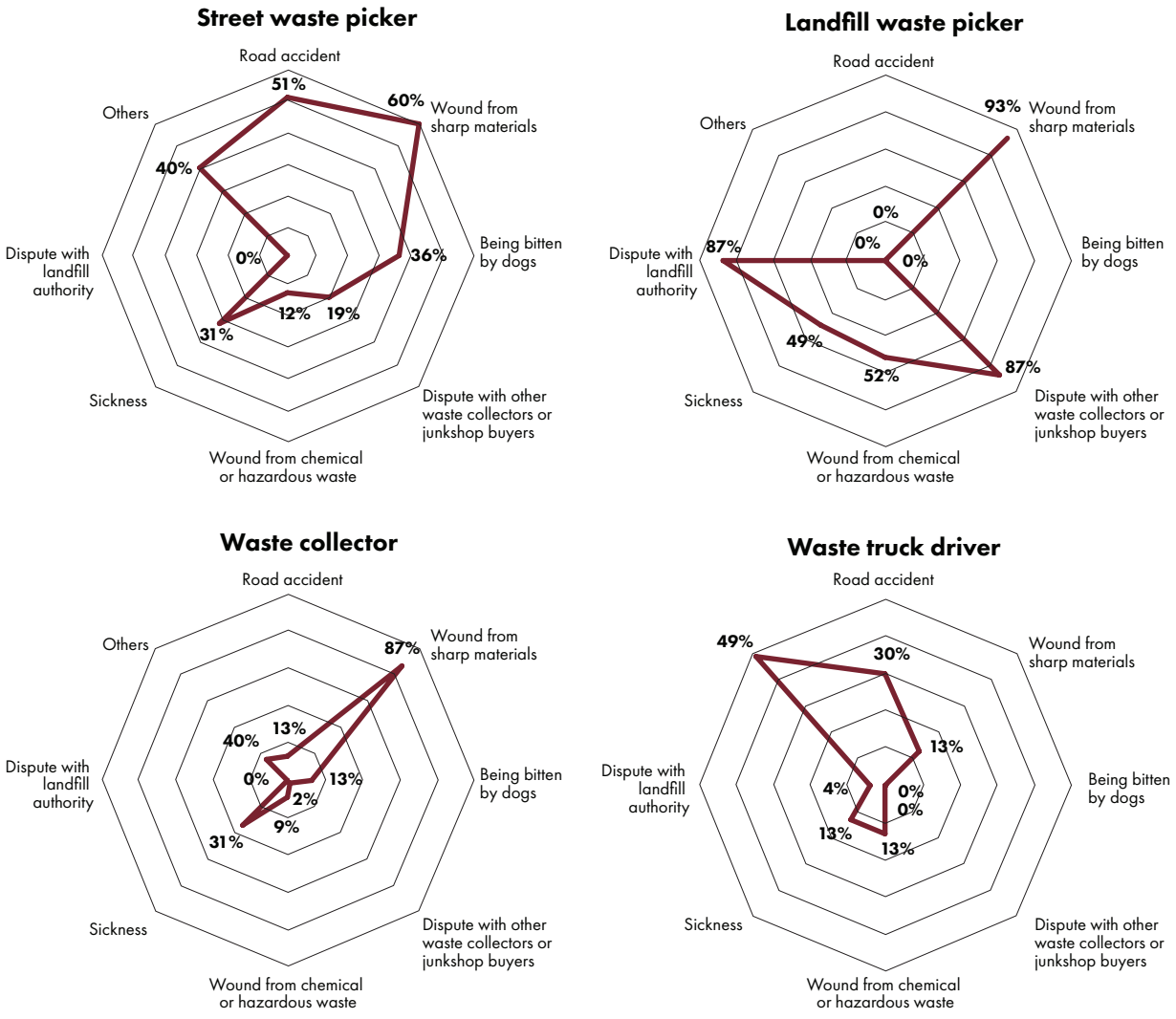


WP32s working at KM32 landfill had received notably more training opportunities that the other IWWs. Nearly 50 percent of respondents stated they had received some form of training on safety and PPE use.

However, the vast majority of ISWPs and waste collectors received no work-related training or training opportunities (see Figure 3.11 Distribution of IWWs with Access to Training Programs). Although, about 9 percent of ISWPs had received some health and safety training, and just over 10 percent of waste collectors stated they had received training on personal protective equipment (PPE).

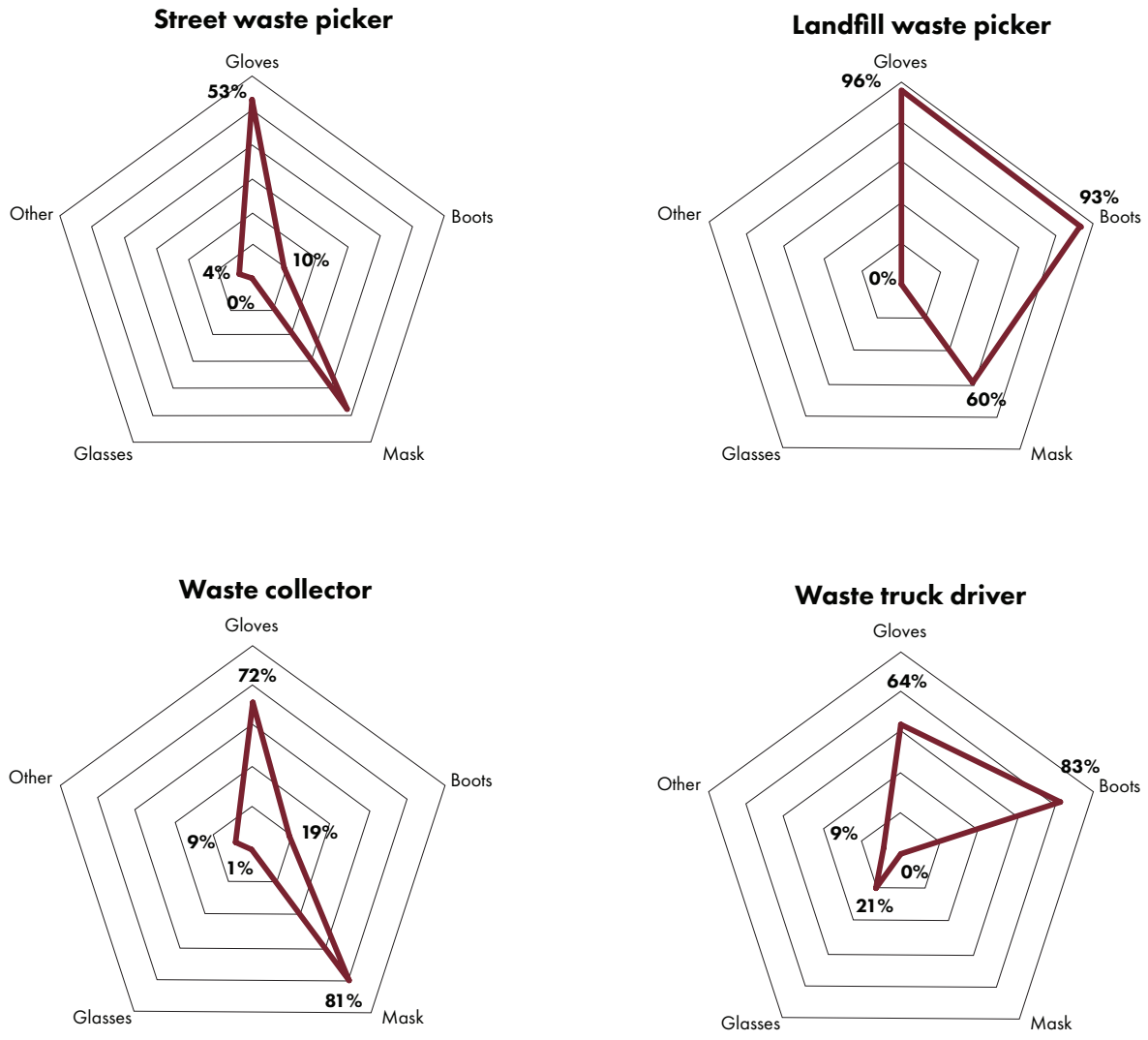
Work Hazards and PPE

Figure 3.12 Daily Hazards Faced at Work



IWWs groups were exposed to different levels and types of hazards at work. The top two hazards for ISWPs were wounds from sharp materials and road accidents. The top two hazards for WP32s were sharp materials and disputes with the landfill authority. The top hazard for waste collectors was sharp materials and the top hazard for truck drivers was road accidents.

Figure 3.13 Type of Protection Gears Worn



Among the IWWs interviewed, the ISWPs were the group that used PPE the least. Approximately only half of ISWPs said they used PPE whereas over 97 percent of WP32s mentioned that they wear protective equipment at work. Most waste collectors surveyed indicated that they wore protective gear during working hours as did waste truck drivers. However, the types of protection used varied.

IWWs' Livelihoods—The Context

Age and Gender

IWWs in Vientiane Capital were both male and female and aged between 14 to 95. However, most workers were aged between 30 to 50. They had low rates of formal education, minimal skills, and little to no previous experience of formal employment. There were more female than male WP32s and slightly more male than female ISWPs. Both waste collectors and truck drivers were mostly male.

Various studies have argued that women working as IWWs are often subject to disadvantages in terms of earnings, working conditions, safety, and security (Ogando and Roever 2017; Ocean Conservancy 2019). This matches the survey results which suggest that the majority of IWWs in Laos who occupied the top-tier high-income earning hierarchy were mainly men. For IWWs, access to higher-value waste and larger amounts of collected waste translates to high-income earnings. This could be

because female IWWs in Vientiane Capital focus on collecting recyclables that are worth less, and male IWWs handle more valuable (such as extracted metals) and heavier materials because handling these items requires greater strength and endurance. Other reasons for the gender disparity are that accessing waste can result in hostility with unfamiliar individuals from households or other waste pickers. Women also often split their work hours between domestic work and waste picking resulting in less volume for selling. Inadequate basic infrastructure and limited access to essential services exacerbate various gendered vulnerabilities in the informal waste sector.

Importance of Skills Training and Capacity Building

IWWs usually have limited formal education placing them in the low-skill segment of the informal sector. However, education and skill training have the potential to enhance IWWs' understanding of waste management practices, occupational hazards, and environmental sustainability. With appropriate education and awareness, IWWs can: (1) adopt safer and more efficient work methods; (2) improve waste segregation practices; and (3) contribute toward sustainable waste management. Educational and entrepreneurial skills training may have a positive impact on IWWs income, enabling them to effectively manage their finances, income, and expenditure, as well as potentially establish successful recycling waste businesses.

In the context of elevated unemployment and challenging economic circumstances, individuals with limited skills are expected to continue to explore alternative income opportunities in the informal waste sector. They are attracted by the relatively higher income than they would receive if they engaged in formal employment. It is also expected that a significant proportion of them will continue to work as IWWs for an extended duration. With the current youth unemployment situation and post COVID-19 economic recovery in Laos[11], the informal waste management sector is likely to experience increased participation of unemployed low-skilled workers. However, it should be noted that most informal IWWs (more than 90 percent) would prefer their children to choose another occupation. They hope to provide the best formal education to their children to allow them to acquire key skills to engage in more stable and secure employment when they grow up.

A large majority of ISWPs, WP32s, and waste collectors, did not receive any form of training to build their skills or protect their health. Yet, this kind of training would improve productivity and livelihood outcomes. Basic training aimed at improving various aspects of IWWs' working conditions such as health and safety, personal hygiene, basic financial management, training on efficient sorting, use of tools, negotiating, and maintaining savings culture, would strongly improve the livelihood strategies of IWWs and their living conditions (USEPA 2021). It would also allow them to find ways to transition into better work.

Long-Term and Long Hours

Essentially, informal waste work appears to be a long-term work option for many low-skilled workers during their productive years. Some ISWPs and WP32s had worked in waste picking for approximately 50–55 years. Similarly, some waste collectors and truck drivers had worked in the sector for 25-30 years. In addition, more than two-thirds of the ISWPs and WP32s engage in waste picking as a full-time occupation.[12] On average, all IWWs worked between 25-27 days per month, with average work hours ranging from to 9-13 hours per day. Higher work hours of 15-18 hours of work in day were reported by ISWPs and WP32s.

11 For more information see: https://www.worldbank.org/en/news/press-release/2022/10/12/enhancing-skills-for-better-jobs-in-lao-pdr

12 Although, about 25 percent of WP32s were farmers who engaged in waste picking on a part-time basis out of season.

How Much is Collected

The average amount of recyclable materials collected by all the surveyed 226 ISWPs was about 43 kilograms a day. The maximum amount was 180 kilograms, and the smallest amount was 0.5 kilograms. The quantity and quality of recyclable waste collected and sold is a key determinant of how much income is earned by IWWs. When asked how they transport collected waste, as well as commute to and from their waste picking work, almost 70 percent of ISWPs indicated that they use motorbikes fixed with carts whereas nearly 70 percent of WP32s used motorbikes without a cart. Approximately one third of the total respondents walked, while the rest used other mediums of transport including, bicycles (over 3.5 percent), and cars (3.5 percent). However, the availability and quantity of recyclable materials is not guaranteed, and the amount collected per day fluctuates. This is due to several factors including competition with waste collectors and other actors.

Where it is Sold

Although their role is fundamental to driving the recycling industry, IWWs have little to no control over the market and price dynamics of recyclable materials. WP32s are in the weakest position. They must sell collected waste to the waste recovery center at KM32 landfill that has a monopoly access to the WP32s' collected waste. The waste recovery center is associated with VCOMS that manages and operates the KM32 landfill. The waste recovery center has an arrangement with the WP32s where the transportation cost of the materials is deducted from the price of the recyclable material.

ISWPs do have a choice to sell collected recyclable materials to junk shops with competitive buying price. However, 90 percent of the ISWPs in Vientiane Capital indicated that they sell their recyclable materials to the same junk shop or waste dealer and only 10 percent sell to junk shops with competitive price offerings. Similarly, more than 95 percent of waste collectors and waste truck drivers surveyed stated they sell their collected recyclable materials to the same buyer (shop or dealer).

The existence of these relationships ISWPs and waste collectors have with junk shops and traders suggests there an established mutual loyalty and satisfaction. However, this does not apply to the WP32s sales arrangement of recyclable materials.

Storage Constraints

Most of the WP32s stated they had no storage where they live so they are forced to take collected waste immediately to the material recovery center at the KM32 landfill. WP32s indicated an average daily amount of recyclable waste collection of 117 kilograms, with the maximum of 720 kilograms and minimum of 3 kilograms. This lack of availability of storage for WP32s reduces their bargaining power in negotiating the selling price and forces them to sell what they have collected regardless of the price on the day. Lack of storage may also apply to the other IWWs.

Income and Housing

Due to the variable amounts of waste IWWs can collect and sell, monthly household incomes of IWWs fluctuate dramatically. Some IWWs reported relatively high monthly income rates of up to 7.5 million LAK ($386) while others reported monthly earnings of as little as 30 000 LAK ($1.6). On average: (1) ISWPs earned around 2.5 million LAK ($125) a month; (2) WP32s earned around 2.1 million LAK ($109); (3) waste collectors earned around 4.7 million LAK ($235); and (4) waste truck drivers earned around 2.3 million LAK ($115).

This income is inadequate or barely enough to sustain a decent living for an average household. About 80 to 90 percent of ISWPs and WP32s borrowed money to meet their needs and rarely saved money. In some instances, the amount borrowed was as high as 10 million LAK ($517.2). The most common reasons for borrowing included spending on family and meeting daily expenses such as healthcare and hospital visits.

WP32s struggled the most to earn enough to cover their expenditure. Approximately 80 percent of WP32s reported a monthly expenditure of nearly twice of their household income. As stated earlier, WP32s make approximately 2.1 million LAK ($135) per month as their income. However, the average monthly expenditure of WP32s is about 5.5 million LAK ($284). Unsurprisingly, the majority of WP32s (about 80 percent) noted that they had no money left for savings because of their expenses.

The housing of IWWs presented a more positive picture with the majority of IWWs living rent free in their own houses. Quite a significant proportion of IWWs (between 70 and 90 percent) indicated that they owned their own homes and did not have to pay rent. In addition, over 90 percent had access to toilets, kitchens, and 85 percent had access to a water supply. However, amongst the WP32s, the number of those with access to water was less at about 63 percent.

Children of IWWs

The needs of the children of IWWs also need to be considered. They often accompany waste pickers parents, many do not go to school, and they receive limited healthcare. If they were able to, most parents would choose to leave their children at home when they went to work. And, if they had a choice, over 90 percent stated that they did not want their children to work as waste workers in the future. However, it was found that a lack of childcare resulted in many children (nearly 30 percent) having to join their parents to go to the landfill.

School enrolment levels of some of the children of IWWs were also quite low. Over 40 percent of WP32s said that their children were not enrolled in formal education. Furthermore, many children did not receive medical care. Approximately 45 percent of ISWPs indicated that they could not afford healthcare for their children.

Access to Credit

IWWs in Laos do not have easy access to financial capital due to their social status without formal job recognition. There is a lack of institutional, organizational, and regulatory systems to provide a framework for recognizing IWWs. Nor are there the necessary support systems for access to credit. This situation accelerates the vulnerabilities of IWWs and reduces their ability to adopt the livelihood strategies to transition into improved livelihood outcomes. These systems must be tailored to provide mechanisms that ensure IWWs access to financial capital without high-value collateral and high interest rates. In other developing countries such as Brazil and Kenya, such schemes and support systems for IWWs have been found to produce transformative results that reduce income inequality and provide opportunities for poor and vulnerable IWWs to transition to better livelihoods (ILO and WIEGO initiative 2017).

Occupational Health and Safety Challenges

Most IWWs are at risk of injury from handling sharp objects, handling contaminated materials, car accidents. ISWPs were the most at risk from work-based hazards. ISWPs received the least amount of occupational health training and did not receive nongovernmental organization support with PPE. Conversely, most WP32s did have protective equipment available such as gloves and boots. However, other than WP32s, many IWWs (especially ISWPs) did not use protective equipment.

Because IWWs in Vientiane Capital work independently and are not formally recognized, they miss out on occupational health and safety support. This includes all three main aspects of personal security and dignity including: (1) workplace health and safety; (2) addressing harassment and violence; and (3) upholding dignity and respect. In addition, these can be more of a challenge depending on gender identity. However, some of the IWWs were aware of this. About 30 percent of the 226 ISWPs emphasized that local authorities and government agencies should provide more support to safety concerns related to their work.

The reality is that IWWs are increasingly compelled to work harder to generate sufficient income to cover expenditure or save for future contingent expenditures. Most IWWs have little or no time for rest, recreation, or social engagement, including with their families, which can negatively impact their health and welfare. IWWs are trapped in a vicious cycle of extended work hours without breaks or vacation time, borne out of necessity and not by choice. In contexts where social protection measures, such as free or subsidized childcare, care for the elderly, and social pensions, are lacking, the challenges faced by informal workers are intensified.

Organization and Cooperation Among IWWs

To earn a living, IWWs in Vientiane Capital interact with a diverse range of stakeholders, including waste generators in households, scrap dealers, junk shops, and other actors within the informal recycling network. Gradually, owing to the presence of common and shared interests, various levels of reciprocal relations and mutual trust develop to foster and bolster shared interests that directly influence livelihood goals. There are two types of reciprocal relationships: (1) *vertical* (that is IWWs and next-level actors in the value chain, such as junk shops); and (2) *horizontal* (between IWWs). These relationships are developed to improve and maximize the use of other assets for mutual benefits. For example, WP32s and the waste recovery center at the landfill operated a mutually beneficial relationship, where the waste recovery center offset transportation costs from the cost of the purchased recyclable material by conveying collected recyclable materials from the WP32s who sold to them. Other variations, as practiced by some ISWPs, waste collectors, and waste truck drivers in Vientiane Capital, involve accessing spaces in junk shops for storing recyclable materials collected daily and maintaining an account of the weight until certain quantities are obtained and sold off to the junk shop. The junk shops provide storage for the IWWs and, in return secure a continuous supply of recyclable materials from the IWWs.

Studies in the other developing countries have shown that the formation of formal or informal cooperative groups can provide a united front for representing and negotiating the interests and policies of IWWs to improve working conditions (Aparcana 2016). In cases where strong cooperation among IWWs exists, there is potential for the formation of either formal or informal cooperatives. These would be based on mutually agreed rules, accepted norms, and sanctions that govern their operations.

However, according to the survey, IWWs in Vientiane Capital did not have such strong networks or associations. The various categories of IWWs operated separately without a unified front for all the IWWs in the city. Since informal waste work is still not formally recognized in the waste management sector of Vientiane Capital, the formation of such a cooperative could provide and deliver many benefits to the IWWs and other relevant stakeholders who benefit from dealing with some of the current challenges they face. For example, an IWW cooperative could become an access point for mobilizing members to receive interventions such as: (1) capacity building and training on market access; (2) basic financial management; (3) healthcare service; and (4) improving rates of saving or measures to improve efficiency, market access, and price negotiations.

Conclusion

Currently, IWWs in Vientiane Capital are left alone to face multiple difficulties and challenges such as accessing to waste resources, financial, occupational health and safety, and dignity. They are in a vicious cycle of not being able to secure a stable source of or to save for essential expenses such as healthcare and education. Due to their low level of skills, limited education, and lack of opportunity to transition into more stable and well-paid occupations, IWWs are unable to have freedom of occupational choice and are locked into the informal waste sector. IWWs need training, income security, or other social welfare to be able to support themselves, their families, and especially their children. They also need protection equipment to safely operate waste picking work.

It is recommended that the government take action to change the working context for this crucial segment of solid waste management. This should include: (1) continuing to have a dialogue with the IWW; (2) recognizing the critical role IWWs play in contributing to the country's circular economy; and (3) providing them with more opportunities to improve their livelihoods. One way to improve their livelihood is by forming formal or informal cooperatives among IWWs. This would help them work more collectively with their counterparts in the recycling value chain and with the government.

Photo: Rieko Kubota / World Bank

4. Priorities and Actions

The study proposes the following priorities and actions as immediate and mid-term solutions to recognizing the waste picking role as an important contributor to the green economy. Taking these actions will provide more recognition and dignity to the work of IWWs and improve their working conditions.

The InteRa Framework

The organization of the priorities and actions followed the structure of the InteRa framework developed by Velis et al (2012). This framework seeks to address the challenges faced by the solid waste management sector in developing countries by using a comprehensive assessment tool to evaluate the integration of informal waste collectors into formal waste management systems.

The InteRa framework proposes that policy recommendations and interventions should consider four strategic areas: (1) solid waste management; (2) materials and value chain; (3) socioeconomic concerns; and (4) organization and empowerment. It states that all four strategic areas should receive balanced attention with an understanding that organization and empowerment should be treated as the overarching umbrella that connects the other three (Velis et al 2012). Though there is no current movement to formalize informal waste collectors into formal system in Laos, the authors recognize the InteRa framework to be a useful tool to develop policy recommendations to support informal waste pickers.

InteRa Strategic Areas

Solid Waste Management

The solid waste management strategic area involves recognizing the contribution of IWWs to waste management. It also includes providing support and resources to improve their working conditions and their access to recyclable waste and increase their productivity.

Two major findings from the surveys and the stakeholder's consultation meeting were: (1) the lack of recognition of waste pickers' contribution to waste management; and (2) and unclear responsibility for IWWs among government agencies. This may be partly due to the nature of their work, which is associated with waste and that waste picking is not legally recognized as an occupation. There is currently no legal framework that governs waste management in Laos. The IWWs in KM32 and on the streets in Vientiane Capital both expressed that they lacked dignity and decency in waste picking work.

It is important to recognize the role played by IWWs. IWWs should be recognized as self-employed workers who provide a public service that generates high-impact environmental benefits. In this regard, this study recommends the government authorities to: (1) formally recognize the IWWs contribution in recovering value from waste; (2) regularly conduct a survey on IWWs livelihood to understand their needs; and (3) integrate support to IWWs as part of the government regulation. Government support to the IWWs can be improved by registering IWWs officially, providing them with ID cards and investing in capacity building to strengthen their ability to collect waste more efficiently. Such actions have shown to be beneficial in Brazil and India (Talbott et al 2022). By registering the IWWs, it is easier to document the informal waste sector's size and the working conditions of the IWWs.

Materials and Value Chain

The materials and value chain strategic area involves the issue of how waste materials can be transformed into valuable resources through recycling. The waste value chain includes collection, sorting, processing, and manufacturing of recycled products. Improving the value chain aspect of waste management can result in higher income for IWWs, higher-quality recycled products, and reduced environmental impact.

The average collected amount of recyclable waste by ISWPs was 43 kilograms per day. That means almost 1 ton of recyclable waste is collected every day by ISWPs alone. However, the quantity and quality of recyclable waste collected and sold is a key determinant of how much income is earned by IWWs. The availability and quantity of recyclable materials every day was not guaranteed. In addition, the amount collected per day can fluctuate due to several factors including competition with waste collectors and other actors. On the interface between IWWs and buyers (junk shop or waste dealers), more than 95 percent of waste collectors and waste truck drivers surveyed indicated they sell their collected recyclable materials to the same buyer (shop or dealer). The existence of such relationships with the junk shops or traders may suggest the likelihood of established mutual loyalty and satisfaction between junk shops and IWWs.

Socioeconomic Conditions

The socioeconomic conditions strategic area relates to how IWWs work and live. IWWs are often marginalized and face a range of social challenges. They have low levels of educational attainment, and many have had no formal education at all. Many of their children are not enrolled at school and some bring their children to work with them due to a lack of childcare. In addition, income streams are precarious and are not adequate to cover basic every day needs forcing some IWWs into debt. Meanwhile, IWWs are unable to get access to credit to change their livelihoods and improve their lives.

The biggest concern of IWWs was their working conditions. They often work in hazardous and unsanitary environments, with little to no protective gear or safety measures in place. This puts them at risk of injury, illness, and exposure to harmful pollutants. One major finding related to social aspects were that a high percentage of ISWPs and WP32s faced injuries from sharp objects during work (ISWPs 87 percent and WP32s 93 percent). For ISWPs, the second most cited threats were road accidents (51 percent), potential dog bites (36 percent), sicknesses (31 percent). Other notable sources of social risk noted by ISWPs are potential disputes with other waste collectors or junk shops to whom they sell their waste. Injury from chemical waste in waste streams was also cited as a problem. For WP32s, disputes with other waste pickers or junk shops (87 percent) and disputes with landfill authority (87 percent) were cited as the second biggest threats at work. Sicknesses (49 percent) and wounds from chemical and hazardous wastes (52 percent) were also cited as daily incidents.

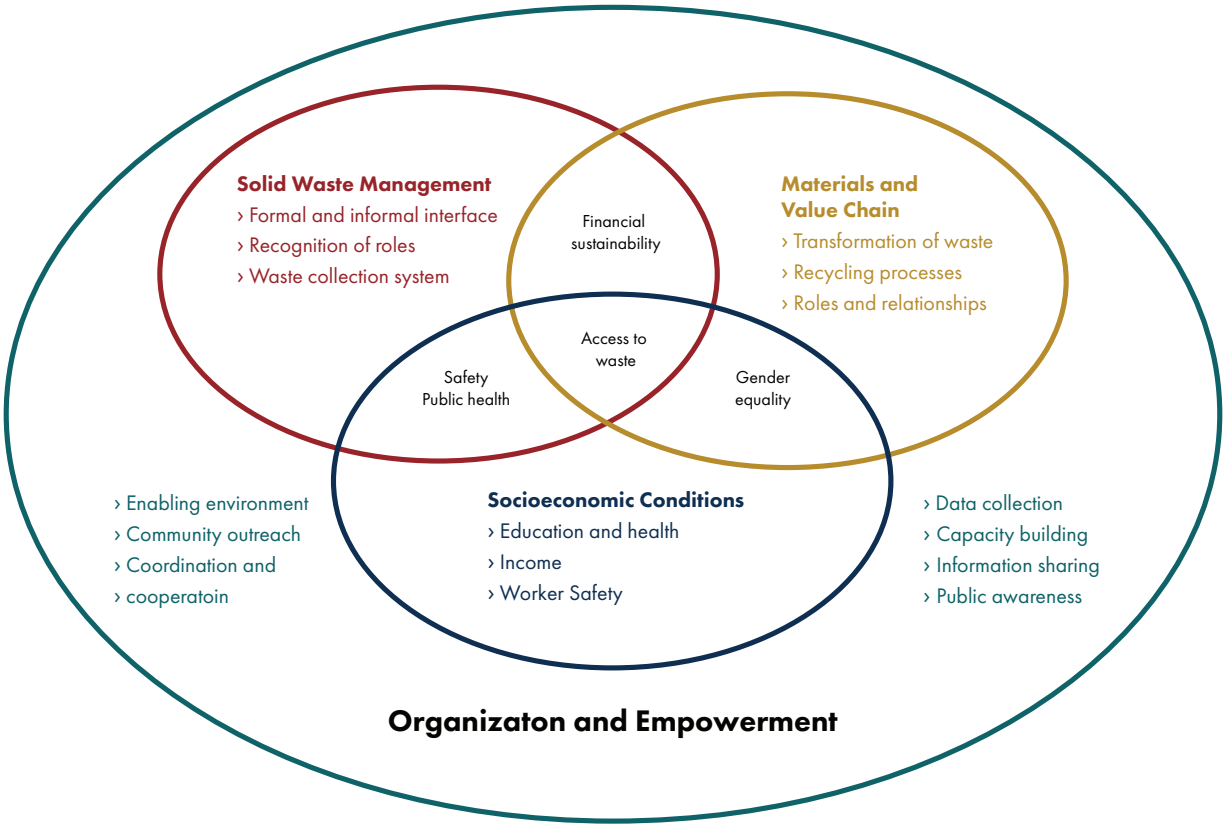
Organization and Empowerment

The organization and empowerment strategic area is the overarching umbrella that interconnects with the other three strategic areas. Solid waste management, material and value chain, and socioeconomic conditions need to be underpinned by an enabling environment made possible by policy interventions for IWWs. Organization and empowerment can be done in different ways such as organizing formal or informal cooperatives. For example, GIZ (2011) found that IWWs cooperatives allowed the local government to recognize IWWs as working partners and increased the collective bargaining power of IWWs. However, the type of organization and association that works best in Vientiane Capital context has yet to be found and local context such as culture and circumstances is important for organization and empowerment to be effective (Medina 2000).

Transforming the IWW Ecosystem

These following priorities and actions on improving livelihood conditions for IWWs were based on: (1) the data and information collected on IWWs in Vientiane Capital; (2) consultations with a broad range of stakeholders in Laos; and (3) the experiences of other countries such as India and Brazil. See Figure 4.1 Map of Informal Waste Priorities. for a map of these priorities set within the InteRa framework.

Figure 4.1 Map of Informal Waste Priorities



Source: Adapted from Velis et al 2012

Lao Pollution and Waste Management Project

It is proposed that the following be considered for implementation as part of the Lao Pollution and Waste Management Project (currently under preparation at the time of the completion of this report).

Table 4.1 Priorities, Actions, and Actors for Lao Pollution and Waste Management Project presents priorities, actions, and intended target groups set within the InteRa framework. Actions have been rated: **High**; **Medium**; and **Low**. It also lists the proposed responsible actors. There are five priorities and 11 related actions.

Table 4.1 Priorities, Actions, and Actors for Lao Pollution and Waste Management Project

Urgency		Priorities and Actions	Responsible Actors	Strategic Areas	Target Groups
1		Establish government consensus on managing IWWs as part of national and local waste management systems			
HIGH	1	Conduct consultations among government agencies and stakeholders.	VCOMS and MONRE	SOLID WASTE MANAGEMENT	WP32s
MEDIUM	2	Conduct regular surveys.	VCOMS and MONRE		WP32s
HIGH	3	Integrate strategy for waste pickers in government policy documents.	VCOMS and MONRE		WP32s
2		Support measures to increase income for waste pickers from waste value chains			
MEDIUM	4	Promote source separation.	VCOMS, MONRE and DPs	MATERIALS AND VALUE CHAIN	WP32s
HIGH	5	Provide training for IWWs, waste aggregators and junk shops on developing equitable agreements for the sale of recyclables.	VCOMS, MONRE and development partners (DPs)		WP32s
MEDIUM	6	Develop simple templates for contracts between buyers and sellers (IWWs) of recyclables.	VCOMS and MONRE		WP32s

Urgency		Priorities and Actions	Responsible Actors	Strategic Areas	Target Groups
3		Improve working conditions of IWWs			
HIGH	7	Provide regular training on health and safety practices in waste picking, hazardous waste handling, collection, and transport, managing injuries.	VCOMS and DPs	SOCIOECONOMIC CONDITIONS	WP32s
HIGH	8	Provide access to protective gear (such as PPE).	VCOMS and DPs		WP32s
4		Improve organization of IWWs			
MEDIUM	9	Assess options for registering IWWs and connecting the registration to the provision of basic health care.	VCOMS	ORGANIZATION AND EMPOWERMENT	WP32s
5		Improve organization of IWWs			
MEDIUM	10	Conduct community outreach programs to educate people about the role of IWWs, their contribution to waste management.	MONRE and VCOMS	ORGANIZATION AND EMPOWERMENT	WP32s
MEDIUM	11	Implement social media campaigns can help reach a broader audience and create awareness about IWWs' issues.	MONRE and VCOMS		WP32s

Priority 1: Establish government consensus on managing IWWs as part of national and local waste management systems

Action 1: Conduct consultations among government agencies and stakeholders to: (1) confirm which authority, agency, or ministry is responsible for waste pickers; and (2) develop a high-level strategy for waste pickers considering overall waste management policy directions, and options such as formalizing IWWs, transitioning out of waste picking, and recognition of IWWs.

In Laos, IWWs have not been addressed in waste management policies and regulations, or in labor related policies and regulations. In addition, policy discussion at national level has not paid attention to IWWs issues. However, considering the significant contribution the IWWs make and the impact of their work on the formal waste management system, the government should start evaluating their current impacts and consider integrating the IWWs into the formal waste management.

Consultations with relevant government agencies and stakeholders would help move this agenda forward. In particular, the consultations need to cover the multiple aspects the policy should consider including labor and social welfare aspects of the IWWs. One example from Argentina showed how forming a cooperative among IWWs and inviting the leader of the cooperative to engage in the development process of waste management regulation and policies led to more favorable policy making for IWWs (Gutberlet et al 2017)—policies that recognize the contribution of the work of IWWs and assures them of their right to work with waste.

Action 2: Conduct regular surveys to monitor IWW's demographic and develop and maintain a database of waste pickers with information on waste management, family registration, and healthcare.

Data must be kept current, and databases maintained. It is recommended that data collection be continuously and regular conducted every 2 or 3 years. This will support the government authority to be able to comprehend and be responsive to the needs and challenges of IWWs. Training, capacity building opportunities, and PPE equipment can be provided as an incentive to participation in the survey.

Building and maintaining an information system on IWWs is essential for understanding their changing needs and improving their working conditions. The information system can provide information on the needs and challenges of IWWs. It is recommended that the data of IWWs be stored in a central database or system by the government authority. The collected data needs to be analyzed to identify trends and patterns. The findings should be shared with stakeholders to inform policies and programs that support IWWs to the extent possible not to reveal confidential personal information. In addition, the information system needs to be continuously updated to reflect changes in the needs and circumstances of IWWs.

Action 3: Integrate strategy for waste pickers in government policy documents such as the new Draft Decision on Municipal Solid Waste in Vientiane Capital.

The study showed that the IWWs who work on the street are less supported in provision of equipment, training, and access to social welfare system. However, VCOMS is considering setting a regulation on the support system to the informal waste pickers that work at the KM32 landfill. Their plan is to introduce a registration system of the IWWs and to expand the support to provide training and healthcare system to the IWWs.

Government authorities need to consider how to support the IWWs fairly and to formalize the support through including the relevant articles in the policy documents. However, some IWWs are reluctant to formalize their status due to the fear of being taxed by the government. These IWWs often belong to marginalized and vulnerable communities, and they require support. The government needs to recognize the need to integrate their employment for the purpose of providing welfare support and other benefits, without imposing taxes on them. This approach would help ensure that these IWWs receive the assistance they require without additional financial burden.

Priority 2: Support measures to increase income for waste pickers from waste value chains

Action 4: Promote source separation (waste should at least be segregated into wet and dry waste).

The mechanism that helps IWWs access clean recyclable materials is the source separation or the establishment of waste collection and transportation systems that are designed to minimize contamination. By encouraging households, businesses, and institutions to separate recyclable materials from other waste, this source separation efforts can help improve the quality of recyclable materials available to IWWs. In Pune, India, separate collection systems for organic and inorganic waste have been implemented and this has reduced contamination levels and made it easier for waste pickers to access clean recyclables (UNESCAP 2019). See Box 4.1 for more information.

However, source separation has been difficult to achieve in Vientiane Capital. A more feasible way to introduce source separation would be to ask waste generators (such as households, markets, and commercial entities) to separate at least into dry and wet waste and to conduct second layer of separation by IWWs or at facilities such as material recovery facilities. However, source separation may result in reducing the amount of recyclable materials that arrive at the landfill (as the ISWPs or waste collectors might already collect the materials at source). Therefore, it is important that the policies and support program (as specified in Priority 4) that promote the WP32s to acquire alternative skill and knowledge on job transition simultaneously needs to take place. Source separation not only supports the waste recycling operation of IWWs along the waste value chain, but also promotes the transition of Laos into a circular economy by recovering value from waste.

Action 5: Provide training for IWWs, waste aggregators, and junk shops on developing equitable agreements for the sale of recyclables.

Strengthening the collaboration and partnership and putting in place fair contracting rules between IWWs, waste aggregators, and junk shops will help increase the efficiency of recyclable material collection and recycling, as well as improve the income of IWWs. The survey found that IWWs face conflicts with junk shops about the quality of recyclable materials and fluctuating prices. A clear written agreement between both parties would help mitigate against this.

The government authority could help to coordinate the IWWs to work with the aggregators to ensure that contracts or agreements are designed in a way that ensures the benefits for both parties. Some support in this area has already been provided. A nongovernmental organization called SwissContact delivered training on waste segregation and occupational health and safety to some waste pickers at the landfill and on the street. In addition, VCOMS offered similar training to WP32s. The Lao government, in collaboration with the World Bank, other international organizations, nongovernmental organizations, and the private sector, could enhance their support to informal waste workers in a similar fashion.

Action 6: Develop simple templates for contracts between buyers and sellers of recyclable materials.

Along with the above training, the government authority could help smooth the transaction between IWWs, junk shops, and waste aggregators by introducing templates for contracts. Waste transactions are often a one-off event. However, when the transaction details such as volume and price are recorded properly and mutually agreed by both parties, the records are useful to avoid conflicts between the two parties. They can also be used to support future negotiations. VCOMS could play a key role in implementing these measures.

Priority 3: Improve working conditions of IWWs

To address the occupational risk and safety issues, it is essential IWWs are provided with adequate support and protection. This includes providing them with protective gear, improving their working conditions, and providing them with access to healthcare services. In addition, it is important to provide training programs on waste sorting and recycling, hazardous waste handling, and occupational health and safety. This will ensure IWWs have some knowledge to cope with the occupational risk and health issue. Additionally, policymakers, waste collection companies, aggregators, and the public need to be aware of the risks faced by IWWs and work together to address and minimize these issues. For example, source separation can help reduce the risk of injuries to IWWs.

Action 7: Provide regular training on health and safety practices in waste picking, hazardous waste handling, collection, and transport, managing injuries.

ISWPs and WP32s would benefit from periodic reminders of the safe handling of waste to avoid potential injuries and accidents during waste picking. The survey showed there are accidents with the waste collection vehicles that lead to injuries and sometimes death. Equipping all the IWWs in safe waste handling would eventually enhance the collective efforts in keeping the working environment free of risks and hazards. Because there is a high turnover of IWSPs and KM32 landfill, this training should be provided with the incentive for participation such as provision of protective gear as an award of training participation.

Action 8: Provide access to protective gear (such as PPE).

One way to improve the welfare of IWWs is to provide them with protective gear. This includes gloves, masks, and boots, which can protect them from the hazards they face while working. Furthermore, investing in proper waste management equipment such as wheelbarrows and trolleys can reduce the physical strain on these workers, which can cause injuries or chronic pain. In Vientiane Capital, some development partners, such as SwissContact and OXFAM, have worked directly with IWWs to provide protective equipment along with training. The government authority could consider building the support program on the existing initiatives that are already in place.

Priority 4: Improve organization of IWWs

The results of the study suggest that IWWs in Vientiane Capital do not have strong networks or associations such as cooperatives and self-help groups as observed in other countries. The various categories of IWWs operate separately from each other and not as a united front. Since informal waste work is still not formally recognized in the waste management sector of Vientiane Capital, the formation of such a cooperative may provide and deliver many benefits to the IWWs and other relevant stakeholders who benefit from dealing with some of the current challenges they face.

Action 9: Assess options for registering IWWs and connecting the registration to the provision of basic healthcare.

The government currently does not have access to demographic information on IWWs and IWWs do not have access to government social assistance schemes. It is important that local government authorities register IWWs and connect this registered information system to systems that provide social assistance such as basic healthcare. Eventually, connecting the registration to the national social security scheme would be critical to ensure protecting their human right and providing an access to the citizen's service.

Priority 5: Raise awareness on the valuable contribution of IWWs in waste management

The study showed that IWWs in Vientiane Capital feel they are often seen as a marginalized group and are looked down on by the public. These negative social perceptions and the lack of legal recognition of waste picking work can lead to discrimination, exclusion, and limited access to social services and opportunities. Ibelli-Bianco et al (2022) suggests that provision of education and training programs may improve IWWs performance in recyclable material collection and handling, self-management, and economic sustainability.

Action 10: Conduct community outreach programs to educate people about the role of IWWs, and their contribution to waste management.

Conducting community outreach programs to educate people about the role of IWWs, their contribution to waste management, and the challenges they face can help raise awareness and promote their recognition. Sharing stories of IWWs and their contributions to the environment and society can help generate support and improve working conditions and livelihood of IWWs. Collaborating with organizations that work with IWWs can help raise awareness and promote their recognition. This could involve partnerships with nongovernmental organizations, community-based organizations, international organizations, government agencies, and waste collection companies.

Action 11: Implement social media campaigns to help reach a broader audience and create awareness about IWW issues.

Conducting awareness campaigns to change social perceptions and increase the understanding of IWWs is essential. Negative social perceptions towards IWWs can lead to discrimination, exclusion, and limited access to social services and opportunities. Awareness campaigns can help to change these negative perceptions by promoting a more positive and accurate understanding of the contributions and challenges faced by IWWs. Such campaigns can be carried out by a variety of organizations, including government agencies, international organizations, nongovernmental organizations, and educational institutions. These organizations should coordinate design, oversight, and implement awareness campaigns. They should also take responsibility for raising awareness within their constituencies and for the public.

Government and Stakeholders

Informal waste pickers play a crucial role in collecting and recycling waste, which ultimately helps reduce the amount of waste that ends up in landfills. However, they often face significant challenges, including lack of legal recognition, inadequate working conditions, and limited access to resources and support. By identifying the priorities and actions that recognize and support the contributions of informal waste pickers, governments and other stakeholders can help to create a more inclusive and environmentally friendly waste management system. These actions include measures to provide training and equipment, improve working conditions, and ensure access to health care, and safety protections. By taking these steps, the government can help promote more sustainable and just waste management practices.

It is proposed that the following priorities and actions are considered for implementation by the government and stakeholders to address the important role of IWW raised by this study. Table 4.2 priorities, actions, and intended target groups set within the InteRa framework. Actions have been rated: High; Medium; and Low. It also lists the proposed responsible actors. There are five priority actions and eight related actions.

Table 4.2 Priorities, Actions, and Actors for Government and Stakeholders

Urgency	Priorities and Actions		Responsible Actors	Strategic Areas	Target Groups
1	Continuous dialogue between government and IWWs in potential integration of IWWs as part of formal waste management systems				
HIGH	1	Conduct consultations among IWWs, government agencies, and stakeholders to develop a high-level strategy for waste pickers.	VCOMS and MONRE MPWT and MOLSW	SOLID WASTE MANAGEMENT	ISWPs and WP32s
MEDIUM	2	Conduct regular surveys to monitor changes of IWW's demographics and develop and maintain database of waste pickers. Conduct regular surveys.	VCOMS		
2	Support measures to increase income for waste pickers from waste value chains				
MEDIUM	3	Develop collection points for recyclable waste that IWWs can access, in villages that do not have waste collection services.	VCOMS, MPWT, and MONRE	MATERIALS AND VALUE CHAIN	ISWPs
MEDIUM	4	Develop system for real-time sharing of information on recyclable prices using SMS broadcasting, social media, or digital platforms.	VCOMS, MPWT, and MONRE		

3	**Support capacity building on financial literacy and skills development for alternative livelihoods**				
LOW	**5**	Provide training for IWWs on basic financial literacy and management.	MOLSW and VCOMS	SOCIOECONOMIC	ISWPs and WP32s
MEDIUM	**6**	Provide access to protective gear (such as PPE).	MOLSW and VCOMS		
4	**Strengthen regulations and develop incentives to prevent children engaging in waste picking**				
MEDIUM	**7**	Conduct comprehensive social needs assessment to help identify the range of solutions (regulations and incentives) needed to prevent children engaging in waste picking.	Ministry of Education and Sports (MOES), MOLSW, VCOMS, and civil society organizations	SOCIOECONOMIC	ISWPs and WP32s
5	**Improve organization of IWWs**				
LOW	**8**	Assess feasibility of IWW community-based organizations or cooperatives for strengthening coordination, cooperation, information-sharing among IWWs.	VCOMS, MPWT, and MONR	ORGANIZATION AND EMPOWERMENT	ISWPs and WP32s

Priority 1: Continuous dialogue between government and IWWs in potential integration of IWWs as part of formal waste management systems

This priority is the fundamental platform to build the working relationship between the government and the IWWs to coexist in the waste management system in the Vientiane Capital. It is **Priority 1** for the Lao Pollution and Waste Policy Project and is also Priority 1 for government and stakeholders working with this sector.

Action 1: Conduct consultations among IWWs, government agencies, and stakeholders to develop a high-level strategy for waste pickers in overall waste management policy directions, considering options such as formalizing IWWs, and recognition of the IWWs contribution to waste recycling.

In Laos, IWWs have not been addressed in waste management policies and regulations, or in labor related policies and regulations. In addition, policy discussion at national level has not paid attention to the issue of IWWs and the voices of IWWs are rarely heard. However, considering the significant contribution the IWWs make and the impact of their works on formal waste management system, it is important to start a dialogue with IWWs and consider different options to integrating the IWWs into the formal waste management. In addition, consultations with relevant government agencies and stakeholders are essential to move this agenda forward and to cover the multiple aspects the policy should consider including the labor and social welfare aspects of the IWWs.

Action 2: Conduct regular surveys to monitor IWW's demographic and develop and maintain a database of waste pickers with information on waste management, family registration, and healthcare.

Data must be kept current, and databases be maintained. It is recommended that data collection be continuously and regular conducted every 2 or 3 years. This will support the government authority to be able to comprehend and be responsive to the needs and challenges of IWWs. To encourage participation in the survey, training, capacity building opportunities, and PPE equipment can be provided as an incentive.

Building and maintaining an information system on IWWs is essential for understanding their changing needs and improving their working conditions. The information system can provide information on the needs and challenges of IWWs. It is recommended that the data of IWWs be stored in a central database or system by the government authority. The collected data needs to be analyzed to identify trends and patterns. The findings should be shared with stakeholders to inform policies and programs that support IWWs to the extent possible not to reveal confidential personal information. In addition, the information system needs to be continuously updated to reflect changes in the needs and circumstances of IWWs.

Priority 2: Support measures to increase income for waste pickers from waste value chains

Action 3: Develop collection points for recyclable waste that IWWs can access in villages that do not have waste collection services.

At present, ISWPs collect recyclable waste from residential and commercial areas on a door-to-door basis. Most of the time, ISWPs need to open waste bags to access the recyclable waste, and then these are left there open. Leaving waste bags open in public area can increase the risk of waste leakage in public space including drains and rivers.

Setting up collection points for recyclable waste in villages that do not have formal waste collection service would benefit both ISWPs and residents. This would provide a short-term and partial solution until a formal waste collection service eventually covers these currently non-served areas. Implementing decentralized waste collection and separation systems in Pune, India were beneficial to the livelihoods of waste pickers (see Box 4.1 Decentralized Waste Management system in Pune, India).

Box 4.1 Decentralized Waste Management system in Pune, India

Pune, a city in the western Indian state of Maharashtra, has implemented a decentralized waste management system that includes collection of organic waste from households and institutions.

In 2007, the Pune Municipal Corporation (PMC) formed a cooperative of waste pickers called SWaCH (Solid Waste Collection and Handling), which is responsible for collecting and segregating waste from households and institutions.

SWaCH provides door-to-door collection of waste from households and institutions. Waste pickers collect the waste in separate bins for organic and inorganic waste. The waste collected by SWaCH is brought to material recovery facilities where SWaCH members segregate the waste into different categories, such as organic waste, recyclables, and non-recyclables.

The organic waste collected by SWaCH is sent to decentralized composting facilities, where it is processed and turned into compost. The compost is then sold to farmers and in and parks. The recyclable waste collected by SWaCH is sold to scrap dealers, who process it and sell it to manufacturers. The non-recyclable waste, such as plastic and sanitary waste, is sent to landfills disposal.

The decentralized waste management system implemented in Pune has several benefits. It provides livelihood opportunities to waste pickers, reduces the amount of waste sent to landfills, and promotes the use of compost in agriculture. The system has been successful in reducing the amount of waste generated by households and institutions in Pune and has been recognized as a model for decentralized waste management in India.

(UNESCAP 2019)

Action 4: Develop a system for real-time sharing of information on recyclable prices using SMS broadcasting, social media, or digital platforms.

It is critical that IWWs have access to information on price to help them determine when and who to sell waste to. This information is usually exchanged through word of mouth among the IWWs. However, it is possible to set up more reliable systems for exchanging this type of information. IWWs in some countries such as Indonesia have set up social media groups in WhatsApp or Facebook to exchange the real-time price information among peers (Hasugian et al 2020). Digital platforms can also provide access to information on market prices for recyclables, which can help IWWs negotiate better prices for their materials.

Priority 3: Support capacity building on financial literacy and skills development for alternative livelihoods

Access to finance is a significant challenge faced by IWWs in Vientiane Capital. Most IWWs operate in the informal economy, which means they do not have access to formal financial services such as bank accounts, loans, or credit. However, providing access to finance can be a game-changer for informal waste workers, as it can help them improve their productivity, expand their businesses, and increase their incomes.

The study reported that the average total household (family) income earnings per month of waste pickers in Vientiane Capital was just over 2 million LAK ($103). However, these income earnings are inadequate or barely enough to sustain a decent living for an average household. About 80 to 90 percent of ISWPs and WP32s borrow money to meet their needs and barely save money. Reasons for borrowing include spending on family and meeting daily expenses such as healthcare and hospital visit.

In addition, there is a desire amongst IWWs for change which expanding livelihood opportunities would help achieve. A significant proportion of the surveyed group of IWWs (above 90 percent) would prefer a more stable career for their children because of the hardship involved in their job. When asked about their children's future, quite a significant proportion of each of the IWW groups surveyed (90 percent) did not want their children to work as waste workers in the future.

Action 5: Provide training for IWWs on basic financial literacy and management including budgeting, saving, borrowing and loans, insurance, and investing.

Financial literacy is essential for IWWs to manage their finances effectively. Providing financial education and training can help IWWs understand financial concepts such as budgeting, saving, loans and investment, which can help them make informed financial decisions. Financial literacy and skills development can be developed and provided by an organization that works closely with the IWWs and who are familiar with the social and economic situations of informal sectors in Laos. To further support the IWWs, assistance can extend to the financial mechanisms such as microfinance schemes for IWWs. Microfinance schemes offer small loans and other financial services to low-income individuals and small businesses, including IWWs. These loans can help IWWs invest in equipment, such as carts, trolleys, and other waste management tools, which can improve their efficiency and productivity.

Action 6 Provide training for skills-building for engaging in alternative livelihoods.

The survey showed that one of the reasons IWWs choose to be IWWs is a lack of opportunity to engage in alternative livelihoods because of limited skill sets. While there is a definite demand for waste picking, the government authority could offer IWWs an opportunity for vocational training to build skills to allow IWWs to broaden their job opportunities beyond waste picking should they wish to. The offering of choice to work as IWWs (and with appropriate training, knowledge, and equipment) or as alternative jobs is important.

Priority 4: Strengthen regulations and develop incentives to prevent children engaging in waste picking

Many IWWs have no choice but to bring their children with them when there is no one at home to take care of them. Most IWWs with children stated that during school holidays and weekdays, their children were left at home and did not accompany them to work. However, 30 percent of ISWPs indicated that they involved their family members and children in waste picking and around 20 percent of WP32s also involved their family members.

Lack of access to caregivers and childcare were the primary reasons given for involving children. However, many children of waste pickers are also not going to school. Only 57 percent of the children of WP32s were enrolled in formal education. This is also a childcare issue and results in the continuing practice of family engaged in waste picking.

Action 7: Conduct comprehensive social needs assessment to help identify the range of solutions (regulations and incentives) needed to prevent children engaging in waste picking.

More comprehensive social needs assessment is necessary to identify the policies, regulations and incentives that keep the children away from waste picking and how to ensure the children receive the necessary education and childcare. The assessment should inform practical policy measures for the national and local government to provide more comprehensive support to the informal waste pickers with children.

Priority 5: Improve organization of IWWs

Action 8: Assess feasibility of IWW community-based organizations or cooperatives for strengthening coordination, cooperation, information-sharing among IWWs, improving access to social services (such as community health care fund and national social security).

This study has shown that ISWPs and WP32s currently do not form any groups or cooperatives to enhance mutual support. However, studies from other developing countries have shown that it is a critical first step for the government and other institutions to work with IWWs and help integrate them in the formal waste management system (Medina 2000). In countries such as Brazil, Mexico, and India,

multiple cases of cooperative and community-based organizations developed for informal waste pickers have proven to be beneficial for the IWWs in sharing the essential information such as pricing of recyclable waste, and in accessing to social services.

Assessing feasibility of initiating community-based organizations or groups could help empower the IWWs to improve their livelihoods and access to support they need. Formalization can also involve creating cooperatives or associations that enable waste pickers to work together, negotiate better prices for their services, and access financial resources. The goal of integrating IWWs is to improve their working conditions, reduce poverty, and promote sustainable waste management practices. Such community-based initiatives could self-initiate by IWWs or by international non-governmental organization that support informal workers.

However, not all waste pickers welcome the chance to be formalized or integrated. According to the surveys in Vientiane Capital, waste pickers choose to scavenge waste because it is independent work and gives them more flexibility. To attract informal waste pickers to register with the authority and to participate in a waste pickers' cooperative or association, the integration should happen in a participatory way and be based on a stakeholder consultation process that includes waste pickers, fulfilling their expectations and needs regarding working conditions, income, flexibility, and empowerment.[13]

Box 4.2 Alliance of Indian Waste pickers and the Inclusion of IWWs in Solid and Plastic Waste Management Rules of India

The Alliance of Indian Waste pickers is a decade-old national coalition of organizations working with waste-pickers and other informal waste collectors in India.

The Alliance of Indian Waste pickers undertook an advocacy campaign for the inclusion of waste-pickers in Solid and Plastic Waste Management Rules 2016 notified by the Union Ministry of Environment, Forest & Climate Change. Within these rules, several rights are formulated to support the livelihood of IWWs.

The rights of waste pickers prescribed in Solid and Plastic Waste Management Rules 2016 include:

- Right to register and be issued occupational identity card
- Right to access waste and retrieve recyclable materials
- Right to sorting space and involvement in material recovery facilities (MRFs)
- Right to form self-help groups for bettering livelihood opportunities
- Right to be involved in door-to-door collection of waste
- Right to training to update skills
- Right to representation in the advisory committee on solid waste management
- Entitlement of scholarships for the children
- Low rate of interest for credit.

The Alliance of Indian Wastepickers 2023[13]

13 See: https://aiw.globalrec.org

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