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Incorporating Informal Female Waste Pickers into Plastic Waste Management: An Analysis of Vietnam's Policies and Regulations

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ABSTRACT

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The vital role of informal female waste pickers (IFWPs) in managing plastic waste in Vietnam is undeniable. Nonetheless, the launch of the Extended Producer Responsibility (EPR) program in 2024 requires incorporating this recycling workforce into the plastic waste management system because EPR requires traceability of recyclables. This paper examines Vietnam's existing policies and regulations that may hinder the incorporation of IFWPs into plastic waste management. A gender-responsive approach was used, including desk evaluations and interviews with experts and target audiences. The findings reveal that IFWPs' contributions have not been adequately recognized or provided with social safety nets. To effectively incorporate IFWPs into the EPR system, the government should enact a law that officially recognizes waste picking as a profession and professionalizes this workforce by incorporating them into more capable organizations.

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Introduction

In Vietnam, waste is often not segregated at the source; hence, collecting and recycling plastic waste in Vietnam has long featured the active involvement of waste pickers, who make a living by picking up recycled waste at landfills or collecting small amounts at residences. More than 30 percent of rubbish is estimated to be collected through this informal route. The informal waste collection force in Vietnam is about 3 million people (Phuong et al., 2024), of which more than 90 percent are women, most of whom are migrants from rural areas to cities (Ba Dung, 2024).

Although some researchers have highlighted the role of informal waste pickers in Vietnam's plastic waste management system, as well as their weakness and vulnerability in inter-layered relationships of waste management (United Nations Development Programme [UNDP], 2022), no research has been conducted to comprehensively review Vietnam's legal framework of incorporating IFWPs into plastic waste management or to propose specific solutions for assisting them. The EPR program, which came into force in Vietnam on January 1, 2024, brings both opportunities to incorporate IFWPs into the plastic waste management system and challenges for them as the amount of informally collected waste is expected to decrease.³ In light of this, it is critical to ensure that efforts to improve plastic waste management and disposal services do not increase gender inequality, social marginalization, or the loss of livelihood for IFWPs. Consequently, this academic paper explores whether Vietnam's existing legal and policy framework appropriately acknowledges the standing and roles of IFWPs within the plastic recycling supply chain. How can the government ensure IFWPs' livelihoods and properly incorporate them into Vietnam's new EPR system?

This paper aims to identify the gaps in current policy and regulations that may prevent IFWPs from engaging in the plastic value chain. These findings could lead to developing more gender-responsive policies and legislation for plastic management in Vietnam. The applied methods include desk research, expert conversations, and interviews with target audiences of 35 informal waste pickers in Ha Noi and Hai Phong, comprising 13 males and 22 females.

Using a gender-responsive approach which includes specific action to try and reduce gender inequalities within communities (United Nations Fund for Population Activities [UNFPA] & United Nations agency for children [UNICEF], 2021), the study examines the involvement of IFWPs in plastic waste management in Vietnam and the possible hazards they face as a result

³ National Assembly, 2020 *Law on Environmental Protection*, Art. 54 & Art.55.

of the implementation of the EPR program. The paper then examines Vietnam's current policy and regulatory framework on plastic waste management to identify whether there are any hurdles to the incorporation of IFWPs. The paper also discusses how certain governments acknowledge and incorporate IFWPs into plastic management strategies. Finally, it offers recommendations for improving the incorporation of IFWPs in plastic management in Vietnam.

Roles and status of women in the informal sector of plastic waste management in Vietnam

Plastic waste is becoming one of the most significant concerns for Vietnam and many other countries. Vietnam produces nearly 3.2 million tonnes of plastic garbage annually (Thai, 2024). However, like other lower-middle-income countries, Vietnam has a rudimentary waste management system (Hong, 2023). Waste pickers and scrap dealers are the primary basis for Vietnam's plastic waste collection and recycling system. Those who work in the waste treatment market at all levels are addressed according to the materials they collect in Vietnamese – “Đồng nát”/“Ve chai” (meaning broken copper/bottles).

These individuals engage in unscheduled waste collection activities without contracts, which is why the waste management authorities of municipalities refer to them as the informal sector (National Plastic Action Partnership [NPAP], 2023). On average, about 700 mobile waste pickers can be found in each Vietnamese city, with urban areas seeing a higher concentration. For instance, between 10,000 and 16,000 trash pickers work daily in Hanoi and Ho Chi Minh City (United Nations Development Programme [UNDP], 2022). Mobile waste pickers trudge kilometers daily to buy recyclable plastic waste from each household or search for and sift through household items, sometimes rummaging through landfills, dumpsites, and public trash bins to recover recyclables. This force is estimated to collect 65–70 percent of the recycled waste generated by businesses and residences in small alleys (Khôi, 2022). This rate occurs partly because the informal sector offers financial incentives for purchasing back waste products that they recover and convenience (going to homes, landfills, or streets to collect or pick up) (Lindhqvist, 2000). Their work significantly contributes to fostering a "culture of waste segregated at source," particularly in the fight against plastic waste pollution. By aiding in waste collection and segregation, they supply resources to recycling facilities. In a circular economy, this plastic waste will be recycled in Vietnam's craft villages, which suffer from chronic pollution and leakage (Nguyen, 2020). Despite the hard work of waste collection, the informal waste collection force in Vietnam is predominantly female (over 90 percent), many of whom are rural-to-urban migrants (Ba Dung, 2024). By actively participating in efforts to decrease the quantity of plastic discharged

into the environment, they lessen the government's financial burden and establish themselves as "green warriors."

Furthermore, the network of IFWPs not only supports addressing the plastic waste issue but also has humanitarian implications by providing jobs for many individuals migrating from rural areas to urban centers in search of income. Approximately 69.7 percent of scrap business owners in Vietnam are women (Ocean Conservancy, 2019). These businesses are typically small, family-run operations with fewer than ten employees, relying primarily on informal verbal or temporary agreements instead of formal contracts (Environment and Community Research [CECR], 2019). While they consider themselves business owners, most female scrap business owners play supportive roles, while men are more likely to make key decisions. Men tend to wield greater financial power within the waste industry due to their access to business networks, technical expertise, and higher-value waste. In contrast, women are primarily engaged in manual labor associated with low-value waste (Nguyen Thi, 2019).

Despite their contributions, IFWPs are frequently disregarded in current solid waste management systems, and as these rudimentary systems are upgraded, their jobs are at risk. Research has found that female waste pickers are more likely to suffer from miscarriages, infertility, hormonal problems, and breast cancer (United Nations Environment Programme [UNEP], 2019). Additionally, gender bias and societal stigma surrounding waste pickers persist (United Nations Development Programme [UNDP], 2022), exacerbating the vulnerability of IFWPs. Therefore, while designing policies and regulations, governments and communities must acknowledge the role of IFWPs and establish supportive frameworks to integrate them into the plastic waste management system.

In 2020, Vietnam enacted the Environmental Protection Law, which governs the application of EPR in plastic packaging.⁴ Decree No. 08/2022-ND-CP, promulgated by the Vietnamese Government on January 10, 2022, encompasses detailed provisions on EPR and roadmaps for establishing a circular economy. EPR is an environmental policy approach that extends the obligation of producers to the post-consumer period of the product's life cycle and came into force on January 1, 2024 (Organisation for Economic Co-operation and Development [OECD], 2016). Consequently, enterprises must establish systems for recollecting plastic packaging or delegate this responsibility to a Producer Responsibility Organization (PRO) that manages waste on their behalf.⁵ Depending on each specific case, PROs sign contracts with municipal authorities and/or waste management entities to collect, segregate, transport and

⁴ National Assembly, *2020 Law on Environmental Protection*, Art. 54 & Art.55.

⁵ National Assembly, *2020 Law on Environmental Protection*, Art.55.

recycle waste. This requirement also leads to competition with the informal sector for valuable waste, negatively impacting the livelihoods of IFWPs. Research indicates that the effectiveness of EPR in Vietnam will hinge on incorporating the informal sector into EPR programs (Phuong, 2021). EPR brings opportunities for IFWPs because the traceability requirement of the plastic value chain under EPR impacts the current waste management system and opens up opportunities to recognize waste pickers as contributors to the circular economy. A crucial question arises: How can informal waste pickers, particularly women, access, connect with, and benefit from EPR policies? This inquiry is imperative as EPR modernizes the waste collection system, primarily mobilizing cooperation among enterprises that formally manage and recycle plastic waste. Furthermore, if less plastic waste is collected informally, what lies ahead for the recycling workforce, especially IFWPs? Therefore, it is essential to examine and institutionalize the incorporation of IFWPs into plastic waste management, thereby enhancing their engagement in the circular economy through EPR implementation.

Current legal frameworks and policies

Some current solutions to plastic waste pollution in Vietnam are governed by a policy and legal framework issued by the Vietnamese government at the central and local levels regarding waste management and the circular economy. This framework aims to promote social inclusion and gender equality in the design and implementation of such initiatives.

The table below lists the instruments relating to plastic waste management in Vietnam and the inclusion of women. These instruments are organized in order of their legal authority, starting with policy documents, followed by legal documents, and arranged from the constitution to laws issued by the National Assembly and then sub-law documents.

Table. Vietnam's policies and legal instruments relating to plastic waste management and the inclusion of women

Name of Document	Main content relating to plastic waste management and inclusion of women
Resolution No. 36/NQ-TW dated October 22, 2018, of the 8th Congress of the 12th Party Central Committee on the Strategy for Sustainable	Prevent, control and significantly reduce marine pollution—the pioneer in the region in reducing marine plastic waste.

Name of Document	Main content relating to plastic waste management and inclusion of women
Development of the Marine Economy until 2030, Vision to 2045 ⁶	
Resolution of the 13th National Women's Congress ⁷	Protecting the environment and combating plastic waste are key tasks for the Women's Union and its members to carry out in the future.
2013 Constitution ⁸	Regulations on human rights (chapter II), including gender equality, labor rights, social security rights, and the right to freedom of association, "encourage all environmental protection activities" (Article 63).
2020 Law on Environmental Protection ⁹	<p>Gender equality and social security are stipulated in environmental protection principles (Article 4.3).</p> <p>Regulations on EPR with support in many forms for recyclers, without direct support for waste collectors (Articles 53 and 54); green credit granted to waste management investment projects (Article 149); the goal of developing a circular economy (Article 142).</p> <p>"Collection, transportation, and treatment of household solid waste generated from households are supported by the Vietnam Environmental Protection Fund" (Article 55(3)(a)).</p>
2019 Labor Code ¹⁰	<p>Labor rights (Article 5)</p> <p>Special regulations on female labor ensure gender equality (Chapter X), as well as domestic workers and workers in the fields of the arts, physical education, sports, and maritime occupations (Chapter XI).</p>

⁶ Central Committee, *Resolution No. 36/NQ-TW dated October 22, 2018*

⁷ Vietnam Women's Association (VWA), *Resolution of the 13th National Women's Congress*

⁸ National Assembly, *2013 Constitution*

⁹ National Assembly, *2020 Law on Environmental Protection*

¹⁰ National Assembly, *2019 Labor Code*

Name of Document	Main content relating to plastic waste management and inclusion of women
2013 Law on Employment ¹¹	Employment means an income-generating work activity not banned by law (Art.3.2)
2006 Law on Gender Equality ¹²	<p>“Ensure the mainstreaming of gender equality in legislative activities and enforcement; implementing gender equality is the responsibility of agencies, organizations, families and individuals” (Article 6).</p> <p>"Ensure gender equality in all fields of politics, economics, culture, society and the family" (Article 7).</p>
2020 Law on Investment ¹³	Scrap businesses are not listed in the conditional investment and business sectors. Scrap import is a conditional industry (Article 45 of Decree 08/2022/ND-CP guiding the 2020 Law on Environmental Protection).
2014 Law on Social Insurance ¹⁴	“Encourage and enable agencies, organizations and individuals to participate in social insurance” (Article 6).
The 2008 Law on Health Insurance (amended and supplemented in 2014) ¹⁵	The state provides health insurance premium support for individuals with meritorious service to Vietnam’s revolution and certain social groups.
Circular 11/2020/TT-BLDTBXH dated November 12, 2020, of the Ministry of Labor, War Invalids and Social Affairs, Promulgating the List of Arduous, Hazardous and Dangerous Occupations and Extremely Arduous, Hazardous and Dangerous Occupations ¹⁶	Waste collectors (with labor contracts) are recognized as working in heavy, hazardous environments of type IV and are, therefore, entitled to a toxic allowance policy.

¹¹ National Assembly, 2013 Law on Employment

¹² National Assembly, Law on Gender Equality

¹³ National Assembly, 2020 Law on Investment

¹⁴ National Assembly, 2014 Law on Social Insurance

¹⁵ National Assembly, 2008 Law on Health Insurance

¹⁶ MOLISA, Circular 11/2020/TT-BLDTBXH

Name of Document	Main content relating to plastic waste management and inclusion of women
Decision No. 450/QD-TTg dated April 13, 2022, of the Prime Minister on the National Environmental Protection Strategy to 2030, Vision to 2050 ¹⁷	Increase reuse, recycling, collection and treatment of plastic waste through the application of shared economic and digital-based business models.
Decision 1746/QD-TTg dated December 4, 2019, of the Prime Minister on the National Action Plan on Ocean Plastic Waste Management until 2030 ¹⁸ .	The Vietnam Women's Union is mentioned as a key and pioneering unit, along with the Trade Union and Youth Union, in the campaign to raise awareness for households, communities and society as a whole. Target to reduce the amount of plastic released into the ocean by 75 percent by 2030.
Directive No. 33/CT-TTg dated August 20, 2020, of the Prime Minister on Strengthening the Management, Reuse, Recycling, Treatment and Reduction of Plastic Waste ¹⁹	Stakeholders must actively and proactively participate in reducing plastic waste. Participation of the private sector and enhancing the role of communities and businesses in reducing, classifying, collecting, recycling and processing plastic waste.
Decision No. 1316/QD-TTg dated July 22, 2021, on approving the Project to Strengthen Plastic Waste Management in Vietnam ²⁰ .	Investigation, survey and assessment of the current status of the generation, collection and treatment of plastic waste and completion of policies and regulations on plastic waste management (Part II, Section 1). Developing a circular economy for plastics in Vietnam.
Decision No. 1407/QD-TTg dated August 16, 2021, promulgating the Project for Vietnam to proactively prepare and participate in building a Global Agreement on contemporary plastic pollution. ²¹	"Ensure full conditions for resources, information, and data to proactively and actively prepare and participate in negotiations, ensure rights, interests, and improve national capacity in preventing and combating ocean plastic pollution" (Article 1).

¹⁷ Prime Minister's *Decision No. 450/QD-TTg*

¹⁸ Prime Minister's *Decision 1746/QD-TTg*

¹⁹ Prime Minister's *Directive No. 33/CT-TTg*

²⁰ Prime Minister's *Decision No. 1316/QD-TTg*

²¹ Prime Minister's *Decision No. 1407/QD-TTg*

Name of Document	Main content relating to plastic waste management and inclusion of women
<p>Decree 08/2022/ND-CP dated January 10, 2022, detailing some articles of the 2020 Law on Environmental Protection (integrating the EPR framework)²²</p>	<p>Facilities that produce and import disposable plastic products and non-degradable plastic packaging must be responsible for recycling and treatment.</p> <p>Detailed regulations on the list of environmental protection activities eligible for incentives, support in terms of capital, land, tax incentives and fees, including investment projects in the fields of collection, processing, recycling or reuse waste.</p>
<p>Decision No. 2361/QD-UBND dated August 4, 2023, of the People's Committee of Nghe An Province on approving the project "propagating, mobilizing and supporting women to participate in classifying and treating waste at source and refraining from the use of plastic bags in Nghe An Province in the period of 2023 - 2027"²³</p>	<p>Affirming "the role and responsibility of the Women's Union in environmental protection" (Part 1, Section I).</p> <p>Determine the goal of establishing over 2,000 models of "turning waste into something useful" through scrap collection activities and waste classification models at source (Part 3, Section 1.2).</p> <p>Organize activities in pilot models: "Organize dialogues between officials, members, and women with the government and relevant departments to answer questions about environmental issues."</p>
<p>Plan No. 148/KH-UBND dated November 14, 2022, of the People's Committee of Thai Binh Province on the plastic waste management plan in Thai Binh Province for the period 2022 - 2025"²⁴</p>	<p>Encourage and enable functional and qualified organizations and individuals to collect, reuse, and recycle plastic waste in the province (Part II, Point 3)</p> <p>The Women's Union must coordinate and implement the above Plan (Section III.13)</p>
<p>Resolution No. 16/2019/NQ-HDND dated December 12, 2019, of the People's Council of Hai</p>	<p>Waste collectors in Hai Duong Province who are not part of a business or cooperative can receive 70% of their health insurance premiums covered by the state budget if they are</p>

²² Prime Minister's Decree 08/2022/ND-CP

²³ People's Committee of Nghe An Province, Decision No. 2361/QD-UBND

²⁴ People's Committee of Thai Binh Province, Plan No. 148/KH-UBND

Name of Document	Main content relating to plastic waste management and inclusion of women
Duong Province on the decision to support 70% of health insurance premiums for the elderly and waste collectors in the province from January 2020 to December 31, 2025 ²⁵	certified by the Commune People's Committee and do not have a health insurance card.

Evaluation of current Vietnamese policies and laws from the standpoint of enabling women in the informal sector to manage plastic waste

A review of the aforementioned documents reveals that Vietnam's national development strategies and sectoral development programs have acknowledged gender, the environment in general, and women and the environment in particular as transversal issues and essential goals. The Vietnamese government has demonstrated a resolute dedication to promoting social inclusion and gender equality in its plastic waste management policy. Nevertheless, Vietnam has yet to enact any legislation that formally designates waste picking as a protected job and occupation under employment law. As a result of their lack of official recognition as a profession, IFWPs are excluded from government welfare programs and are subject to many forms of discrimination.

Current legislation provides financial support exclusively for recyclers, leaving waste pickers without direct assistance.²⁶ As a result, whether informal waste pickers transition to formal status or not, their access to support from the EPR system hinges on the recycler. If there is an information asymmetry—meaning the waste picker lacks knowledge about the support available to recyclers—or if recyclers withhold information to benefit from the EPR system without redistributing resources to the waste pickers, then waste pickers will not receive any benefits.

Regulations should specifically target informal waste pickers, including IFWPs, to ensure that they receive the necessary support. To be able to access this support, informal waste pickers must be recognized as legal entities or registered businesses and possess tax identification codes. This requirement would facilitate their eligibility for assistance. Currently, it remains easier

²⁵ People's Council of Hai Duong Province, *Resolution No. 16/2019/NQ-HDND*

²⁶ National Assembly, *2020 Law on Environmental Protection*, Art.54(2).

for the formal sector to get support from the EPR system through recyclers. This advantage exists because the formal sector can provide invoices for collected scrap materials, giving them a concrete basis to get EPR support from recyclers when purchasing scrap.

Moreover, the status and function of IFWPs in Vietnam's plastic waste management policies and legislation remain ambiguous if not "forgotten." According to Mr. Nguyen Thi, Chief Expert of the Legal Department at the Ministry of Natural Resources and Environment, current regulations concerning domestic solid waste management do not consider gender factors directly or indirectly. In the next five years, the existing "Dong nat/scrap" system will continue to be effective for collecting and recycling waste, but it will begin to face competition from professional, modern organizations (Thi, 2022). Social security and gender equality are mentioned in the principles of the Law on Environmental Protection (2020); however, the role of IFWPs in waste management is not acknowledged in the law or related regulations and policies. Additionally, this group lacks all kinds of support. According to Vietnam's laws and policies, the capabilities, vulnerabilities, and varied social security requirements of IFWPs remain primarily unacknowledged and unreflected.

According to the Law on Social Insurance, waste pickers in the informal sector are not eligible for compulsory social insurance because they work without a labor contract.²⁷ The Law on Social Insurance and Health Insurance allows informal laborers to purchase voluntary insurance; however, the majority of them are unable to do this on account of their meager incomes, which range from USD 4.2. to 8.4 or approximately VND 100,000 to 200,000 (Environment and Community Research [CECR], 2019); Phong, 2020). The Center for Environment and Community Research (CECR) reports that female landfill laborers in Hanoi earn only 78 percent of what their male counterparts earn. Even purchasing voluntary insurance, IFWPs are only entitled to retirement and death benefits because the existing voluntary social insurance regime does not cover health insurance, pensions, and unemployment insurance.²⁸ Without a formal employment agreement, recognized professions, management, or representative organization, 97.9 percent of IFWPs lack insurance coverage (Dung, 2019; Environment and Community Research [CECR], 2019).

A survey conducted by CECR in Da Nang disclosed that 90 percent of roadside waste pickers are rural-to-urban migrant laborers who are not affiliated with any recognized labor organization or association. As a result, support for improved working conditions and higher rates for waste collection is unattainable for vulnerable IFWPs in Vietnam in the absence of an official

²⁷ National Assembly, 2014 Law on Social Insurance, Art 2.1.

²⁸ National Assembly, 2014 Law on Social Insurance, Art 3.3.

representative organization. Their integration into the EPR system is uncertain due to their lack of formal registration for waste-picking activities. This absence of registration means that there is no representative to communicate with municipal authorities and PROs. Consequently, they face challenges in accessing information about recyclable waste sources and staying informed about legal changes. In Vietnam, 12 out of 35 interviewees in the target audience expressed a desire not to join a waste pickers organization. They cited concerns that this integration model could lead to procedural and administrative difficulties, limiting the activities' flexibility.²⁹

While municipal authorities and communities generally accept informal waste pickers, certain provinces have issued official documentation approving their services. However, there is no conclusive evidence that the perspectives of IFWPs are being considered during the formulation and execution of plastic waste management policies.

In conclusion, the primary obstacle to incorporating IFWPs into the EPR system in Vietnam is the lack of formal recognition of their work, particularly for women who wish to enter recycling and higher-value markets. If the obstacles confronting IFWPs are resolved, this workforce can become an essential partner in the circular economy, contributing to minimizing plastic pollution's health and environmental impacts and promoting economic and human development.

Experience from other countries

Many nations prioritize legal aid, social recognition, and strengthening waste collection organizations to incorporate IFWPs in plastic management. The following are examples of policies and legislation from some countries that have similarities with Vietnam in terms of socioeconomic context when developing a circular economy and have effectively incorporated informal pickers into plastic waste management (Crivellari et al., 2008; Dias, 2009; Gunsilius et al., 2011; Samson, 2009).

India's 2006 National Environmental Policy mandated the recognition and enhancement of collection and recycling systems operating in the informal sector. Following this, the 2009 National Action Plan on Climate Change and numerous state legal documents reaffirmed the significance of waste pickers' duties (Chikarmane et al., 2008). The city administration of Pune has even authorized waste pickers to perform door-to-door waste collection. In addition to providing waste pickers with insurance coverage, the city government has issued these individuals

²⁹ This information is based on the author's interviews in May 2, 2024, with 35 IFWPs in Hanoi, the capital city, and Hai Phong, the coastal town.

with professional identification cards, which have assisted them in establishing themselves as service providers and laborers (Samson, 2009).

In 2010, Peru enacted Law 29.419 to regulate the activities of refuse pickers. This legislation was formulated through a participatory process involving representatives of waste collectors (Gunsilius et al., 2011).

The Brazilian National Solid Waste Policy of 2010 acknowledges waste collection cooperatives as service providers. As a result, the policy establishes a number of mechanisms to assist municipalities and cooperatives in integrating informal laborers into the solid waste treatment system (Dias, 2009). In addition to designating scavenging as a distinct category in its Occupational Classification since 2002, Brazil has constructed a nationwide database containing socioeconomic information regarding both formal and informal scavengers (Crivellari et al., 2008; Women in Informal Employment : Globalizing and Organizing [WIEGO], 2011). The Brazilian city of Diadema approved Law 2336/04, which requires waste picker groups participating in the city's source separation program to be paid a sum equal to each ton of recyclables collected as a private enterprise.

Businesses and industries can help waste pickers by placing recycling containers at customer collection sites. They can also invest in cooperative recycling depot development, technical support, and transactions with cooperatives for environmental services. Furthermore, a Social Fund established by the Brazilian Bank for Economic and Social Development provides cooperatives with access to funds for equipment and infrastructure (Gunsilius et al., 2011).

The aforementioned policies and laws have established specialized financial mechanisms for IFWPs to access capital and develop capacity, ensuring that waste pickers have a stable monthly income. By integrating IFWPs into the solid waste system, working conditions can be enhanced (uniforms, specially designed carts and buckets for waste collection, sorting space, etc.) and working hours can be adapted.

Waste pickers are organized in various forms, including cooperatives, groups, businesses, and micro-enterprises (Gunsilius et al., 2011). Some organizations are exclusively IFWPs, typically to better address gender stereotypes (Samson, 2009):

1. The Self-Employed Women's Association (SEWA) is the largest organization of women working in the informal sector in India (Self Employed Women's Association [SEWA], 2024).

Since its inception in 1972, SEWA has amassed an almost three-million-strong

membership of women representing around 67 professions. The organization advocates for and coordinates meetings of women to address professional challenges. It gives them the necessary identity, voice, and influence to affect policy.

Additionally, members of the association formed waste collection cooperatives in urban and rural regions. SEWA maintains partnerships with factories, hospitals, offices, and the Textile Labor Association (TLA) to stabilize waste sources. SEWA also contracts services to collect waste from residential areas.

The waste collection team leader's duty is to locate and assemble the greatest number of waste pickers. Every morning, they gather at the SEWA office to deliberate on a course of action before spreading throughout the city. They hold meetings to determine community members' needs and connect them to SEWA services.

Campaign groups educate members on the necessity of organizing and serve as a liaison between SEWA and its membership. SEWA has tackled a number of issues concerning waste pickers, including: promoting the establishment of a Government Welfare Board for informal sector workers through the issuance of petitions, letters, and ongoing meetings with government employees; rewarding members for garbage collection; and establishing the Gujarat Informal Economy Board Development Board in 2007. SEWA assists this welfare authority in the registration of its members. The waste disposal staff members have obtained the following through this committee: identification cards; medical reimbursement of up to USD 30 for members who require hospitalization at a government hospital for 24 hours; kits and the knowledge required to advance refuse classification courses.

In the meantime, SEWA maintains its advocacy efforts for the subsequent inquiries: scholarships and uniforms for the education of waste pickers' children; life and health insurance for members; increased annual medical reimbursement to USD 175 and coverage of all medical procedures, not just hospitalization; reimbursement for medical expenses incurred by members who are admitted to a nearby facility; substitute contracts executed with organizations that collaborate with waste picker members for the bidding system; for waste classification purposes, shady areas should be supplied in waste picker communities.

SEWA employs a dual approach encompassing struggle and development to sustain current livelihoods and augment the income of its members. SEWA expands its membership through co-op and partnership legal structures. In contrast to cooperatives, which serve as a legitimate framework for initiating economic activities, unions secure long-term benefits through negotiations with the government and unseen employers (such as scrap shop workers).

2. The Independencia de la Mujer (Woman's Independence) Cooperative was established in Montevideo, Uruguay on December 2, 2005.

The women initiators received support in registering their cooperatives, generating promotional materials that elucidated their initiatives, and soliciting residents to donate their waste to lessen the trash collection burden. Local businesses and households contribute recyclable waste that cooperative members collect. They fund the provision of this service through the sale of recyclables.

The cooperative's primary objective is to devise strategies for acquiring new customers and collecting recyclable refuse from existing clients. Relations between Independencia de la Soñ and cooperatives comprised solely of men, some of which are connected through family ties. Cooperative membership has enabled Independencia de la Soñ members to gain access to resources and support, increase their income, and advance as women in the industry (Samson, 2009).

3. The Coop Carmo cooperative was founded by women in Coopcarm, Brazil.

NGOs assisted women who depended only on church food distribution to become more knowledgeable about environmental concerns and backed initiatives to enhance food production, recycling, and sorting. Then, in 2003, they filed to become a legal entity.

In addition to electing directors, presidents, and administrators, cooperative members also form production, finance, and audit committees to assist in overseeing the cooperative's operations. Policies are established at the Annual General Meeting and routine meetings. Coopcarm collects recyclables along designated routes and rotates the communities in which it operates daily. They demonstrate to nearby businesses and residents the significance of waste management and its environmental and health benefits through awareness programs. The cooperative draws revenue from the sale of recyclables rather than receiving compensation for material collection. Cooperative members are compensated in accordance with the number of days worked and the collective sale of basic materials. In addition to wages, members of the cooperative are granted basic food cards by the city government, specifically designed for low-income workers (Samson, 2009).

Vietnamese policies and law proposals

Policy and legal reforms aimed at incorporating IFWPs into plastic management must

concentrate on the following concerns, according to the experiences of other nations and Vietnamese practice.

First, Vietnam should enact a welfare law for waste pickers that recognizes waste picking as an occupation and establishes a national database for this sector, including data disaggregated by gender. This recommendation stems from the fact that, as discussed above, the primary obstacle to incorporating IFWPs into the EPR system in Vietnam is the lack of formal recognition of their work. A law of this nature would ensure that the rights and needs of IFWPs are addressed as legal obligations rather than being subject to governmental goodwill. Additionally, such legislation would significantly reduce the stigma and insecurity of scavenging.

To protect the rights of IFWPs, waste picker welfare laws should include provisions that specify types of waste or disposal areas that are off-limits to women and define minimum safety requirements for waste collectors, sorters, processors, and recyclers. The law should encompass the following elements: (i) Municipal authorities should be required to consult with IFWPs, either in person or through an online portal, before drafting policies and regulations regarding plastic waste management. This consultation is crucial to ensure that emerging policies effectively address the concerns of a diverse range of stakeholders and promote their full engagement; (ii) Social inclusion and gender equality should be mandatory criteria for collective impact initiatives in the field of plastics management, ensuring that marginalized communities, which often lack access to essential services or support, benefit from these efforts; (iii) The mandatory issuance of identification cards for waste pickers should be enforced so they can use these cards for accessing, gathering, and selling domestic waste; (iv) There should be a compulsory provision of subsidized and suitable waste-picking equipment for IFWPs; (v) Waste pickers must be included in all social welfare programs; (vi) A cooperative bank should be established to provide credit facilities for underprivileged workers, modeled after the Brazilian Bank for Economic and Social Development (Dias, 2009). The welfare law for waste pickers, enacted by the highest legislative body, cannot regulate the micro-level issues faced by IFWPs. Instead, it can only regulate generally, in which it entrusts municipal authorities to create specific regulations that facilitate and protect IFWPs based on their local conditions.

Resolution 28-NQ/TW was passed to extend social insurance coverage, particularly to informal sector workers (Party Central Committee, 2018). In order to ensure that informal sector workers are adequately protected, it is necessary to provide them with access to social insurance benefits. Voluntary social insurance benefit forms must be supplemented within the Law on Social Insurance. The government must undertake research in order to develop short-term social insurance packages that are appropriate for informal sector workers in terms of payment rates,

benefits, and transaction methods. Furthermore, similar to the province of Hai Duong, the government must conduct extensive pilot programs for a system that enables women who collect plastic refuse in the informal sector to enroll in social insurance and health insurance (People's Committee of Nghe An Province, 2018)

Second, Vietnam must promote the formation and operation of coalition-based groups of informal waste pickers.

By organizing unregistered and non-contracted waste pickers into legally recognized organizations, they can better verify the origin and quality of the recycled waste they collect. This would enable their incorporation into the EPR system. Additionally, these organizations serve as a mechanism to seek awareness of the position that IFWPs deserve and to enhance their voices, visibility, and validity. A survey of the experiences of other countries demonstrates that IFWPs uniting as a legal entity have benefited waste pickers in the following ways: enhanced their status and self-esteem; raised members' income, thereby enhancing their quality of life; and contributed to the improvement of health by enhancing working conditions. There is a need to assist in establishing networks, furnish institutional frameworks for the employment of refuse pickers as service providers to local agencies and/or companies, circumvent intermediaries, thereby augmenting profits, and avert incidents of harassment and violence. Additionally, out of 35 target audiences, 23 expressed interest in joining a waste pickers' association. They believe such an association would enhance the quantity of waste collected by facilitating better information exchange among members regarding waste amounts and collection areas.³⁰ It would also strengthen connections with various scrap businesses, helping to reduce information asymmetries about pricing. The Vietnam Women's Union (VWU), which has been in existence for more than nine decades, represents the lawful and legitimate rights and interests of all classes of Vietnamese women, advocates for women's advancement and gender parity, and originates from Vietnamese reality (Vietnam Women's Union, 2024). Certain local Women's Unions have formed self-management organizations known as "green living women" clubs. The primary objectives of these clubs are to raise funds for charitable activities, collect plastic waste, and contribute to environmental cleanup efforts. However, these initiatives have failed to encourage IFWPs to migrate from rural to urban areas; they have only brought together women who have permanent domicile in the area (Hoa, 2023). Because IFWPs lack a legally recognized organization to advocate for their interests, they are frequently subject to the control of intermediaries and price pressure. Simultaneously, the waste collection infrastructure of the state (URENCOs) is

³⁰ This information is based on an interview with 35 IFWPs in Hanoi, the capital city, and Hai Phong, the coastal town, conducted by the corresponding author on May 2, 2024.

expanding and modernizing at a rapid pace, thereby creating direct competition with the waste system.

Moreover, because the EPR's support policies will exclusively benefit entities registered to collect and recycle refuse, namely those with a legal entity, it is imperative to formulate policies that transform the waste management sector. To ensure proper progression and safeguarding of the rights of IFWPs, it is imperative that these individuals obtain registration to operate within a legitimate organization (avoiding solo or domestic operations) and ultimately establish their own association.

Concerning organizational structure, IFWP organizations can be structured in various ways; however, the cooperative model with a network extending from the central to the grassroots level (commune, ward) is the most suitable. VWA ought to be the organization that initiates contact with, unites, and encourages regional IFWPs to form cooperatives. Women from other locations may join this organization as cooperative members to assist in collecting plastic debris from local households, stores, and streets.

Upon formation, cooperatives and groups affiliated with IFWPs shall become members of the Vietnam Cooperative Alliance System, an enduring political, social, and professional organization that was founded in 1946. Currently, networks exist at the provincial and central city levels as well as at the central level (Vietnam Cooperative Alliance, 2020). In the advancement of society, membership in a cooperative would grant its members equal authority, thereby replacing the employer-employee dynamic with unionization. These trade cooperatives give women greater bargaining power, access to credit, training and markets, and help them to build assets. Moreover, membership in a union with millions of members will guarantee that the government notices the IFWP's concerns.

In terms of operation, although IFWP cooperatives offer a legitimate framework for commencing economic endeavors, the Vietnam Cooperative Alliance intends to negotiate with the government and covert employers (e.g., workers at scrap shops) to secure enduring contracts and exert influence over the formulation of policies regarding the management of plastic waste.

Third, Vietnam must establish the necessary conditions for IFWPs to exercise their rights. The local context influences the requirements and demands of IFWPs; however, the following may constitute conditions and measures necessary to ensure the realization of their rights: (i) Offer IFWPs opportunities for capacity building via capacity building courses; (ii) Increase accessibility by instituting a transparent bidding process that enables refuse pickers to transition into contractor status. Providing sorting and baling infrastructure through qualified recycling

facilities encourages the use of technology (mobile phones, digital connections, information) to communicate with one another and the official system. Furthermore, by equipping them with these devices, they can efficiently identify materials that require collection and reconcile them with those of smugglers, recyclers, and exporters. Concurrently, the government is progressively implementing automatic collection technology in an attempt to eliminate the need for ineffectual visits to households. For instance, users can schedule appointments to purchase refuse and junk through the VECA application, which functions similarly to reserving a car with Uber or Grab (Trong, 2022).

In addition to financial resources from the state budget, Vietnam may solicit financial assistance from international organizations and the private sector to implement this proposal. Recycling companies also raised concerns about guaranteeing a sustainable supply from the informal economy, particularly IFWPs (Party Central Committee, 2018).

In addition, these companies have expressed a willingness to contribute to the cost of training waste collectors in plastic sifting techniques so that they may have access to a higher-quality plastic supply (Nguyễn, 2023). Regarding international organizations, a multitude of entities have rendered tangible assistance toward the collection of plastic waste in Vietnam (Hoang, 2023). Engaging in local initiatives to establish financial funding mechanisms (e.g., self-managed revolving funds, microcredit) for IFWPs is an additional approach that can assist these organizations in maintaining consistent access to financial resources and increasing their income.

Conclusion

Informal waste pickers (IFWPs) play a significant role in plastic waste management in Vietnam. To be incorporated into the recycling system under the EPR program, IFWPs must improve and reform their current informal methods of collecting recyclable waste.

For Vietnam to successfully integrate IFWPs into the EPR system, it is essential to enact legislation that formally recognizes waste picking as a legitimate profession. This legal recognition would allow IFWPs to register as workers within a legal organization and work towards forming their own associations. The Vietnam Women's Union (VWU) plays an important role in this process. Once organized, these "dong nat/scrap" workers will experience improved working conditions, gain access to financial support through EPR programs, and gradually adopt automated waste collection technologies. Additionally, Vietnam should establish support mechanisms to integrate these workers into the EPR system by providing capacity-building initiatives and financial assistance.

Incorporating IFWPs into plastic waste management is a complex process that requires

a coordinated approach. Therefore, it is vital to engage stakeholders from the public sector at both national and local levels, as well as the private sector and development partners. Their collaboration is essential for providing information, enhancing capacity-building efforts, advocating for necessary policy changes, and supporting the restructuring of the waste collection system in Vietnam.

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