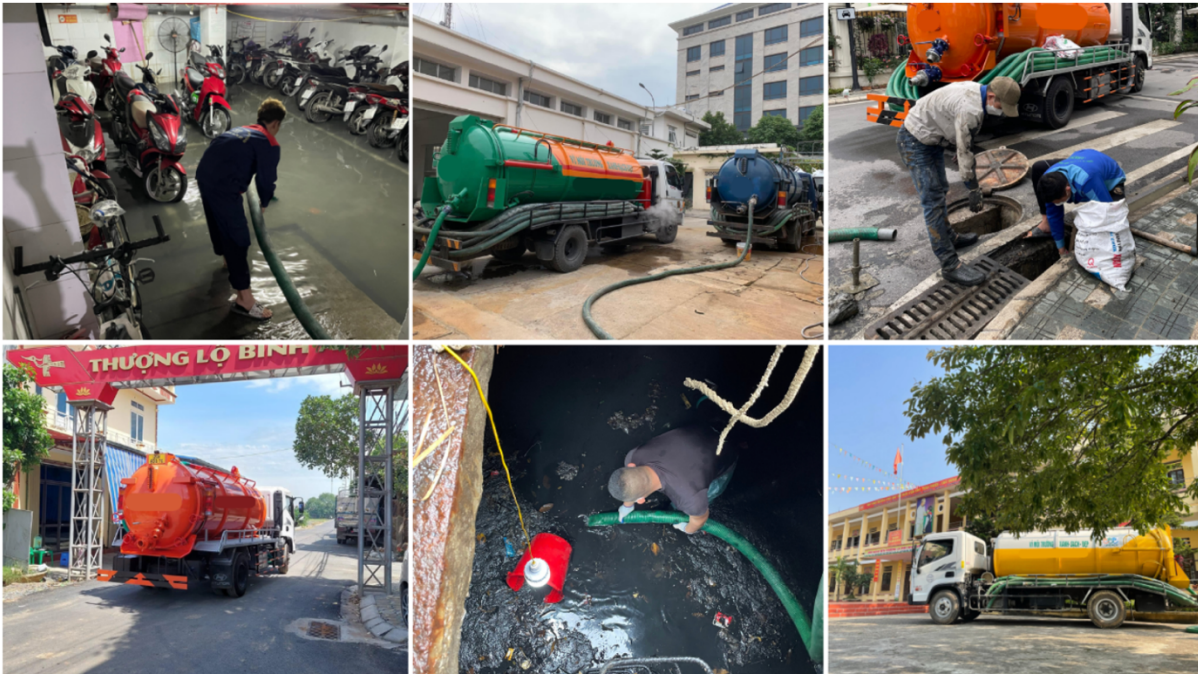


# REPORT

## Understanding the the dire plight of sanitation workers in Hanoi, Vietnam



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## Abstract

The fast pace of urban development observed in Hanoi in recent years has revealed shortcomings in the city's public sanitation infrastructure and how the current waste collection, processing, and management system is currently being pushed beyond its limits. This places great pressure on sanitation workers, who have already had to face hazardous working conditions, financial insecurities, and discrimination from society. In this study, we focus on a group of sanitation workers who participate and responsible for any step of only solid waste management and explore the landscape and difficulties of sanitation workers in Hanoi. A quantitative survey with 344 local sanitation workers in the solid waste management sector, focusing on workers in the Hanoi Urban Environment Company (URENCO) were surveyed throughout March of 2023. It is noted that URENCEO is responsible for solid waste collection and disposal, including fecal sludge from public toilets.

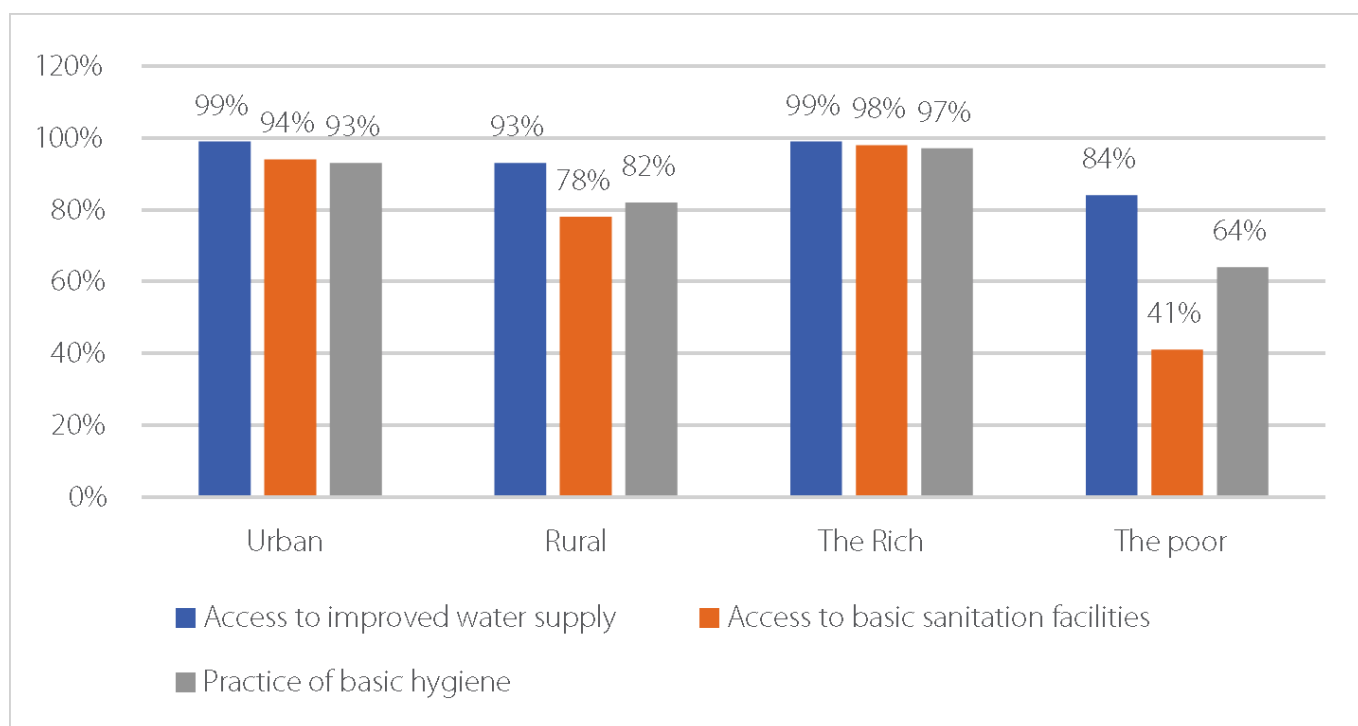
The results were then aggregated and analyzed. The research team found out that sanitation workers encounter different types of occupational and health hazards, and there are significant differences between two groups of sanitation workers in Hanoi: rural and urban workers (urban = 128, rural = 162). Particularly, urban respondents are more likely to encounter occupational and health hazards than rural workers, and rural workers are faced with more insecurities in terms of employment and finance. The results also showed that many workers are discriminated against, and that most discrimination comes from strangers/society in general). In addition, although employers of sanitation workers have secured for their employees the basic rights of workers, such as social insurance or workshops on safety topics as prescribed by the current legislature, other benefits, bonus, or allowances are still not received by sanitation workers. Thus, we recommend that efforts in policy making should be focused on leveling the urban-rural worker gap, providing workers with additional benefits as befitting their jobs. Efforts should also be made to raise the awareness of society on the importance of sanitation workers.

The research was conducted with the financial/ grant support from the [Initiative for Sanitation Workers](#) (ISW).

## I. INTRODUCTION

Vietnam has made many efforts in ensuring safely water and sanitation services<sup>1</sup> as mandated by the MDG7 and SDG6. For the past two decades, the situation of water and sanitation in Vietnam has been increased significantly in term of physical infrastructure, legal and institution establishment, and hygienic coverage. According to UNICEF (2020), around 90% of nationwide population have accessed improved water supply and hygienic sanitation facilities (Figure 1.). The central Government implemented several nation programmes on Water, Sanitation, and Hygiene (WASH) in company with announced key sector policies, decrees, and guidelines for water and sanitation improvement since the end of the 1990s. For example, the National Orientation Plan for Water Supply to 2010 (issued in 1998), the Rural National Target Program, the National Target Programme for Social and Economic Development in Ethnic Minority and Mountainous Areas, the Sustainable Poverty Reduction Programme, Decision 1930/2009/QDTTg: Approval of orientation for drainage development in Viet Nam urban and industrial zones toward 2025 and vision toward 2050; and Decree 80/2014/ND-CP: Decree of the drainage and treatment of wastewater.

**Figure 1. Access to improved water, basic sanitation, and hygiene (UNICEF, 2020)<sup>2</sup>**



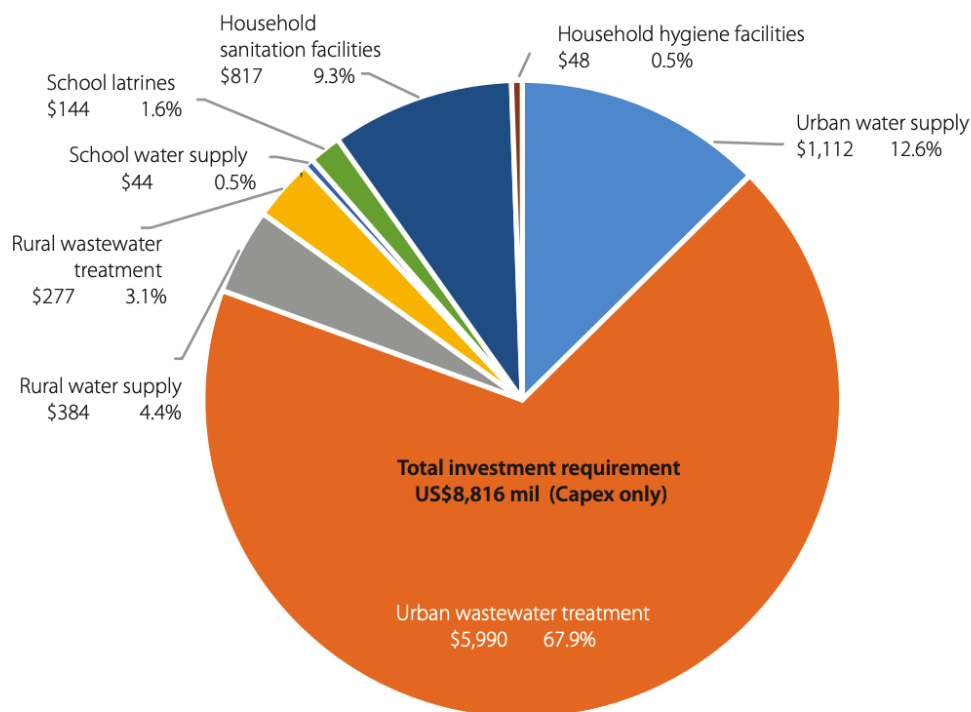
It is reported that the national budget for achieving of WASH objectives by 2030 is VND 204.3 thousand billion (US\$8.8 billion), equivalent to 3 per cent of Vietnam's 2020 GDP (UNICEF, 2022). Up to 68 per cent of that amount will be spent for urban wastewater treatment with focusing on infrastructure and facility development. Wastewater treatment is considered as the first priority in WASH objectives because Water pollution is a serious issue in Vietnam as a result of rapid industrialization and urbanization without adequate environmental management. In other words, solid waste theme is received little attention and funding from the government and local authorities. Also, there is few research and studies focusing on solid waste issues in general and sanitation workers in particular. In fact, the plight of sanitation workers in Vietnam has time and again come to

<sup>1</sup> WaterAid, ILO, & WHO (2019). *The hidden world of sanitation workers: Media briefing*. [https://washmatters.wateraid.org/sites/g/files/jkxooof256/files/the-hidden-world-of-sanitation-workers\\_1.pdf](https://washmatters.wateraid.org/sites/g/files/jkxooof256/files/the-hidden-world-of-sanitation-workers_1.pdf)

<sup>2</sup> UNICEF, Policy brief: Water, Sanitation and Hygiene in Vietnam, February 2020.

light, though through only anecdotal evidence<sup>3,4,5</sup> instead of being systematically documented. Studies into the dire situation of sanitation workers in Vietnam are also far and few between.

**Figure 2. Total capital investment requirements for meeting government objectives by 2030 (in US\$ million) (UNICEF, 2022)<sup>6</sup>**



Hanoi is the Capital of Vietnam with the area of more than 3,344 km<sup>2</sup> and population of more than 8.3 million people in 10 urban districts, 1 town and 18 rural districts. After the expansion in 2008, the high rate of urbanization and development has caused burden of infrastructure system of sanitation and water supply and treatment. For example, several communes in the the mountainous areas of the City cannot reach the treated water supply. Most of urban drainage network is out of date with limited scale and lack of maintenance. More than 90% of urban wastes has not yet been treated and directly discharged into rivers and lakes inside the City which makes environmental pollution becoming more serious. Urban garbage collection and treatment faces with many difficulties and entanglements; collection is not carried out comprehensively and collected garbage is mainly transported for burial, filling and not treated, etc. (Le Van Duc, 2012).

According to statistics, the city discards about 7,000 tones of waste every day, of which construction sites account for about 25 percent. Solid waste is mainly transported to four landfill sites built by sanitation companies in cooperation with land owners. However, all four sites were already full and may be closed soon. The Hanoi People’s Committee plans to build 14 waste collection and treatment sites, but so far no funding has been released to implement the project<sup>7</sup>.

<sup>3</sup> Tuoi Tre News (2018). Ho Chi Minh City feeds a world of garbage underground. <https://tuoitrenews.vn/news/society/20180706/ho-chi-minh-city-feeds-a-world-of-garbage-underground/46566.html>

<sup>4</sup> Vietnamnet (2020). A day of sanitation workers: Stay in sewer to keep Hanoi clean. <https://vietnamnet.vn/en/society/a-day-of-sanitation-workers-staying-in-sewer-to-keep-hanoi-clean-695360.html>

<sup>5</sup> VnExpress (2020). Saigon sewer cleaners keep life from flowing. <https://e.vnexpress.net/news/life/trend/saigon-sewer-cleaners-keep-life-flowing-4147023.html>

<sup>6</sup> UNICEF, Assessment of WASH Funding and Financing in Vietnam, November 2022.

<sup>7</sup> Vietnam Plus (2018). Hanoi waste collection faces challenges. <https://en.vietnamplus.vn/hanoi-waste-collection-faces-challenges/141993.vnp>

In Hanoi, environmental sanitation management in the city was carried out in the form of centralized bidding by a state-owned company name Hanoi Urban Environment Company (URENCO). The company is responsible for solid waste collection and disposal, including fecal sludge from public toilets.

This fact poses greater challenges when an increasing pressure from maintaining the sanitation system together with occupational risks and costs is putting an onerous burden on sanitation workers. Filling this void, this exploratory research aims to shed light on current challenges facing sanitation workers in Hanoi. Workers, while delivering sanitation services, are directly exposed to hazardous biological and chemical agents, which puts their health at risk. Earning meagre income and suffering from social discrimination, they remain vulnerable due to inadequate legal protection.

Based on initial observation and reasoning, this research identifies four key challenges<sup>8</sup> facing sanitation workers, namely (i) occupational and health hazards, (ii) financial insecurity, (iii) social stigma and discrimination, (iv) weak legal protection and invisible workforce. These four challenges shall form the springboard for us to gather evidence on the ground.

## **2. RESEARCH OBJECTIVES & METHODOLOGY**

### **2.1 Research objectives**

The overarching goal of this research is to understand the dire plight of sanitation workers in Hanoi, Vietnam. This initial evidence-based understanding should later inform policies and actions to improve the conditions of sanitation workers in Vietnam. To realize this goal, we identify key objectives as follows:

1. Understand current practice and sanitation landscape, with a focus on those directly involved in fecal waste management in Hanoi;
2. Examine the relevance of the aforementioned four challenges in the context of Vietnam;
3. Identify the popularity and severity of those challenges among sanitation workforce in Vietnam;
4. Systemize pertinent policies and regulations that regulate the delivery of sanitation work and protect the rights of sanitation workers in Vietnam;
5. Identify existing support system and good practices that help improve the lives and working conditions of sanitation workers;
6. Identify key areas for action in the context of Vietnam.

Our research should improve the conditions of our ultimate beneficiaries – sanitation workers via two main channels, which are facilitated by research uptake and dissemination of findings.

First, this research aims to raise public awareness on the essential yet low-grade sanitation jobs that often go unnoticed. By laying bare the plight of sanitation workers, we hope to draw public attention to the challenges faced by these workers. Heightened awareness can be translated into changes in behaviors concerning public hygiene, the household design of on-site sanitation systems (e.g., septic tanks), and the collective protection of public drainage system.

Second, various actors are making efforts to improve sanitation workers' conditions and rights, though these efforts are ad hoc and fragmented.<sup>9</sup> In Vietnam, there have been some good practices where sanitation

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<sup>8</sup> We draw this insight from the report *Health, Safety, Dignity of Sanitation Workers* by ILO, WaterAid, the World Bank, and WHO (2019). This is thus far the most comprehensive global report on the conditions of sanitation workers.

<sup>9</sup> ILO, WaterAid, the World Bank, & WHO (2019). *The Health, Safety and Dignity of Sanitation Workers: An Initial Assessment*. [https://www.ilo.org/sector/Resources/publications/WCMS\\_728054/lang--en/index.htm](https://www.ilo.org/sector/Resources/publications/WCMS_728054/lang--en/index.htm)



workers' insurance is paid by employers.<sup>10</sup> However, the impact of interventions like this are not well-known, neither how popular this practice is. Through this research, we contribute to the collective understanding of the current situation of sanitation workers, and thus help build the evidence base to inform more comprehensive and concerted efforts by various actors. Employers can use our research findings to explore the risks and costs of sanitation jobs from their workers' perspectives. Findings from this research may inform policymakers of areas where policies and regulations fail to adequately protect workers. Advocacy groups and associations working to empower sanitation workers could use the research findings as evidence to further their cause and amplify voices of these workers.

## 2.2 Research methodology

### *Scope of work*

In this study, we focus on the problems of sanitation workers directly involved in the management of solid waste, including both waste in solid form and fecal sludge along the sanitation service chain. We chose Hanoi, the capital city, with 2455 people per square kilometer<sup>11</sup>, the second highest in Vietnam, as the location of this study. In Vietnam, it should be taken into consideration that fecal waste is included in solid waste and also often treated together within solid waste management cycle<sup>12</sup>. Due to high population density, sanitation needs are heightened and so is requirement for maintenance.<sup>13</sup> Plus, there are several problems related to the public sanitation system in Hanoi due to the unsynchronized development of infrastructure and the rapid growth of urban population.<sup>14</sup>

### *Methodology*

To realize research objectives, we construct a quantitative research design to collect and analyze quantitative data. We conducted a survey among 344 sanitation workers in urban and rural districts of Hanoi, including employees in two big sanitation service companies (Hanoi Urban Environment Company (URENCO) managing both solid waste and fecal sludge, and Hanoi Sewerage and Drainage Company (SADCO) responsible for wastewater and sludge treatment), and sanitation workers of district's cooperatives. Hence, workers who participated in the study deal with both fecal and solid waste. Literature and materials studied include but are not limited to legal documents on labor, personal protective equipment, occupational health and safety, relevant reports, academic papers, and media news.

### *Sampling*

For this survey of sanitation workers, the proposed sample size for each province will be calculated using the following standard formula with error of 0.05.

$$n = \frac{z^2(p.q)}{e^2}$$

The margin of error here (e) is equal to 0.05, while the Z-value here is equal to 1.96 for 95% confidence level. The percentage of picking a choice, which is the probability that the worker will attend to the survey, will

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<sup>10</sup> Lao Động (2020). *Được đóng bảo hiểm COVID-19: Công nhân môi trường yên tâm làm việc hơn*. <https://laodong.vn/cong-doan/duoc-dong-bao-hiem-covid-19-cong-nhan-moi-truong-yen-tam-lam-viec-hon-792041.ldo>

<sup>11</sup> <https://www.statista.com/statistics/1188687/vietnam-urban-cities-population-density/>

<sup>12</sup> Law on Protection of the Environment of Vietnam no. 72/2020/QH14, issued on 2020

<sup>13</sup> Payal Hathi, Sabrina Haque, Lovey Pant, Diane Coffey, Dean Spears; Place and Child Health: The Interaction of Population Density and Sanitation in Developing Countries. *Demography* 1 February 2017; 54 (1): 337–360. doi: <https://doi.org/10.1007/s13524-016-0538-y>

<sup>14</sup> Le Ngoc Cau, Hiroyasu Satoh, Takashi Mino. *The Existing Urban Environmental Sanitation System in Hanoi and Problem Related*. <http://www.wepa-db.net/pdf/0703forum/paper26.pdf>

be assumed as 0.5. Using the above formula and associated assumptions, the estimated sample will be **384**. Initially, the sample is planned to be disaggregated according to gender, type of works, type of employers. However, upon approaching the potential targeted group, the research team decided to disaggregate sample to settlement of workers in urban and rural areas.

### *Fieldwork*

The research team divided sample size into six districts of Hanoi: three urban districts including Hoan Kiem, Dong Da, and Hai Ba Trung; and three rural districts including Gia Lam, Dong Anh, and Hoai Duc. Enumerators were required to actively approach workers in their assigned areas, with conditions that they are working as waste collectors, drivers of compactor trucks, workers pumping septic tanks or dredging waste in ponds. The research team assigned two enumerators in each district, for a total of nine enumerators. The survey was conducted in 11 days, from February 9<sup>th</sup> 2023 to February 20<sup>th</sup> 2023.

The target sample size for each district is 64 respondents. The actual number of respondents are presented in the table below.

***Table 1. Sample size and number of survey respondents (people)***

District	Sample size	Actual respondents
<i>Urban districts</i>		
Hoan Kiem	64	64
Dong Da	64	62
Hai Ba Trung	64	56
<i>Rural areas</i>		
Gia Lam	64	64
Dong Anh	64	64
Hoai Duc	64	34
<b>Total</b>	<b>384</b>	<b>344</b>

### *Data collecting method*

This survey used the following research methods: (i) literature review; and (ii) quantitative research.

Thus, the research team collected and reviewed secondary documents and data including documents related to the socio-economic context of Hanoi, sanitation landscape of Hanoi, legal and state management documents, research reports and reports that analyzed survey results. These documents were related to sanitation and sanitation workers, providing a background knowledge of the issue in similar countries to Vietnam and in Viet Nam particularly, as well as regional best practices.

To collect primary data, the research team conducted a quantitative survey, using the direct interview method. The questionnaire was designed to measure the opinions, perspective, and assessments of sanitation workers in Hanoi on their occupations, financial status, insurance, and benefits, working environment, health problems, and social responses towards their works. There is no limitation on age, sex, and marital status of the respondents, except the conditions that they have to work in the environmental sanitation sector. The actual number of quantitative interviews were lower than the proposed plan, as depicted in the above Table.

As the survey used tablet to record the data, while the fieldwork is conducted, data was uploaded frequently to our central server once the filled form was completed for each interviewee for data storage and backup. DEPOCEN staff at the back office followed up with the data collected and checked the reliability and conformity of the filled form and informed the supervisors at fieldwork for adjustment of activities if any problem arose.

After the fieldwork was completed, all data was transferred to STATA – professional statistical software. Data then was cleaned and checked for further processing and analysis. Cleaning data eliminated errors made during data entry as well as unusable data.

Descriptive statistics (e.g., frequency distributions, cross-tabulations, graphs) were run on all variables to screen the data for anomalies, and to assess the proportions of non-response and extent of nonresponse prejudices. Descriptive statistics were also run on variables to screen for violation of assumptions of normality and to ensure sufficient heterogeneity in responses.

#### *Limitations and mitigating solutions*

During implementation, this study encountered some hindrances. The limitations of the study and mitigating solutions are as follows.

- In this study, we define sanitation workers, or environment workers as people who participate and responsible for any step of solid waste management. This definition is narrower than universal definition that is who directly involved in the “cleaning, maintaining, operating, or emptying” a sanitation technology, pits, manholes, sewers, and septic tanks, which focus more on workers dealing with fecal sludge and excreta<sup>15</sup>. Hence, surveyed sanitation workers in this study are mostly workers of URENCO company in Hanoi. This is due to the fact that in Hanoi, sanitation work is primarily controlled by URENCO. A solution to diversify the sample is to approach workers in suburban areas who are not workers of URENCO, for example, workers in Hoai Duc district are employees of Thanh Cong cooperative. However, it must be noted that the population size of workers out of URENCO is much less than that of URENCO’s workers.
- Implementation of the survey is delayed due to the occurrence of Covid-19 in Hanoi, and the long procedure of receiving approval from URENCO to approach their workers. Initially, the research was started in early 2022 after receiving grants, however, Covid-19 was still making huge impacts on Hanoi at that moment, thus, causing difficulties to conduct face-to-face interviews or surveys with workers. Furthermore, since the research team did not receive any support and approval from sanitation companies after sending correspondences to approach workers formally, we decided to approach workers informally by having enumerators make direct contact with workers during their working hours in six districts.
- Implementation of expected in-depth interviews is also delayed and was not conducted as anticipated. Initially, the research team contacted approximately 10 branches of sanitation companies in Hanoi via correspondences, emails, and phone calls to invite company’s representatives and their workers participate in interviews, however, there was no positive responses. Regarding interview with experts

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<sup>15</sup> World Bank, ILO, WaterAid, and WHO. 2019. Health, Safety and Dignity of Sanitation Workers: An Initial Assessment.

and relevant stakeholders in this field, the research team also did not receive any favorable responses to conduct interviews.

### 3. KEY FINDINGS

#### 3.1 Understand current practice and sanitation landscape, with a focus on those directly involved in solid waste management in Hanoi

##### *Overview of solid waste management in Hanoi*

Hanoi is the capital of Viet Nam, with the average population of 8,330,800 people<sup>16</sup>. Hanoi has 12 urban districts (4,095,400 people), and 17 rural districts (4,235,500 people) (General Statistics Office, 2021), in which the entire administrative boundary of Hanoi capital is 3,344.6 km<sup>2</sup> in total<sup>17</sup>. According to statistics of the General Statistics Office (GSO) of Vietnam, the average collected solid waste treated per day in 2020 of the City is relatively high, with 6,500 tons of total domestic solid waste<sup>18</sup> per day, in which 6,170 tons are treated in accordance with standard national technical regulations<sup>19</sup>. These amounts rank Hanoi in the top three provinces with highest collected domestic waste per day nationally (Dong Nai is the province with highest records, with 21,000 tons of collected domestic waste per day). The city has a fast-paced urbanization process and high population density of 2,480 people per square kilometer, thus, keeping a well-maintained sanitation system poses a big challenge.

In terms of infrastructure, solid waste in Hanoi is mainly transported to four landfill sites built by sanitation companies in co-operation with land owners: Van Noi and Nguyen Khe (Dong Anh District), Vinh Quynh (Thuong Tin District) and one in Dan Phuong District<sup>20</sup>. The city also has two other waste treatment plants, the Nam Son Waste Treatment Complex in Soc Son District and Xuan Son solid waste treatment area in Son Tay Town<sup>21</sup>. Statistics from Hanoi's People Committee show that so far, the rate of solid waste collection is approximately 100% and more than 90% in urban areas and rural areas, respectively.

According to Decision No. 609/QD-TTg issued on 2014 in approval of plan for solid waste treatment of Hanoi capital to 2030 vision to 2050, the solid waste management includes following steps: management planning activities, investment in construction of solid waste management facilities, activities of classification, collection, storage, transportation, process, treatment, reuse and recycling solid waste in order to prevent and minimize harmful impacts on the environment and human health<sup>22</sup>.

The detailed process of collecting and transportation of solid waste in Hanoi's areas is regulated as in the figure below. The process includes three main steps: (1) collect solid wastes on streets manually or mechanically, (2) transfer to compactor trucks (capacity of less than 5 tons), (3) transport to transit waste station or treatment plants.

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<sup>16</sup> <https://www.gso.gov.vn/wp-content/uploads/2022/08/Sach-Nien-giam-TK-2021.pdf>

<sup>17</sup> <https://thuvienphapluat.vn/van-ban/Xay-dung-Do-thi/Quy-et-dinh-609-QD-TTg-nam-2014-Quy-hoach-xu-ly-chat-thai-ran-Ha-Noi-den-2030-tam-nhin-2050-227455.aspx>

<sup>18</sup> Solid waste is waste in solid form or sludge, as defined in Article 4, point 19, Law on Protection of the Environment of Vietnam no. 72/2020/QH14, issued on 2020

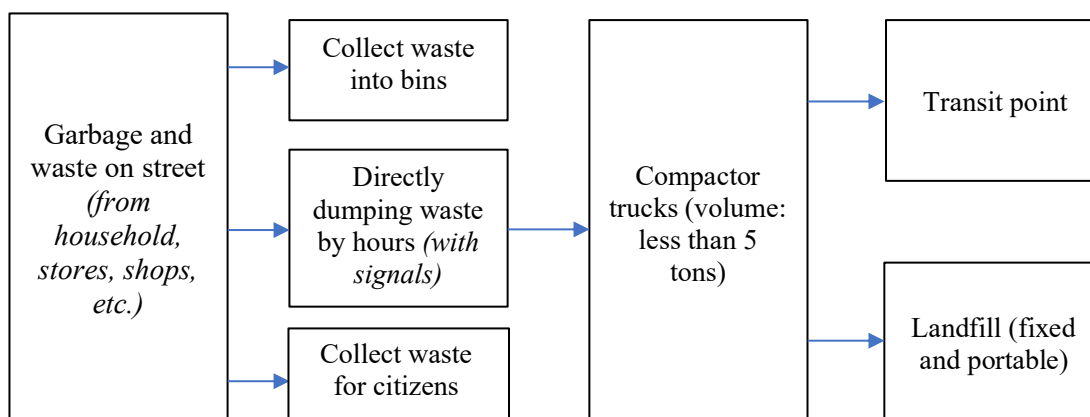
<sup>19</sup> QCVN 61-MT:2016/BTNMT

<sup>20</sup> <https://vietnamnet.vn/en/hanoi-waste-collection-faces-challenges-E213055.html>

<sup>21</sup> <https://vietnamnet.vn/en/hanois-landfills-overloaded-685456.html>

<sup>22</sup> <https://thuvienphapluat.vn/van-ban/Xay-dung-Do-thi/Quy-et-dinh-609-QD-TTg-nam-2014-Quy-hoach-xu-ly-chat-thai-ran-Ha-Noi-den-2030-tam-nhin-2050-227455.aspx>

**Figure 3. Process of collecting and transportation of solid waste on streets of Hanoi city<sup>23</sup>**



### Stakeholder mapping

Stakeholders in solid waste management of Hanoi mostly are governmental bodies and state-owned enterprises. The detailed stakeholder mapping is presented in the table below.

**Table 2. Mapping of stakeholders involve in solid waste management of Hanoi**

Type of stakeholder	Name of stakeholder	Roles in solid and fecal waste management sector
Public entity	Ministry of Construction	Line ministry for oversight of urban water supply, sanitation, and drainage <sup>24</sup>
Public entity	Ministry of Natural Resources and Environment	Perform state management of solid waste; direct, guide and inspect the management of ordinary industrial solid waste, daily-life solid waste, hazardous waste, recycling, collection, and treatment of waste <sup>25</sup>
Public entity	Ministry of Health	Management of both ordinary and hazardous medical waste within the location of healthcare establishments, including classification, collection, storage, minimization, recycling, transportation, documentation, and reporting <sup>26</sup>
Public entity	Hanoi People's Committee (HPC)  Department of Construction	Legal owner of wastewater infrastructure
Public entity	District and Commune People's Committees	Organize the discharge of wastewater in district and commune levels

<sup>23</sup> According to Decision 30/2020/QĐ-UBND on issuing procedure and budget cost norm for environmental sanitation maintenance of Hanoi city, issued in 2020.

<sup>24</sup> <http://moc.gov.vn/vn/tin-tuc/1276/45150/ministry-of-construction.aspx>

<sup>25</sup> <https://thuvienphapluat.vn/van-ban/Bo-may-hanh-chinh/Nghi-dinh-68-2022-ND-CP-chuc-nang-nhiem-vu-quyen-han-va-co-cau-to-chuc-cua-Bo-Tai-nguyen-530216.aspx>

<sup>26</sup> <https://vanban.chinhphu.vn/default.aspx?pageid=27160&docid=204797>

State-owned enterprise	Hanoi Sewerage and Drainage One-Member State Company Limited (HSDC)	Delegated by HPC, responsible for treatment of wastewater
State-owned enterprise	Hanoi Urban Environment Company (URENCO)	Responsible for solid waste collection and disposal, including fecal sludge from public toilets

According to Hanoi Department of Construction, environmental sanitation management in the city was carried out in the form of centralized bidding<sup>27</sup>. The state-owned company (Hanoi Urban Environment Company (URENCO) was considered to monopolize the market, with eight state-owned branches. After the expansion in 2008, URENCO expanded its scope and cooperated with other private companies or cooperatives. Solid waste collection in Hanoi are all under management of URENCO (see Table 3 for full list)<sup>28</sup>. Below is the list of private companies and cooperatives participating in solid waste collection and transportation in Hanoi.

**Table 3. List of private companies and cooperatives in solid waste management in Hanoi**

No.	Name of company / cooperative	Type	Area coverage
1	Green Environment Joint Stock Company	Joint stock company	
2	Environment Technology and Ecology Joint Stock Company	Joint stock company	
3	Thanh Cong cooperative	Cooperative	Hoai Duc, Thanh Xuan, Dan Phuong, and Thach That district
4	Noi Bai Commerce Joint Stock Company	Joint stock company	Soc Son district
5	Mai Dinh cooperative	Cooperative	

#### *Hanoi Urban Environment Company Limited (URENCO)*

Hanoi Urban Environment Company Limited (URENCO) is a state-owned enterprise operating under the Hanoi People's Committee. Currently, the company consists of 22 member units with nearly 5000 employees<sup>29</sup>.

URENCO was established in 1960 under the name Hanoi Sanitation Company. In 1991, the company changed its name into Hanoi Urban Environment Company, abbreviated as URENCO. From the period of 1991 to 1995, the company focused on improving technology and working conditions for workers, by launching new lines of garbage cranes and garbage handcarts. From the period of 1996-2000, URENCO launched newly built garbage compactors, and changed the waste transporting method from open to closed, improving the process of waste collection and transportation. In 2001, URENCO built Cau Dien waste processing factory and Nam Son (Soc Son district) medical waste treatment plant that applied new environment treatment technology.

In 2005, URENCO changed to the operating model of a state-owned one-member limited liability company. From 2009 to 2014, the company invested in buying dozens of new compactor trucks, road irrigation trucks, garbage trucks, dust collectors and modern compaction equipment. In 2009, URENCO successfully

<sup>27</sup> <https://www.vietnamplus.vn/ha-noi-chi-dao-xu-ly-viec-cong-nhan-moi-truong-bi-no-luong/720674.vnp>

<sup>28</sup> VEPR. 2016. Mid-term Reform in Utility Services Market: The Case of Municipal Solid Waste Management System

<sup>29</sup> <https://urengo.com.vn>

launched the wastewater treatment station No. 2 at Nam Son waste treatment plant, and coordinated with PJI-LFGC Canada Company to start the project of reducing waste generated from the landfill. In 2013, URENCO started the construction of industrial waste incinerator to generate electricity at Nam Son treatment plant, sponsored by Japan's NEDO organization

In 2014, URENCO inaugurated and operated septic tank sludge treatment plant at Cau Dien treatment plant, with a capacity of 300 tons per day, improving the capacity of septic tank sludge treatment in Hanoi city. In the same year, the average income of employees of the company is reported to reach 6.2 million VND/person/month (an increase of 1.5 times compared to 2010).

Table below presents the branches and affiliates of URENCO<sup>30</sup> up to now.

**Table 4. Branches and affiliates of URENCO**

<b>No.</b>	<b>Name of affiliate / member</b>	<b>Type of affiliate</b>	<b>Area manage</b>
1	URENCO 1 – Ba Dinh branch	State-owned enterprise	Ba Dinh district
2	URENCO 2 – Hoan Kiem branch	State-owned enterprise	Hoan Kiem district
3	URENCO 3 – Hai Ba Trung	State-owned enterprise	Hai Ba Trung district
4	URENCO 4 – Dong Da branch	State-owned enterprise	Dong Da district
5	URENCO 6 – Xuan Son branch	State-owned enterprise	Xuan Son treatment plant, Son Tay district
6	URENCO 7 – Cau Dien branch	State-owned enterprise	Cau Dien commune, Nam Tu Liem district
7	URENCO 8 – Nam Son branch	State-owned enterprise	Nam Son treatment plant, Soc Son district
8	URENCO 5 – Tay Do Urban Environment Joint Stock Company	Joint stock company (Equitisation)	Tay Ho district
9	URENCO 10 – 10 Urban Environment and Industry Joint Stock Company	Joint stock company (Equitisation)	N/A
10	URENCO 11 – 11 Urban Environment and Industry Joint Stock Company	Joint stock company (Equitisation)	N/A
11	Tu Liem Urban Environment Joint Stock Company	Joint stock company (Equitisation)	N/A
12	Thanh Tri Urban Environment Joint Stock Company	Joint stock company (Equitisation)	Thanh Tri district
13	Gia Lam Urban Environment Joint Stock Company	Joint stock company (Equitisation)	Gia Lam district
14	Dong Anh Urban Environment Joint Stock Company	Joint stock company (Equitisation)	Dong Anh district
15	Soc Son Urban Environment Joint Stock Company	Joint stock company (Equitisation)	Soc Son district
16	Son Tay Urban Environment and Industry Joint Stock Company	Joint stock company (Equitisation)	Son Tay town

<sup>30</sup> <https://urengo.com.vn/vi/cac-don-vi-thanh-vien/>



The sanitation workforces of Hanoi are facing several burdens and challenges. Several challenges that Hanoi's sanitation workers are facing are increased workload, poor working conditions, low income, etc.

Particularly, Hanoi currently has four landfill sites: Van Noi and Nguyen Khe (Dong Anh District), Vinh Quynh (Thuong Tin District) and one in Dan Phuong District; and two other waste treatment plants: the Nam Son Waste Treatment Complex (Soc Son district) and Xuan Son solid waste treatment area (Son Tay town). In recent years, two treatment plants of Nam Son and Xuan Son often faced unfavorable conditions due to conflict of interests, unaddressed regimes and policies in compensation for site clearance and request for early relocation of households in areas affected by the environment by local residents<sup>31</sup>. The situation led to congestion in solid waste transportation from the center of Hanoi to treatment plants, causing serious environmental pollution as well as burden for workers who are in charge of waste collecting and transporting. They had to work overtime with their shift extending to more than 12 hours or work from night to early morning, waiting for compactor trucks to arrive and finishing their work as procedure.

In addition, from 2021, Covid-19 created severe impacts on working conditions of sanitation in Hanoi. General Director of URENCO, Nguyen Huu Tien, shared at the Company Conference in 2022 that in 2021, the Covid-19 epidemic caused complexity and greatly affected the company's business plan and sanitation works of the city in general<sup>32</sup>. The adverse effects of Covid-19 further placing more burden for workers in sanitation sector in working overtime, late payment of salary, and other difficulties.

Sanitation workers must expose to hazardous environmental conditions daily. They have to deal with stench from waste collecting, pit emptying or fecal sludge, which may lead to potential health problems such as breathing problems, headache, nausea, vomiting, or vertigo<sup>33</sup>. Several occupational accidents can happen to workers, including scratch, infections, tetanus, and poisoning because accumulated gas in the sewers. In some cases, workers might experience external accidents, as some sanitation workers in Hanoi were recorded to encounter car and motorbike accidents during their workhours, which caused severe sequelae or injuries up to 80% injury scale values<sup>34</sup>.

It is reports that many sanitation workers choose to quit their jobs due to low income without any supporting mechanism, especially under impacts of Covid-19 with increasing inflation and other economic downturn scenarios. Furthermore, Covid-19 leaves many industries had to close or suspend operations, resulting in less waste generation, which reduces the company's revenue from garbage<sup>35</sup>. Inflation, consumable supplies, increasing in petrol and oil prices and garbage disposal, etc., are other factors leading to decrease in the income of environmental workers. Current policies also cannot provide better income conditions for sanitation workers, given that all operation costs is increasing while cost norm for sanitation services remain unchanged since 2016 according to Decision no. 6841/2016/QĐ-UBND of Hanoi's People Committee<sup>36</sup>.

Workers in this sector are often known to experience social stigma and discrimination. They may experience dislike or contemptuous attitudes from people, given the bias that they are working with wastes and dust as the nature of their job<sup>37</sup>. Other stigmas are pertinent with the workers as they are poor, low educated, illiterate, or jobless, which are the reasonable reasons why they choose to do such arduous and hazardous jobs. Moreover, review from relevant international documents that workers in sanitation sector might encounter

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<sup>31</sup> <https://laodong.vn/xa-hoi/kho-nhu-cong-nhan-moi-truong-nhung-ngay-bai-rac-nam-son-bi-chan-819671.lido>

<sup>32</sup> <https://kinhtedothi.vn/muc-thu-nhap-cua-cong-nhan-ve-sinh-moi-truong-chua-tuong-xung-voi-cong-suc.html>

<sup>33</sup> <https://thoatnuochanoi.vn/tin-tuc-chi-tiet/21297/lam-ban-voi-bun-thai>

<sup>34</sup> <https://laodong.vn/xa-hoi/cong-nhan-ve-sinh-moi-truong-nghe-tham-lang-thuong-truc-hiem-nguy-856150.lido>

<sup>35</sup> <https://www.vietnamplus.vn/ha-noi-thu-nhap-sut-giam-nhieu-cong-nhan-moi-truong-xin-nghi-viec/772541.vnp>

<sup>36</sup> <https://thuvienphapluat.vn/van-ban/Xay-dung-Do-thi/Quy-et-dinh-6841-QĐ-UBND-quy-trinh-dinh-muc-kinh-te-ky-thuat-don-gia-duy-tri-ve-sinh-moi-truong-Ha-Noi-2016-336044.aspx>

<sup>37</sup> <https://plo.vn/vat-va-nghe-rac-dip-tet-post666835.html>

intergeneration discrimination, as children of sanitation workers may have to face up with uncomfortable feelings from peers (World Bank, ILO, WaterAid, and WHO, 2019).

### 3.2 Challenges faced by sanitation workers in Hanoi

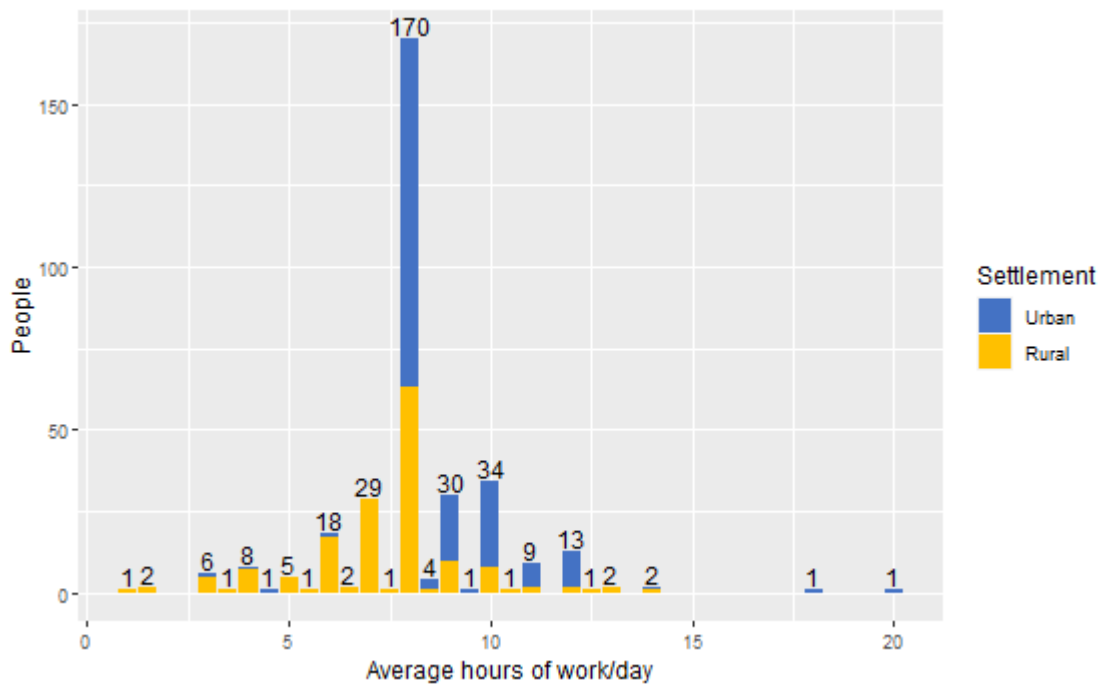
In order to verify information from anecdotal sources, a quantitative survey that focus on four domains: (1) occupational and health hazards, (2) financial insecurities, (3) social discrimination, and (4) legal protection was carried out with around 400 sanitation workers of 8 URENCO branches and affiliate in Hanoi. This section will present findings from the survey.

#### 3.2.1. Occupational and health hazards

##### Working time

Overall, the most common hours of work that respondents reported is 8 hours per day (170/344 respondents). Interestingly, most of those who reported working for more than 8 hours per day came from urban areas. This may be due to the workload in urban areas being higher, necessitating extra work. On the other hand, most of those who work for less than 8 hours per day worked in rural areas. One explanation for this is that those living in rural areas would have more alternatives on waste processing, such as how organic waste can be used as animal feed, fertilizes, or as raw material for making biogas.

Figure 4. Respondent’s daily working hours, disaggregated by work area



##### Occupational hazards

Although 87.6% of all respondents reported never having their belongings stolen, 5.1% still reported that sometimes they are robbed and 6.2% reported that robberies seldom happened. Male respondents are least likely to be robbed than their female counterparts. Respondents working in urban area are usually robbed (1.1%), followed by female respondents (0.73%).

**Table 5. The frequency of respondents' being robbed of their belongings (%)**

	Female	Male	Migrant	Non-migrant	Urban
Usually	0.7	0.0	0.0	0.8	1.1
Sometimes	5.1	0.0	7.5	2.8	4.9
Seldom	6.2	8.6	7.5	6.4	6.6
Never	87.6	91.4	83.9	90.0	86.8

Half of all respondents (47.7%) said that they hardly experienced any work-related accidents. Up to 30% of surveyed workers often meet with accidents while working on streets. Between male and female respondents, it appears that female respondents are more likely to suffer from accidents than their male counterparts (8.76% vs 2.86% constantly suffering). Little to no differences were detected among the other groups of respondents.

**Table 6. The frequency of respondents having work-related accidents (%)**

Types of respondents		Usually	Often	Seldom	Never
Gender	Female	8.8	31.7	13.9	44.9
	Male	2.9	22.9	15.7	58.6
Migration	Non-migrant	7.6	28.7	15.9	47.4
	Migrant	7.5	33.3	9.7	48.4
Location	Urban	7.1	33.5	11.5	47.3
	Rural	8.0	25.9	17.3	48.2
<b>Total</b>		<b>7.6</b>	<b>29.9</b>	<b>14.2</b>	<b>47.7</b>

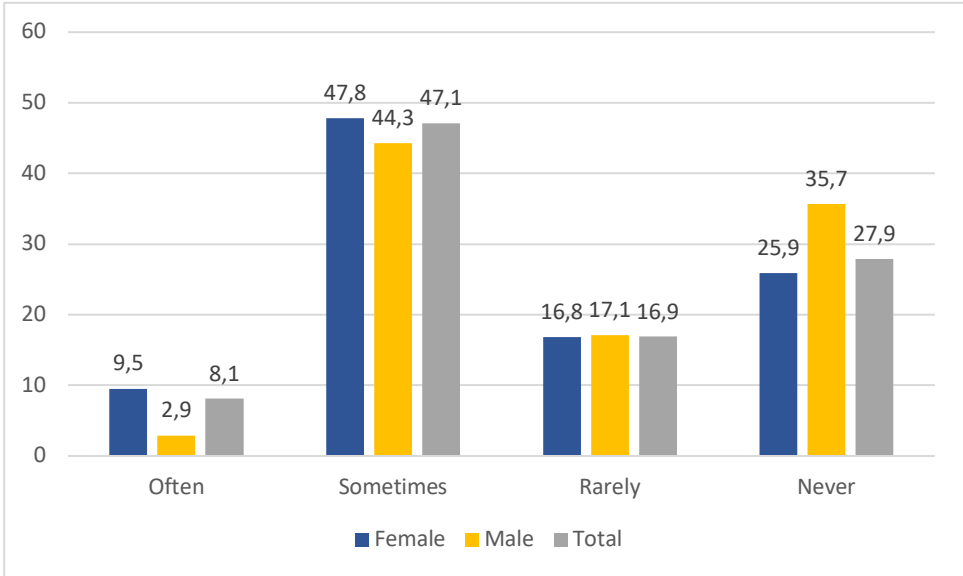
The majority of respondents reported that they have never encountered any traffic accidents (64.5%). Female, non-migrant, and urban respondents are more likely to report that they constantly suffered from traffic accidents at 2.9%, 3.0%, and 3.8% respectively. On the other hand, male, migrant, and rural respondents are more likely to report that they never suffered from traffic accidents at 71.4%, 71.0%, and 73.5% respectively.

**Table 7. The frequency of respondents having traffic accidents (%)**

Types of respondents	Usually	Often	Seldom	Never
Female	2.9	17.9	16.1	62.8
Male	0.0	14.3	12.9	71.4
Non-migrant	2.8	17.5	17.1	62.1
Migrant	1.1	16.1	10.7	71.0
Urban	3.8	22.0	17.0	56.6
Rural	0.6	11.7	13.6	73.5
<b>Total</b>	<b>2.3</b>	<b>17.1</b>	<b>15.4</b>	<b>64.5</b>

Male respondents are less likely to have traffic accidents than their female counterparts.

**Figure 5. Frequency of respondents having traffic accidents, disaggregated by sex (%)**



**Health hazards**

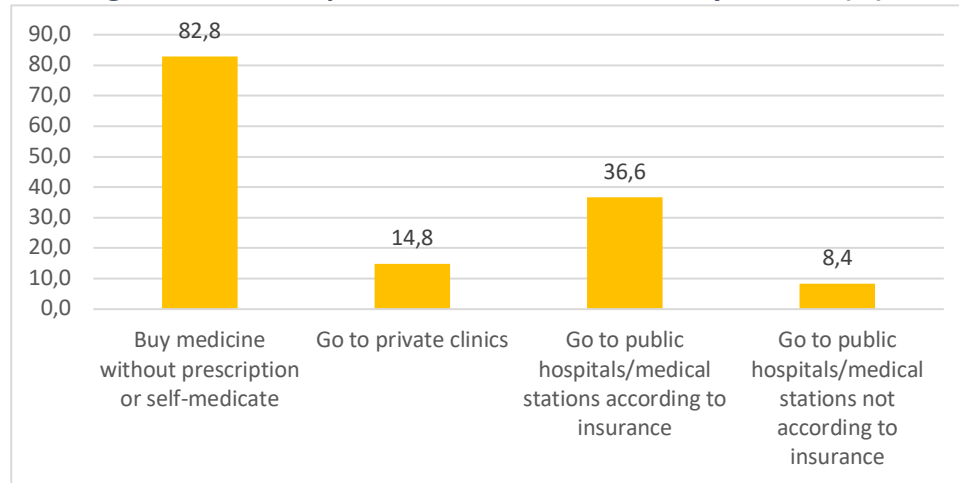
On a whole and across all groups, almost half of respondents reported that at least sometimes they have flus/fevers and headaches. Respiratory conditions are also common, with 43.02% of all respondents reporting that they sometimes exhibit them. These may be due to exposure to contaminants and toxins, elements synonymous with sanitation works. Joint pains are also common among respondents (36.92% of all respondents reported that they sometimes have this). This may be the result of the high age of respondents, coupled with heavy physical labor.

**Table 8. Frequency of respondents encountering common ailments (%)**

Common ailments	Usually	Sometimes	Rarely	Never
Fever/flu	11.9	55.2	10.8	22.1
Headache	13.9	53.2	7.3	25.6
Stomachache	9.0	30.8	6.1	54.1
Joint/bone pain	34.6	36.9	4.6	23.8
Gynecological disease	1.7	9.9	2.9	85.5
Allergic rhinitis	11.3	21.2	2.3	65.1
Respiratory syndromes	7.6	43.0	3.5	45.9
Eye diseases	9.9	19.5	3.8	66.9
Dermatological conditions	3.8	12.8	1.4	82.0
Others	4.94	0.9	1.4	92.7

Across all groups and as a whole, the data exhibit very similar patterns. More than 80% of respondents across all groups reported that they would self-medicate at home or by medicine at pharmacies if they find themselves sick. This is followed by public hospitals/medical stations according to insurance (36.6%).

**Figure 6. What respondents would do when they are sick (%)**



When those who self-medicate were asked why they do so, the majority of respondents reported that they think their conditions did not warrant a visit to professional medical facilities (66.7% of all respondents, 68.1% of female respondents, 60% male, 71% non-migrants, 53% migrants, 57% urban, 77.2% rural). The second reason most of respondents choose to self-medicate is to save their time for others rather than go to hospitals.

**Table 9. Why respondents choose to self-medicate (%)**

Reasons why respondents choose to self-medicate	Gender		Migrant status		Settlement		Total (n=344)
	Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)	
High fares	3.5	10.7	2.4	11.7	7.4	2.2	4.9
Complicated procedures	7.9	3.6	5.3	11.7	12.1	1.5	7
Takes too much time	14.8	19.6	14.4	19.5	20.1	11	15.8
Not necessary to go to doctors, hospitals	68.1	60.7	71.6	53.2	57	77.2	66.7
Others	5.7	5.4	6.3	3.9	3.4	8.1	5.6

### 3.2.2. Financial insecurities

From the results, we extrapolated that the average monthly income in 2022 of respondents is around 5.9 billion VND/month, the median monthly income is 6 million VND/month. This is much lower than the average income in Hanoi at the same time, which is around 8.3 million VND/month.

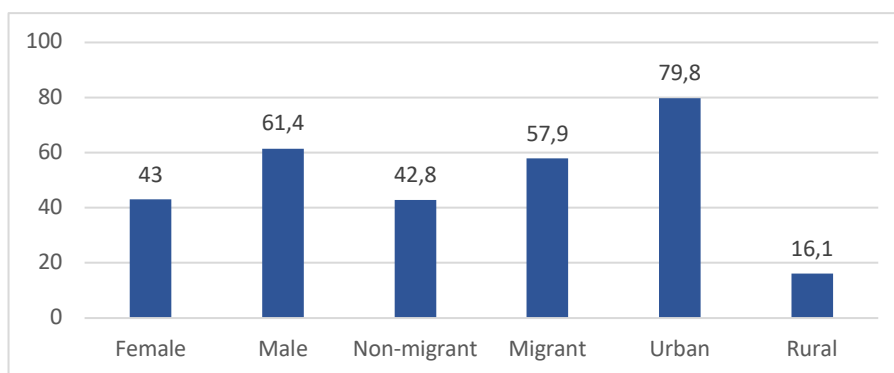
Workers in urban areas are much more likely to receive overtime payment than rural workers (79.8% versus 16.1%). This may be due to the much larger workload in urban areas necessitating more time to process. In addition to that, male respondents are more likely to receive overtime payment than female ones; and non-migrants are more likely to receive overtime payment than migrants.

Overall, and when disaggregated by groups, the majority of respondents (47.1-58.4%) reported that what they earned from sanitation jobs is adequate without savings. Another 14 to 29% said that on top of being able to provide a living, the salary from sanitation work also allows them to save. However, approximately 15-20% of respondents said that their salary from sanitation work can only partially provide for their needs, and 5 to 15% of respondents described hardship as their salary is inadequate.

**Table 10. Assessment of workers on how their salaries meet their needs and savings (%)**

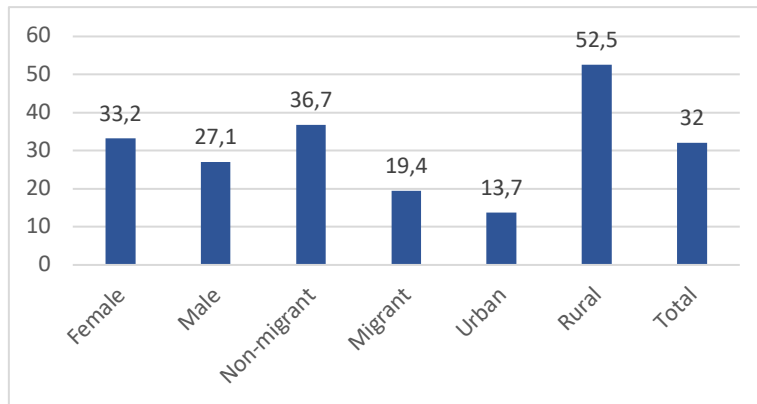
	Female	Male	Non-migrant	Migrant	Urban	Rural	Total
Adequate, able to save	15.7	30	20.3	14	9.3	29	18.6
Adequate, but not able to save	58.4	47.1	55.8	57	61	50.6	56.1
Inadequate, can only meet needs partially	18.2	15.7	18.7	15.1	19.2	16	17.7
Inadequate, a lot of hardship met	7.7	7.1	5.2	14	10.4	4.3	7.6

**Figure 7. Percentage of respondents receiving overtime pay, disaggregated by gender, migration, and settlement area (%)**



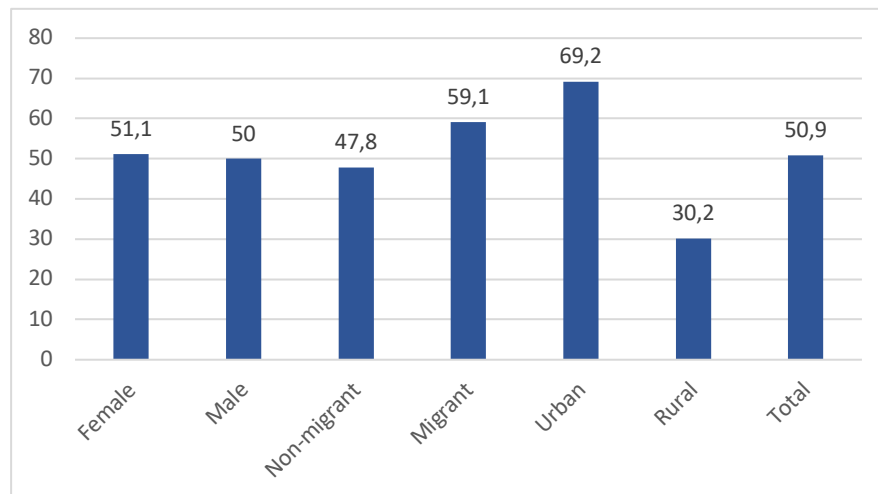
Among the groups, those who work in rural areas are most likely to experience late payment (52.5%). Migrant respondents are also less likely to experience late payment than non-migrant respondents (19.4% and 36.7%).

**Figure 8. Percentage of respondents who experienced late payment of salary, disaggregated by gender, migration, and settlement area (%)**



Around 50.9% of all respondents reported that they do not have any form of compensation if they do not use all of their paid leaves. There is a significant difference in the percentage of urban respondents saying that they do not have compensation (69.2%) versus rural respondents that said so (30.2%).

**Figure 9. Percentage of respondents who did not have any form of compensation if they do not use all of their paid leave days, disaggregated by gender, migration, and location (%)**



Overall, most respondents reported that their employers have never withheld their salary without any proper explanation. The same was true when respondents were subsetted by sex, migrant status, and area of work.

**Table 11. Frequency of employers not paying respondents' salaries without any reasons (%), disaggregated by gender, migration, and location**

Types of disaggregation	Types of respondents	Usually	Sometimes	Seldom	Never
Gender	Female	2.5	1.5	1.8	91.2
	Male	2.9	2.9	2.9	90.0
Migrant status	Non-migrant	2.0	1.6	1.6	94.0
	Migrant	4.3	2.1	3.2	82.8
Settlement	Urban	2.2	2.7	2.2	88.5
	Rural	3.1	0.6	1.8	93.8
	<b>Total</b>	<b>2.6</b>	<b>1.7</b>	<b>2.0</b>	<b>91.0</b>

### 3.2.3. Social stigma and discrimination

Most respondents reported that they have never been forbidden to work in any areas (88.1% all respondents). However, when disaggregated by gender, male respondents are significantly more likely to report that sometimes they are forbidden to work in certain areas than female respondents (12.9% and 4%).

**Table 12. Percentage of respondents being forbidden to work in certain areas, disaggregated by gender, migrant status, and settlement (%)**

Types of disaggregation	Types of respondents	Constantly	Sometimes	Seldom	Never
Gender	Female	2.5	4.0	2.9	89.4
	Male	0.0	12.9	2.9	82.9
Migrant status	Non-migrant	1.6	5.6	3.2	88.4
	Migrant	3.2	6.4	2.1	87.1
Location	Urban	3.3	6.0	3.8	85.7
	Rural	0.6	5.6	1.8	90.7
	<b>Total</b>	<b>2.0</b>	<b>5.8</b>	<b>2.9</b>	<b>88.1</b>

51.7% of all respondents reported that they have never been mocked or treated in contempt for their job, while 27.0% reported that they sometimes experienced that. The data also showed that female respondents (29.2% sometimes, 9.1% constantly), non-migrant respondents (24.3% sometimes, 10.0% constantly), and urban respondents (29.1% sometimes, 13.2% constantly) are more likely to be mocked.

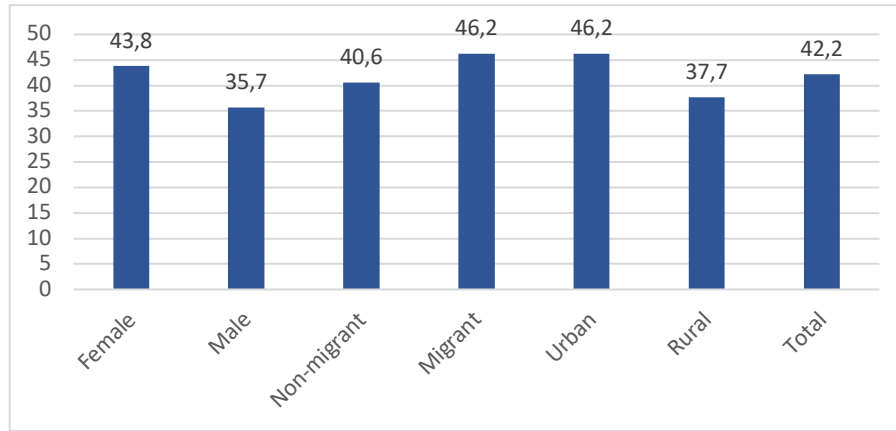
**Table 13. Percentage of respondents being mocked/treated with contempt, disaggregated by gender, migrant status, and settlement (%)**

Types of disaggregation	Types of respondents	Constantly	Sometimes	Seldom	Never
Gender	Female	9.1	29.2	12.0	48.9
	Male	7.1	18.6	11.4	62.9
Migrant status	Non-migrant	10.0	24.3	12.7	52.6
	Migrant	5.4	34.4	9.7	49.5
Settlement	Urban	13.2	29.1	8.2	48.9
	Rural	3.7	24.7	16.0	54.9
	<b>Total</b>	<b>8.7</b>	<b>27.0</b>	<b>11.9</b>	<b>51.7</b>

Overall, respondents reported that they feel proud or normal about their job. However, when disaggregated by sex, it seems that male workers are less likely to feel proud about their job than female respondents. Although the percentage of male respondents having neutral feelings about their jobs is more or less the same as that of female respondents, the percentage of male respondents feeling ashamed about their job is almost twice as much as that of their female counterpart.

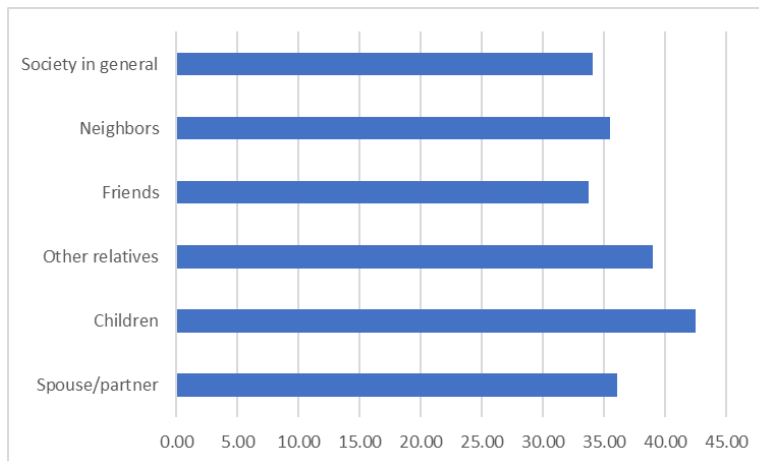
**Figure 10. Percentage of respondents reporting that they feel proud of their work, disaggregated by sex, migrant status, and area of work (%)**





The majority of respondents, as a whole and when disaggregated into groups, reported that they think others feel proud of them and their jobs. In all the groups, respondents are more confident in their partners’/spouses’ and their children’s opinion of them than that of other relatives, friends, neighbors, and society as a whole.

**Figure 11. Percentage of respondents responding that they think others (their partners, their children, society, etc.) feel proud about them and their jobs(%)**



Over respondents agree and about a quarter of respondents strongly disagree to the two positive statements about their children’s social interactions at school. On the third statement, most respondents either disagree or strongly disagree on it. This shows that they think their children are socially well-adjusted.

**Table 14. Percentage of respondents agreeing to statements regarding their children at school, disaggregated by sex, migrant status, and area of work (%)**

Statements on respondents’ children	Gender		Migrant status		Settlement		Total (n=344)
	Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)	
My children go along well with	57.0	61.3	55.9	62.9	68.4	46.1	57.8

their school mates							
My children's schoolmates are nice to my children	56.2	56.4	53.4	64.0	69.0	42.3	56.3
My children are bullied and mocked by their schoolmates	3.0	3.2	3.8	1.1	2.9	3.2	3.1

Over respondents agree and about a quarter of respondents strongly agree to the one positive statement about their children's opinion on their jobs. On the two other statements, most respondents either disagree or strongly disagree on it. This shows that they think their children are generally positive about the respondents' job.

*Table 15. Percentage of respondents agreeing to statements regarding their children's opinion on the respondents' job, disaggregated by sex, migrant status, and area of work (%)*

Statements on respondents' children	Gender		Migrant status		Settlement		Total (n=344)
	Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)	
My children are sympathetic about my job	59.5	54.3	60.6	52.7	62.1	54.3	58.4
My children are ashamed that I do this job	4.0	14.3	6.8	4.3	8.8	3.1	6.1
My children demonstrate that they don't like me doing this job	5.8	7.1	5.2	8.6	6.6	5.6	6.1

### **3.3 Systemize pertinent policies and regulations that regulate the delivery of sanitation work and protect the rights of sanitation workers in Vietnam**

#### *3.3.1. Policy landscape*

Legal and institutional framework pertinent with environmental sanitation of Hanoi includes documents regulating the delivery of sanitation work and any documents regulating rights and benefits of sanitation workers. Generally, law enforcement of legal framework in sanitation and environment sector is regarded as relatively weak<sup>38</sup>, lacking several resources at the provincial level. Environmental sanitation policies in Viet Nam are dependent on the guidance of a variety of by-law documents at lower administrative levels. At the state level, the highest legal document of environmental sanitation is the Law on Protection of the Environment of Vietnam No. 72/2020/QH14, issued in 2020; and the highest legal document of workers' rights is the Labor Code No. 45/2019/QH14, issued in 2019. In city level, law enforcement is regarded as ineffective due to lack of human capacity, supporting institutional framework, commitment from citizens, as well as financial resources (Le, Hiroyasu, Takashi, n.d.).

The detailed hierarchy of legal documents in Viet Nam will be present in Annex 2.

#### **a. Policies regulating the delivery of sanitation work**

It is found that Viet Nam has been receiving several technical and financial assistance from international organizations in improving urban sanitation and wastewater treatment<sup>39</sup>. Significant cooperation projects between Hanoi and international organizations are listed below.

- i. The Japan International Cooperation Agency (JICA) has been a pioneer in financing large-scale sewerage projects in Hanoi (with five other provinces);
- ii. SFD Promotion Initiative of Sandec (the Department of Sanitation, Water and Solid Waste for Development) at Eawag (the Swiss Federal Institute of Aquatic Science and Technology) provide desk-based scientific and technical research and recommendation for fecal waste treatment flow in Hanoi;

Regarding legal framework, Hanoi People's Committee (HPC) holds the primary responsibilities and duties in waste management of the city, as well as direct waste management and treatment plans for Hanoi capital for the period to 2030 with a vision to 2050, as per directed in Decision 609/QĐ-TTg dated April 25, 2014. Facilities to collect, store and transport solid waste are normally service companies, service cooperatives or households via service contracts, referred to as solid waste collectors and transporters (Article 24, Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management). The People's Committee also has supervision responsibilities of waste collecting and transportation facilities, especially on checking means of protective equipment for sanitation workers (Article 28, Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management).

In terms of costs for waste management, the People's Committee also has the role to calculate budget and expense for solid waste collection, transportation, and treatment of the city (Article 79, Law on Protection of the Environment of Vietnam). The cost structure also includes labor training cost, apart from other main costs for planning, building, and maintaining of waste management tasks (Article 3, Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management). However, when reviewing policies regulating

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<sup>38</sup> Le Ngoc Cau, Hiroyasu Satoh, Takashi Mino. n.d. The Existing Urban Environmental Sanitation System in Hanoi and Problems Related

<sup>39</sup> ADB. (2015). Viet Nam Urban Environment Program. Urban Sanitation Issues in Viet Nam

cost norms of sanitation works (section b), there is no clear budget for employee training depicted in any legal documents.

The detailed planning and management plan for solid waste treatment in Hanoi is thoroughly presented at Decision 609/QĐ-TTg dated April 25, 2014 approving the Master plan on solid waste treatment of Hanoi capital until 2030, with a vision to 2050. In this document, it is projected that as of 2030, the collection rate of domestic solid waste in urban areas will be averagely 90-100%, and 80-90% for rural areas; the collection rate for septic sludge will be roughly 90-100% in urban areas, and 70-90% in rural areas (Article 1). Hanoi, furthermore, will have three main solid waste treatment zone: (1) Region I, Northern region, includes inner city areas and some suburb districts (Me Linh, Dong Anh, Gia Lam, Soc Son); (2) Region 2, Southern region, includes Thanh Tri, part of Ha Dong and other rural districts; (3) Region 3, Western region, includes part of Ha Dong and other western rural districts of Hanoi (Article 1).

Details of policies regulating the delivery of sanitation work are listed in Annex 3.

## **b. Policies protecting the rights of sanitation workers**

Workers in general and sanitation workers in particular are protected by a systematic legal framework. Viet Nam has ratified 25 international conventions of the International Labour Organization (ILO) in protecting standard labour rights<sup>40</sup>. Relevant core conventions are listed below. Currently, Viet Nam has not ratified any conventions specifically on protecting the rights of sanitation workers.

- i. [C100 - Equal Remuneration Convention, 1951 \(No. 100\)](#)
- ii. [C111 - Discrimination \(Employment and Occupation\) Convention, 1958 \(No. 111\)](#)

At national level, the foundation legal document stipulates general working conditions, rights and responsibilities of sanitation workers is the Viet Nam Law of Labour, issued in 2019. Some rights of workers needed to be highlighted are: not be subjected to discrimination (Article 5); earn a suitable salary compared to qualifications and skills (Article 5). In terms of working time, night working hours are calculated from 10 pm to 6 am the next day (Article 106). Workers have at least a 30-minute break a day, or at least a continuous 45-minute break if working at night (Article 109). For annual leave, workers will be entitled to 16 days of annual leave if they have worked for a full 12 months for an employer and doing particularly heavy, hazardous or dangerous occupations or jobs (Article 113). For female workers, all female employees are entitled to have a break of 30 minutes each day during menstrual period, and a 60-minute break per day while raising children under 12 months of age (Article 137).

Workers in environmental sanitation sector are classified into Working conditions type IV, V, and VI<sup>41</sup>, which are jobs classified into heavy, hazardous and dangerous occupations. Decree 59/2007/ND-CP dated April 9, 2007 of the Government regulated the responsibilities of solid waste employers including organizing periodical medical examinations for employees (Article 26), and implementing occupational safety plans and ensuring health of employees (Article 31). Decree 80/2014/ND-CP on drainage and wastewater treatment further specified the responsibilities of drainage units are to “ensure safe, effective [...] protection in management and operation of water drainage and wastewater treatment systems according to regulations” (Article 18).

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<sup>40</sup> <https://www.ilo.org/hanoi/areasofwork/international-labour-standards/lang--en/index.htm>

<sup>41</sup> According to [Circular 29/2021/TT-BLĐTBXH](#) issued on 2021 by The Ministry of Labour - Invalids and Social Affairs, occupations and jobs with working conditions classified as IV are heavy, hazardous and dangerous; occupations and jobs with working conditions classified as V and VI are particularly heavy, hazardous and dangerous.

Regarding working time, Article 105 of the Law of Labour regulated that *“Employers are responsible for ensuring the working time limit for jobs that are exposed to dangerous and harmful factors [...]”*. For female workers, the Law also stipulated that female employees doing heavy, hazardous, and dangerous jobs can notify the employer during pregnancy or childbearing period, and thus can be switched to safer and lighter work or reduce the daily working hour by 1 hour without any reduction in wages (Article 137).

Salary and cost norms to maintain environmental sanitation works in Hanoi are specifically stipulated in Decision 30/2020/QĐ-UBND on issuing procedure and budget cost norm for environmental sanitation maintenance of Hanoi city, issued on 2020 (replaced the Decision 6841/QĐ-UBND issued on 2016), and ministerial-level document Decision 592/QĐ-BXD on the announcement of estimate level of collection, transportation, and disposal of urban solid waste. Cost norm are divided by types of works of environmental sanitation, including 14 processes (Appendix 1, Decision 30/2020/QĐ-UBND) as follows:

- i. Maintain cleanliness of streets and sidewalks
- ii. Maintain neighborhood hygiene
- iii. Collect and transport domestic waste to the treatment site
- iv. Maintaining summer and alley sweeping by special vacuum cleaner vehicles, capacity < 2m<sup>3</sup>
- v. Maintain hygiene in flower gardens, parks, medians...
- vi. Maintain road washing by special vehicles
- vii. Maintain brick public toilets
- viii. Maintain steel public toilets
- ix. Install and maintain portable toilets
- x. Pump for suction and transport of septic tank sludge
- xi. Treatment of septic tank sludge (Cau Dien treatment station)
- xii. Construction solid waste landfill operation
- xiii. Clearing and transporting waste land, construction solid waste
- xiv. Operation of landfill and treatment of domestic solid waste

The detailed cost norms for 14 processes of environmental sanitation works will be included in Annex 4.

In general, all types of work and workers must comply with following rules to ensure working safety conditions: fully prepare and equip work tools and labour protection equipment, ensure labour safety and traffic safety while working, and use full personal protective equipment (PPE) as prescribed, including uniforms, helmet, gloves, rubber shoes, etc. For workers working in septic tank and fecal sludges, their PPE includes extra items such as masks, toxic filter masks, long leather gloves, cloth gloves, goggles, noise-canceling earplugs, etc. compared to other jobs.

Regarding working time, shifts of workers are often divided into daytime and night-time shifts, with day-time shift starts from 8 a.m, and night-time shift starts from 10 p.m. Shift duration is varied in each type of job. The documents also specified that during falling leave season and in case of heavy rain or local flooding, sanitation workers must do extra tasks to maintain environmental sanitation on streets, pavements, and sewer systems.

Many types of sanitation works, furthermore, are linked with responsibilities to raise people’s awareness, including perceive and record comments or complaints of people on waste collections system and sanitation status in general, inform their employer or unit leader accordingly to improve the work, propagate directly with household to give guidance on waste collection and correct waste dumping, etc.

In terms of work development and training opportunities, according to Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management, directions are given to support state and international supports in labor training with state budget sources through training assistance programs (Article 14), and invest in professional training and labor protection equipment for workers collecting and transporting solid wastes (Article 26). The Decision 491/QĐ-TTg on approving the adjustment of the National strategy on integrated solid waste management to 2025, vision to 2050 also stipulated directions to develop human resources of environmental sanitation works, including provide training to improve solid waste management capacity for officials from central to local levels, and consolidate vocational training schools and centers to improve quality of training for technical workers in waste treatment facilities (Article 1).

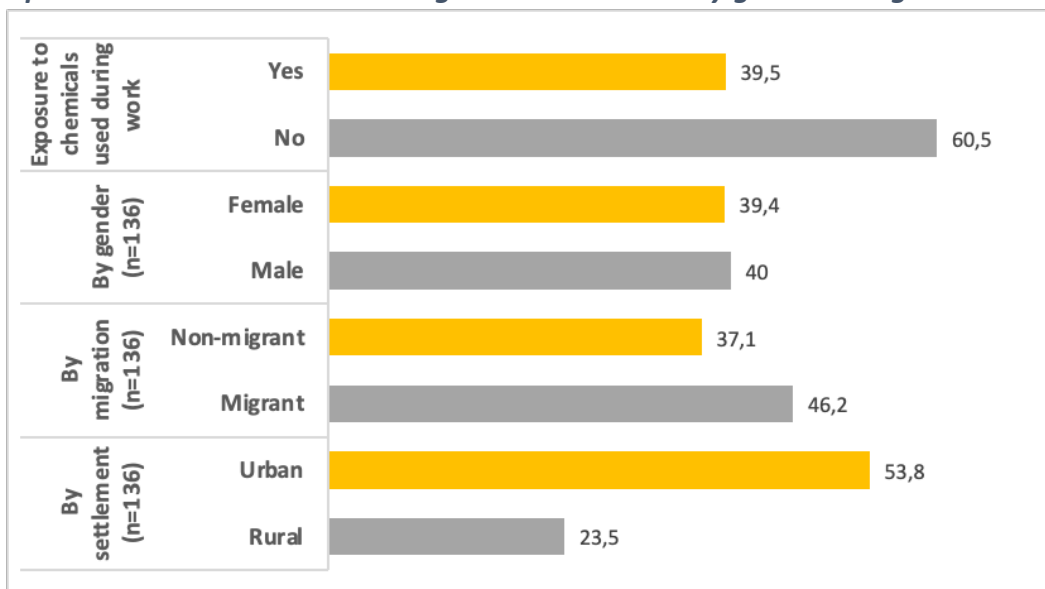
3.3.2. *Context of regulations and policies implementation in Hanoi city*

**a. Working environment**

***Exposure to chemicals***

The results show that nearly 40% (136 people) of 344 respondents were exposed to chemicals during their work. Types of chemicals included in the questionnaire are alcohol bleach, abrasive-dilution detergents, sulfuric acid, lead, mercury, cadmium, chromium, polybrominated, biphenyls, polybrominated diphenyl ethers, cryogenic gases, oxidizing agents, etc.

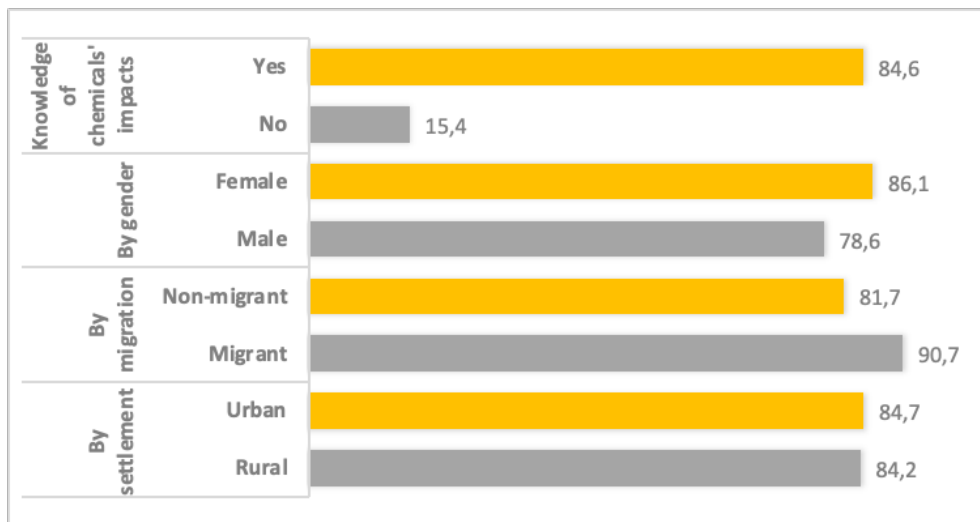
**Figure 12. Exposure to chemicals used during work in total and by gender – migration – settlement (%)**



Among 136 respondents have contact with chemicals during work, there is no significant difference by gender. By migration status, non-migrant workers are less likely to be exposed to chemicals than migrant workers. By settlement, the rates of urban workers who have contact with chemicals double that of rural workers, which can be explained that urban workers have greater workload due to higher population density in urban areas of Hanoi, thus increasing their exposure probability to chemicals.

Of respondents exposed to chemicals which are presented in Figure 14 below, most of them are aware of hazardous impacts that chemicals can cause (84.6% equivalent to 115 people). In general, there is no remarkable difference in their knowledge in this matter by gender, migration status or settlement.

**Figure 13. Knowledge of hazardous impacts of chemicals, by gender – migration – settlement (%) (n=136)**



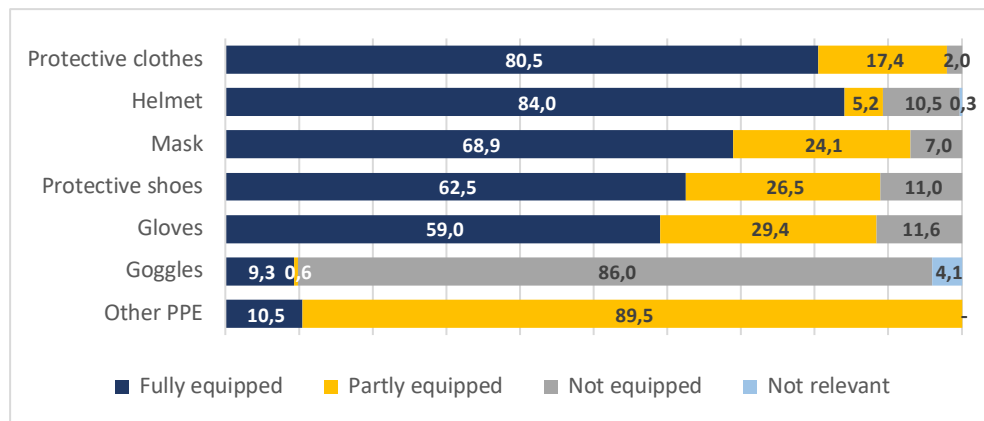
Of respondents exposed to chemicals which are presented in the figure below, most of them are aware of hazardous impacts that chemicals can cause (84.6% equivalent to 115 people). In general, there are no remarkable difference in their knowledge in this matter by gender, migration status or settlement.

Hazardous impacts of sanitation work have been recognized and regulated in Circular 29/2021/TT-BLĐTBXH issued on 2021 by The Ministry of Labour - Invalids and Social Affairs, defining occupations and jobs with working conditions classified as IV are heavy, hazardous and dangerous; occupations and jobs with working conditions classified as V and VI are particularly heavy, hazardous and dangerous. Jobs of sanitation workers, thus, are classified into Working conditions type IV, V, and VI. Responsibilities of employers to protect workers' right and ensure safety protocols for workers when working in hazardous environment are mentioned relatively thorough in Decree 59/2007/ND-CP dated April 9, 2007 (Article 26 and Article 31), and Decree 80/2014/ND-CP (Article 18).

**Provision of personal protective equipment (PPE)**

Overall, most of surveyed workers are fully provided with PPE such as protective clothes (337 people), helmet (307 people), mask (320 people, protective shoes (306), and gloves (304 people). Goggles, or eye protections, is the only PPE that workers are not equipped, with solely 34 workers have this PPE fully equipped by their employers.

**Figure 14. Provision of PPE for workers by types of PPE (%)**



Disaggregated the results by three groups of gender, migration and settlement, there is no significant differences of PPE provisions between female and male workers or non-migrant and migrant workers. However, by settlement, two PPE as mask and gloves have remarkable difference of provision rates between urban and rural workers, with rural workers are provided less than urban workers. Particularly, rural workers are less equipped with masks by 61 people compared to urban workers, and the difference for gloves is 81 people.

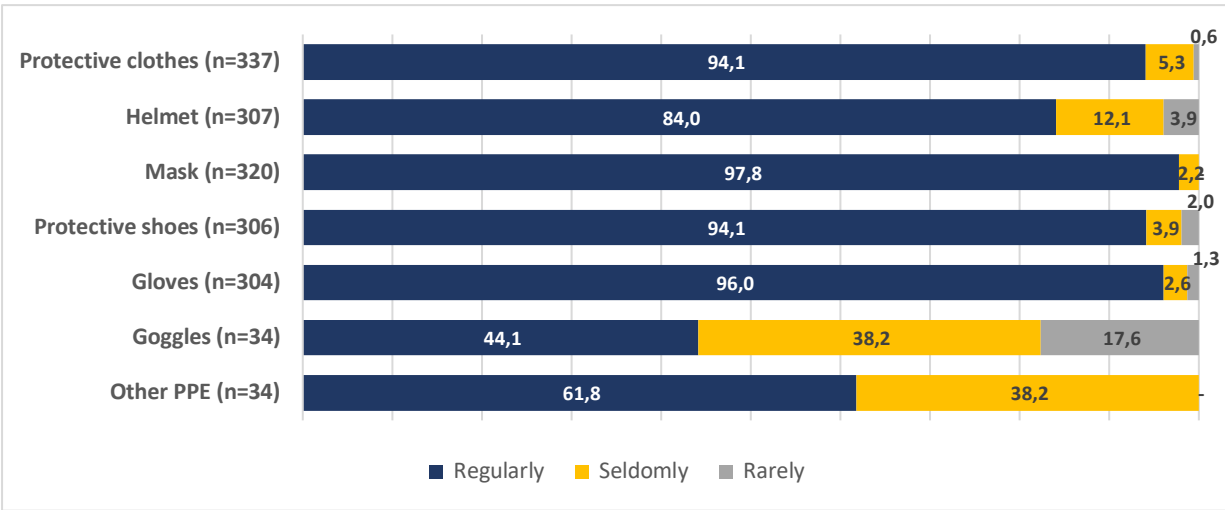
**Table 16. Provision of PPE for workers by types of PPE disaggregated by gender – migration - settlement (%)**

Types of PEE	By gender		By migration		By settlement	
	Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)
Protective clothes	79,6	84,3	82,1	76,3	85,2	75,3
Helmet	82,5	90,0	83,3	86,0	86,3	81,5
Mask	67,9	72,9	66,5	75,3	<b>81,9</b>	<b>54,3</b>
Protective shoes	58,4	78,6	62,9	61,3	69,8	54,3
Gloves	54,0	78,6	58,2	61,3	<b>78,0</b>	<b>37,7</b>
Goggles	7,3	17,1	8,0	12,9	13,7	4,3
Other PPE	11,3	7,1	10,8	9,7	7,7	13,6

Workers' frequencies of using PPE are illustrated in Figure 16 below, with protective clothes, masks, protective shoes, and gloves are most regularly used. Workers also assessed that goggles are relatively necessary in work although not fully equipped compared to other PPE.

**Figure 15. Workers' frequency of using provided PPE (%)**

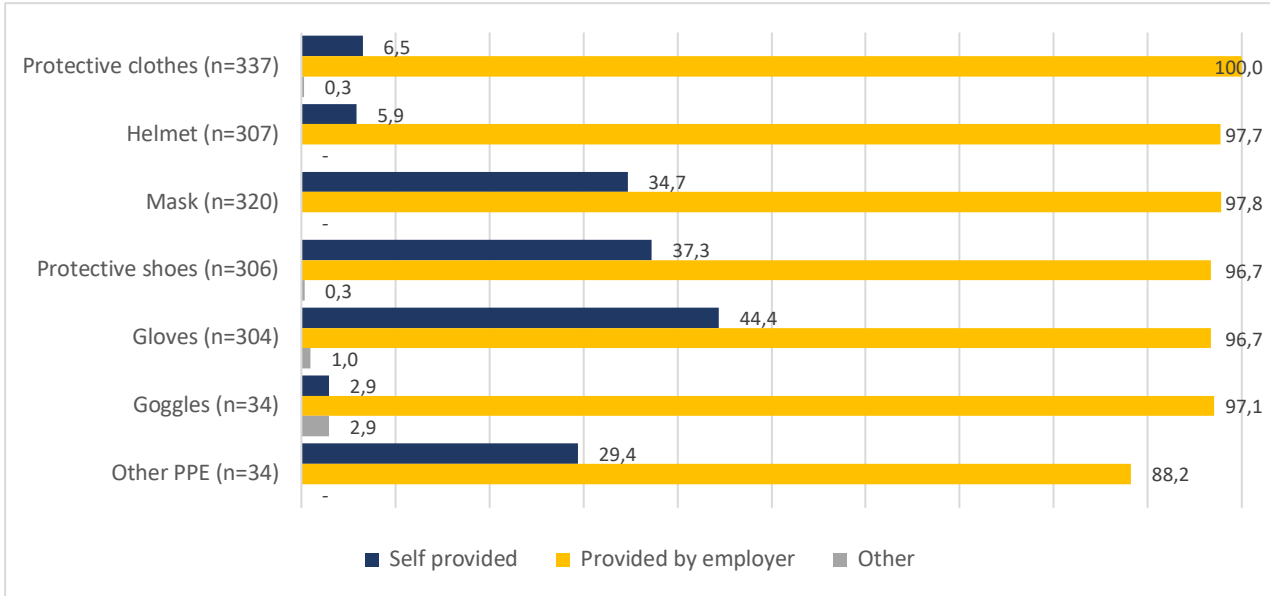




34 workers also commented that employers should equipped other PPE, such as raincoat (17 people), reflective clothing and equipment (5 people), etc. More than half of these people (61,8% equivalent to 21 people) think that these types of PPE are necessary and will be frequently used in the jobs.

In terms of providers for PPE, nearly every type of PPE is provided by employers. 100% workers (344 participants) shared that their employers provide protective clothes, and only a minor number of them (6,5%, equivalent to 22 people) prepare extra clothes by themselves.

**Figure 16. Sources of PPE provision for workers (select multiple) (%)**



Gloves, protective shoes, and masks are types of PPE that workers also tend to self-prepare besides provision of their employers. Goggles are also mostly provided by their employers, although only a small number of workers receive this PPE in total (34 of 344 people).

**Training and knowledge advancement**

Overall, most surveyed workers have had training in labor safety (68,6% equivalent to 236 people). Policies that support employee welfare and pertinent legal documents are other topics that frequently chose to

organize trainings. However, the number of workers has had advanced apprenticeship and skillset training are relatively low, with 37,5% (78 people) and 29,7% (102 people) respectively. This may imply that environmental sanitation companies do not focus on job and skillset development prospect for workers, which also reflected correspondingly in workers' assessments on promotion schemes (see more in section b. Insurance and benefits).

**Figure 17. Workers' participation in companies' training (%)**

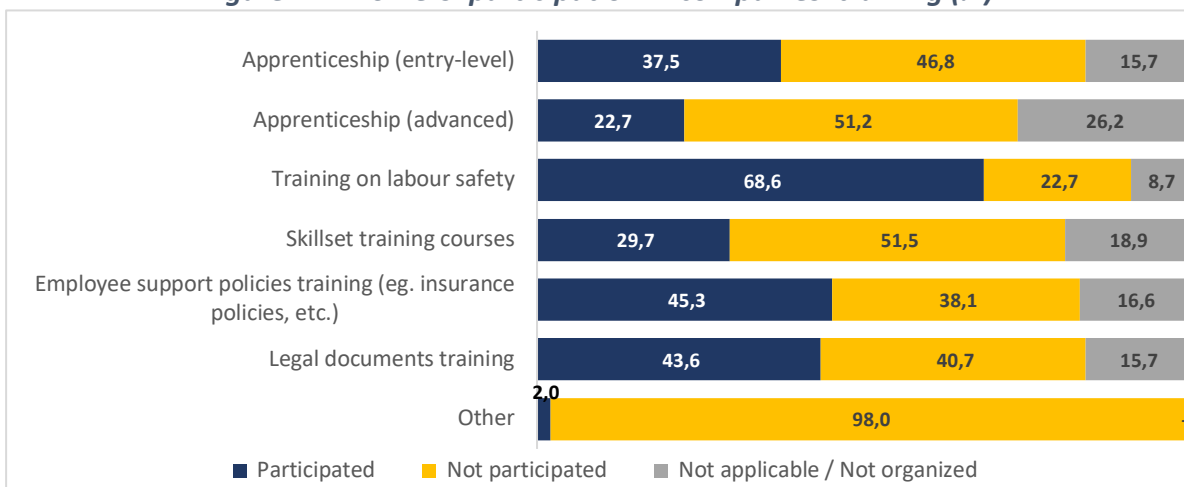
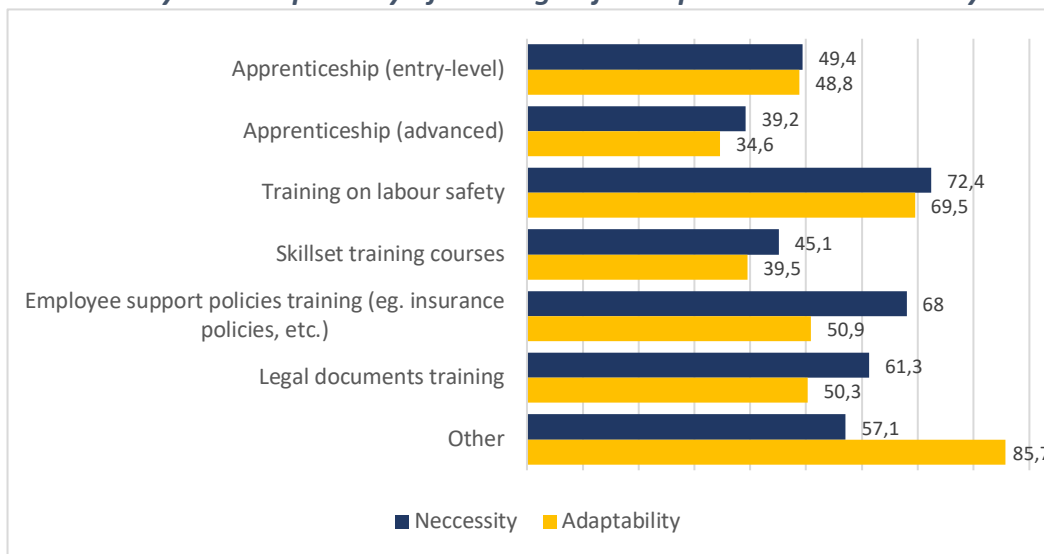


Figure 18 below demonstrates the assessment of workers on level of necessity accordingly to level of adaptability of training in work.

**Figure 18. Necessity and adaptability of training to job requirements assessed by workers (%)**



In general, most types of training have adaptability level closed to necessity level, implies that sanitation companies provide relatively effective training for workers in response to their needs. However, it is interesting to note that, with the most frequently organized types of training as training in employee support policies and legal documents, level of adaptability is quite low compared to their necessity.

When asked about training in labor safety, most workers (more than 67% respondents each) shared that their companies or employers have organized several trainings and they have participated accordingly. The research team generalized seven primary types of training in labor safety.

**Figure 19. Themes of trainings in labor safety (%)**

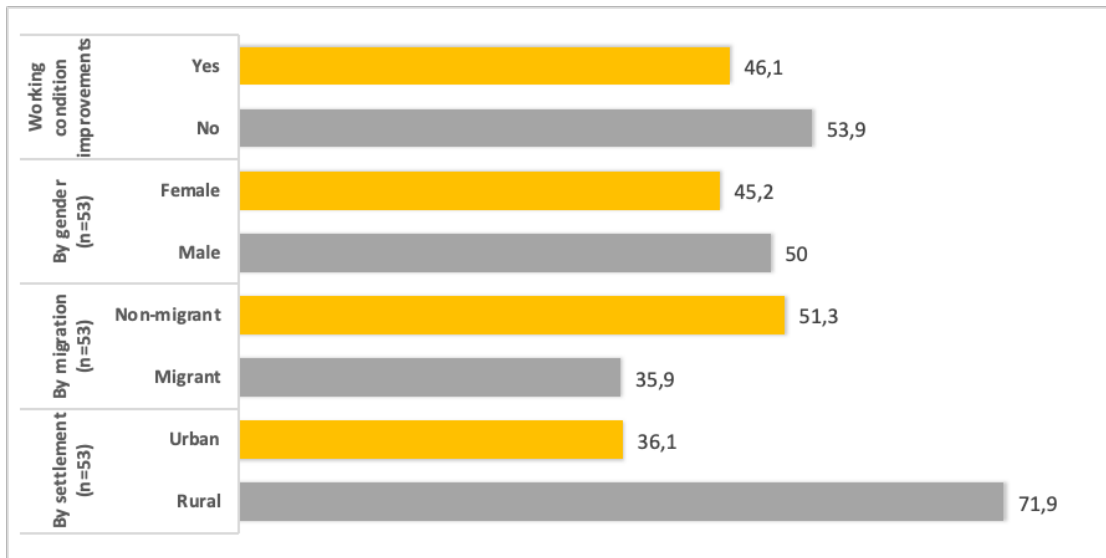


Our overall assessment shows that training opportunities for sanitation workers is one of the gaps in policies regulating the delivery of sanitation works and protecting rights of workers. Training opportunities for workers have been mentioned in some legal documents including the Decree 59/2007/ND-CP dated April 9, 2007 (Article 14 and Article 26) and The Decision 491/QD-TTg on approving the adjustment of the National strategy on integrated solid waste management to 2025, vision to 2050 (Article 1). However, up to now, there is no by-law documents instructing how to foster favorable training opportunities as well as to improve the human capital of workers in the sanitation sector.

### ***Working conditions improvements***

In general, the number of surveyed respondents who hope to have improvements in their working conditions is lower compared to those who are already satisfied, with 46.1% workers (53 people) want to have improvements. Improvements of working conditions include working facilities, personal protective equipment, salary and benefits, etc.

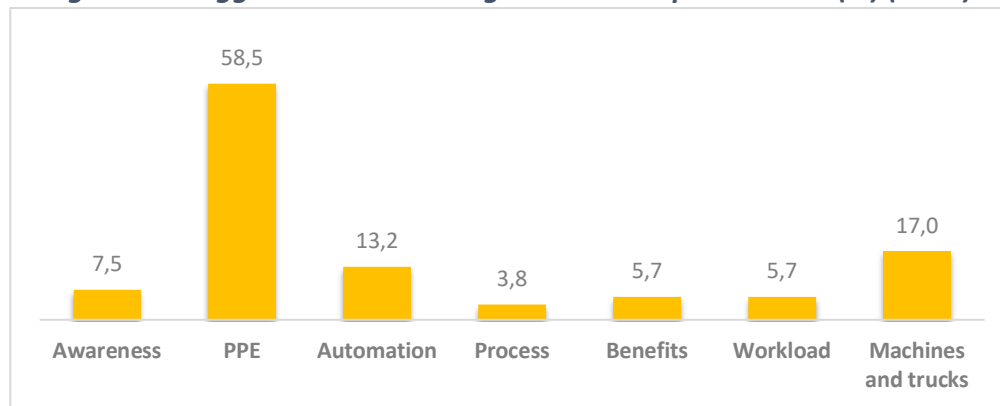
***Figure 20. Opinions on working condition improvements in total and by gender – migration – settlement (%)***



By gender, more male workers seem to want improvements than females. By migration status, the rates of non-migrant workers want to have improvements exceeding 15,4% that of migrant workers. By settlement, the rates of rural workers want to have improvements double the rates of urban workers, with nearly 72% rural workers (21 people) want better working conditions.

Details of suggestions are summarized below, with more than half of 53 workers hoping to have better PPE. Specifically, many emphasize that better rubber shoes, footwears, masks, etc. should be provided by their employers.

**Figure 21. Suggestions on working condition improvements (%) (n=53)**



Furthermore, around 17% workers (9 people) commented that employers should increase the number of machines and compactor trucks for a better waste collection process, and 13.2% workers (7 people) suggested the application of automation in waste collection. Other suggestions on improvements are raising awareness of Hanoi’s citizens in sorting waste, correct waste dumping (4 people), increasing benefits and allowances for workers (3 people), better allocation of workload for workers by hiring more workers (3 people), and progression in waste collection procedure (2 people).

**b. Insurance and benefits**

## Insurance

Overall, most workers participate in social insurance and health insurance, with 72,1% and 85,2% of total respondents rates respectively. Not many sanitation workers participate in unemployment insurance.

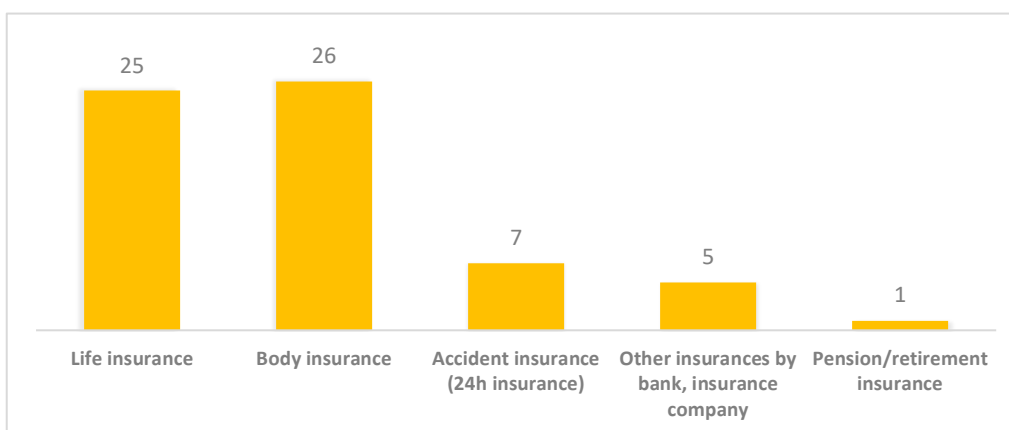
**Table 17. Workers' participant in types of insurance by gender – migration - settlement (%)**

Types of insurance	Total	By gender		By migration		By settlement	
		Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)
1. Social Insurance (including in the Labor Contract)	<b>72,1</b>	73,0	68,6	69,3	79,6	<b>92,3</b>	<b>49,4</b>
2. Voluntary Social Insurance	<b>7,0</b>	6,2	10,0	5,2	11,8	9,3	4,3
3. Health insurance	<b>85,2</b>	86,9	78,6	87,6	78,5	84,6	85,8
4. Unemployment insurance	43,3	44,9	37,1	41,4	48,4	46,2	40,1
<b>5. Other insurance</b>	18,9	18,2	21,4	21,5	11,8	10,4	28,4
6. Do not know	2,6	2,6	2,9	2,0	4,3	-	5,6
7. Not participating	3,8	3,3	5,7	3,2	5,4	2,7	4,9

Analyzing the rates of insurance participation by gender and migration, it can be seen that there is no remarkable difference. However, between urban and rural workers, the rates of urban workers who have social insurance nearly doubled that of rural workers, higher than 42.9%.

Nearly one-fifth of the total surveyed workers participated in other types of insurance. The figure below demonstrates types of other insurances that workers are participating in, with body insurance being the type that has the most workers' participation (26 people), followed by life insurance (25 participants). Accident insurance, which is often called 24-hour insurance, other insurance provided by banks or insurance companies, and pension insurance are other insurance options chosen by a minor number of workers.

**Figure 22. Types of other insurance and workers' participation (people) (n=65)**



## Bonus and allowance es

Regarding allowances that workers receive in the jobs, Figure 23 below shows that workers mostly received allowances compensating for toxic and hazardous working environments (53,5% workers received), and per diem for meals (25,6% workers received). The number of sanitation workers receive or have their employers provide other types of allowances is relatively low. Only 7,6% of total 344 respondents informed that they received other types of allowances, namely allowances for health (by cash or provide milk, sugary drinks, etc.) (6 people), allowances due to extreme weather periods (5 people), allowances for fixing machines and trucks (4 people), allowances for Covid-19 (2 people) and for mobile phone fees (2 people).

**Figure 23. Types of allowances that workers received since 2022 (%)**

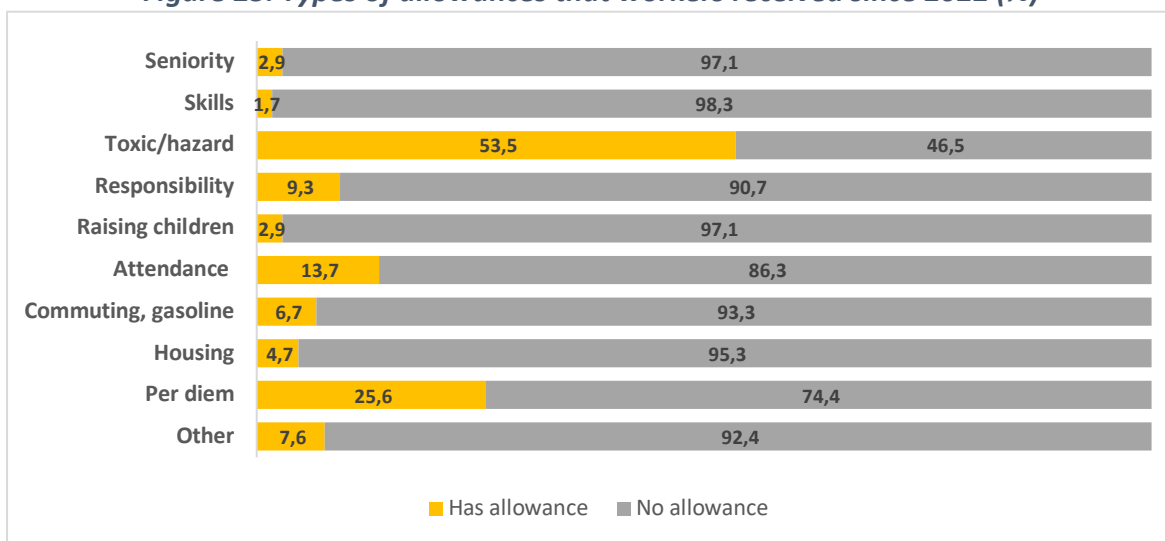


Table 18 below describes methods of payment for allowances, by monthly, annually, quarterly, or in other methods. In general, workers often get paid allowances each month for most types of allowances, including skills, toxic and hazard, responsibility, commuting and gasoline, and per diem. Seniority is the type of allowances that workers tend to receive annually. For the allowances for workers to raise children, there is no fixed method or time of payment. Some of the female workers share that they received this type of allowances when giving birth, splitting in half prepaid before giving birth and the other half paid after six months of pregnancy leave.

**Table 18. Methods of payment for allowances for workers since 2022 (%)**

Types of allowances	Total (n)	Methods of payment			
		Monthl y	Annually	Quarterl y	Other
Seniority	10	20,0	<b>60,0</b>	10,0	10,0
Skills	6	<b>50,0</b>	33,3	-	16,7
Toxic/hazard	184	<b>79,3</b>	8,7	7,6	4,3
Responsibility	32	<b>84,4</b>	3,1	6,3	6,3
Raising children	10	20,0	20,0	10,0	<b>50,0</b>
Attendance	47	27,7	2,1	<b>70,2</b>	-
Commuting, gasoline	23	<b>100,0</b>	-	-	-
Housing	16	18,8	31,3	18,8	31,3
Per diem	88	<b>98,9</b>	1,1	-	-

The amounts of allowances are relatively varied across respondents, from VND 200.000 to VND 5.000.000 for each type of allowances.

Regarding gifts and bonus for workers, Table 19 below presents methods of providing each type of gifts and bonus. For year end bonus (13<sup>th</sup> month salary) and holiday gifts, workers often received these bonuses by cash. During the mid-autumn festival, 78,8% workers responded that their employers prepare gifts or presents in this season. For female workers, they often received gifts on women's days by cash, and workers who have children often received gifts or presents on Children's day. However, nearly 80% of surveyed workers do not receive any kind of bonus for work results.

**Table 19. Types and methods of bonus, gifts for workers (%)**

Types of bonus/gifts	Method of receipt (select multiple)		
	Gifts, presents	Cash	No bonus
Year end (13 month) bonus	47,4	<b>61,0</b>	29,9
Work result bonus	4,1	17,7	<b>79,9</b>
Holiday gift (Independence Day, Labor day, New Year's eve, Lunar New Year, etc.)	50,6	<b>95,9</b>	2,6
(Women only) Women's Day gift (20 Oct, 8 Mar)	19,7	<b>66,4</b>	16,1
(Have children) Children's Day gift	<b>66,4</b>	2,5	31,5
Mid-autumn Festival Gift	<b>78,8</b>	4,9	16,3
Other	2,7	6,7	91,3

### **Benefits and welfare**

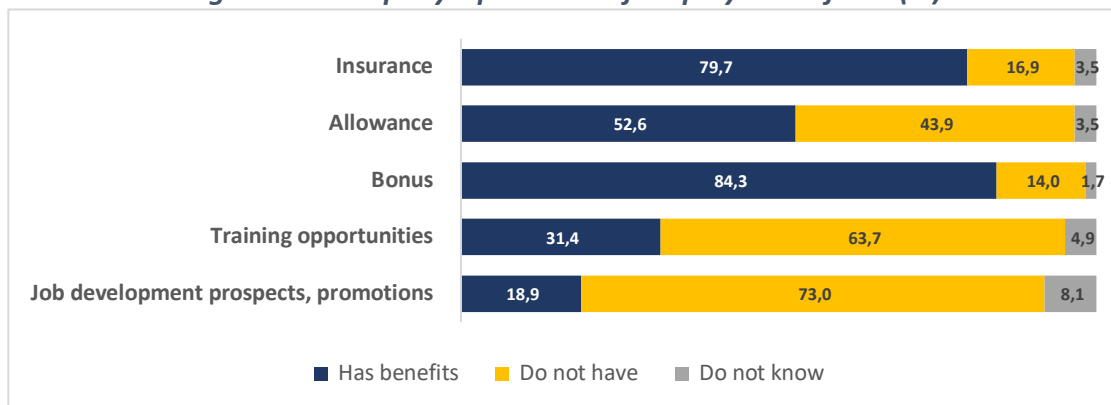
Regarding occupational benefits, in general, environmental sanitation companies and cooperatives in Hanoi cover most benefits for their workers. Over 75% of 344 workers participated in the survey shared that their employers support paid sick leave, pregnancy benefits, or benefits compensating for accidents or work-related injuries. Disaggregated results by gender and migration show no remarkable differences between female and male workers or non-migrant or migrant workers. However, by settlement, rural workers seem to receive less benefits compared to workers in urban areas, with the difference of approximately 30% respondents for each benefit.

**Table 20. Types of benefits provided by employers (%)**

Types of benefits	Total	By gender		By migration		By settlement	
		Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)
Paid sick leave	<b>79.1</b>	79.9	75.7	78.5	80.6	<b>92.9</b>	<b>63.6</b>
Pregnancy	<b>75.9</b>	78.1	67.1	75.3	77.4	<b>90.1</b>	<b>59.9</b>
Accidents, work-related injuries	<b>76.7</b>	77.7	72.9	75.3	80.6	<b>91.2</b>	<b>60.5</b>
Others	13.1	12.0	17.1	14.3	9.7	10.4	16.0

In terms of employee welfares, overall, insurance, bonus and allowances are top-three frequently welfares provided by environmental sanitation companies. It is not surprising that training opportunities and job development prospects have less provision rates, since these welfares are not compulsory regulated as the company's responsibilities. Only 18,9% (65 people) of 344 workers stated that their companies have provide development and promotion schemes.

**Figure 24. Company's provision of employee welfares (%)**



Disaggregating the results into three groups, in general, there is no remarkable differences of company's provision of welfare by female and male workers, non-migrant and migrant workers, or urban and rural workers. However, bonus schemes seem to have the opposite trend in urban and rural workers segment compared to other types of welfares, with rural workers having more bonus benefits than urban workers by 21,5% (20 people).

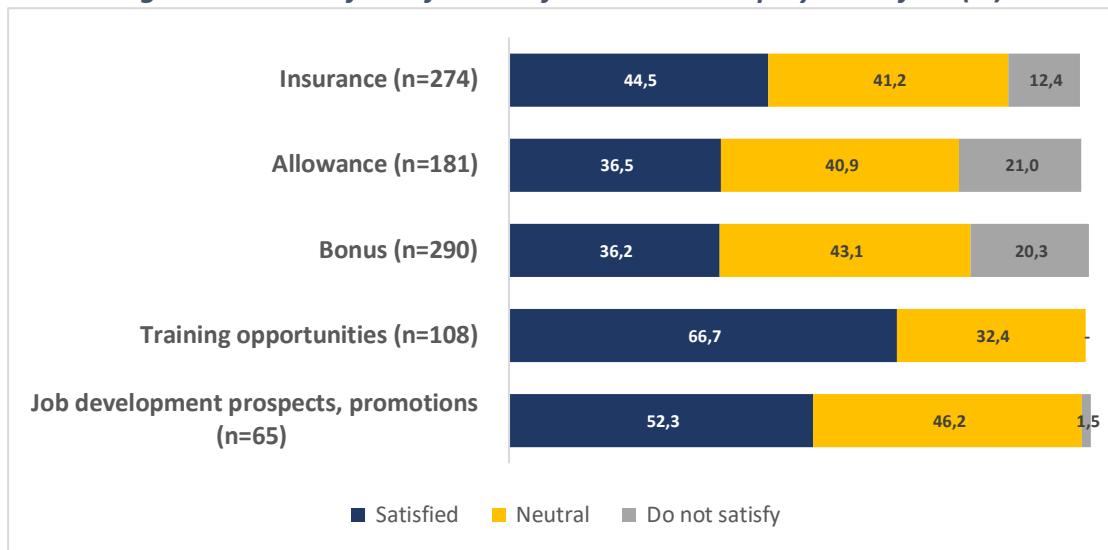
**Table 21. Company's provision of employee welfares by gender – migration – settlement (%)**

Employee welfares	By gender		By migration		By settlement	
	Female (n=274)	Male (n=70)	Non-migrant (n=251)	Migrant (n=93)	Urban (n=182)	Rural (n=162)
Insurance	77,7	87,1	79,3	80,6	84,1	74,7
Allowance	50,7	60,0	52,6	52,7	47,8	58,0
Bonus	84,3	84,3	86,5	78,5	<b>74,2</b>	<b>95,7</b>
Training opportunities	29,6	38,6	29,1	37,6	28,0	35,2
Job development prospects, promotions	16,8	27,1	17,5	22,6	21,4	16,0

Workers' satisfaction on welfare varied among most frequently and less provided welfares, which is presented in Figure 25 below. For the top three most provided welfares namely insurance, allowance and bonus, workers remained relatively satisfied or somewhat neutral to these kinds of benefits, with the levels of satisfaction range from 36% to 44,5% (from 66 to 122 workers). Approximately 20% of workers are unsatisfied on their companies' allowance and bonus schemes (around 40 to 60 people).



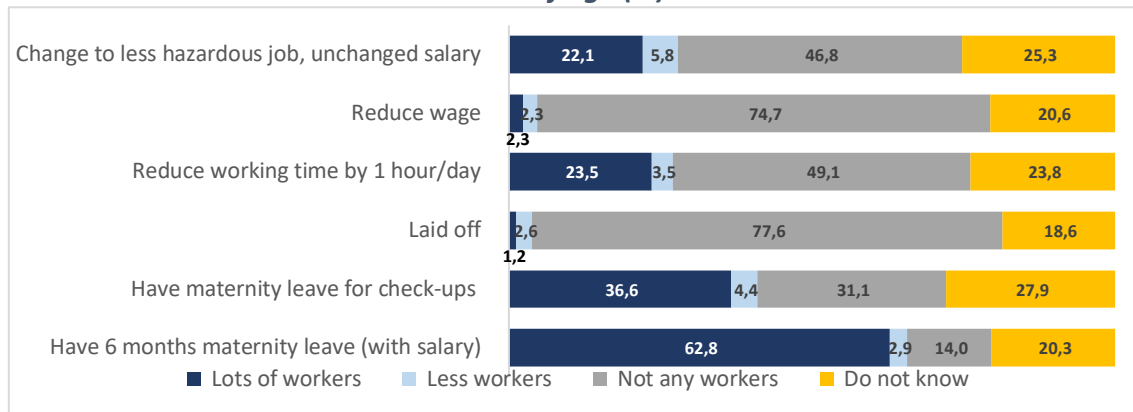
**Figure 25. Level of satisfaction of workers on employee welfare (%)**



However, for the less frequently provided welfares namely training opportunities and promotions, it seems that workers are more satisfied despite that they do not regularly earn these benefits. Averagely 66,7% of 108 workers (72 people) are satisfied with training opportunities that their companies provided, and 52,3% of 65 workers (34 people) are happy with their job development prospects. There are nearly no workers being unsatisfied with these two welfares.

Workers were also asked to share their observations on cases of pregnant female workers or female colleagues raising children under 1-year-old of age in some scenarios. The results are illustrated in Figure 26 below.

**Figure 26. Observation of workers on cases of pregnant female workers and bearing children under 1-year-old of age (%)**



Overall, female workers in the environmental sanitation sector seem to have good benefits during their pregnancy and childbearing period, with 62,8% people agreed that lots of female workers have the compulsory 6-month maternity leave with unchanged salary, and 36,6% people agree that almost every female workers have maternity leave during pregnancy for check-ups. Around 20% of 344 surveyed workers shared that most of female workers have their working time reduced by 1 hour per day, and have their jobs changed to less hazardous ones with salary remained unchanged.

For the two unfavorable scenarios for female workers, which are having their wages reduced and being laid off, there was nearly no observation of such cases. Only 2,3% of respondents (8 people) have observed or

known female workers having their wages reduced, and 1,5% of respondents (4 people) have seen female workers being laid off during pregnancy period.

#### **4. RECOMMENDATIONS OF KEY AREAS FOR ACTION IN THE CONTEXT OF VIETNAM**

Regarding protection for sanitation workers, we recommend that future policies focus on not only equipping sanitation workers with adequate protection and overall reducing the level of hazard that workers are exposed to, but also on raising the awareness of sanitation workers on the types of ailments they may suffer, their causes, and the importance of seeking professional medical attention as soon as they have symptoms. In addition, awareness should also be raised on the benefits of using health insurance for sanitation worker's medical care.

In terms of financial insecurity, most sanitation workers in Hanoi have much lower monthly wages than the city's average. The current wage for sanitation workers has left a lot of workers inadequately provided, and the majority of those who are adequately provided cannot save with the current wages. From this, we recommend that the wage of sanitation be raised in order to fully meet the needs of workers. Although rural sanitation workers are not exposed to as much hazard as their urban counterparts, they are subject to somewhat more severe levels of financial insecurities. Our results showed that rural workers are more likely to not be compensated for overtime work, more likely to have their payment withheld by employers, and not as likely to benefit if they have unused paid leave days. Thus, we recommend that policies should facilitate rural sanitation workers in receiving more equitable contract terms compared to urban sanitation workers.

Workers in Hanoi have to face up with discrimination and stigma, generally. The most common symptoms of discrimination include being forbidden to work in certain areas, being mocked and being treated with contempt. Thus, we recommend that efforts should be placed on raising the awareness of society in general on the importance of sanitary work and sanitary workers.

Our findings reflect the gap in policies that the research team has reviewed, as legal documents in the sanitation sector do not focus on regulating career prospects and skills development for workers. Although basic wages and insurance have been provided for sanitation workers, they are not entitled to other benefits, bonuses or allowances, as only half of 344 surveyed workers have received toxic allowances, Other types of allowances including seniority, per diem, housing, skills, etc., are also hardly ever provided. Furthermore, other benefits in terms of career development, skills training, and promotions for sanitation workers are not prioritized and less provided by employers compared to benefits that secure labor safety. Therefore, we recommend that future policies and policy making efforts should be aimed at the provision of sanitation workers with bonuses and allowances befitting the characteristics of their jobs.

## 5. CONCLUSION

From our results of surveying 344 sanitation workers in Hanoi, we have inferred certain trends and sum them up in the following conclusions.

Our study shows that sanitation workers encounter different types of occupational and health hazards, and there are significant differences between two groups of sanitation workers in Hanoi: rural and urban workers (urban = 128, rural = 162). Particularly, urban respondents have to work longer hours, are more likely to get robbed, and are more likely to catch illnesses than rural workers. On the other hand, although rural sanitation workers face a less intensive workload than their urban counterparts, they are faced with more insecurities in terms of employment and finance, namely that rural workers are likely to receive less compensation than their urban counterparts.

Of the types of health hazards that workers may have, joint/bone pain is the most commonly reported, followed by stomach ache, headache, fever/flu, and allergic rhinitis. Possible explanations for this trend are as follows: The high average age of workers (46.73 years old), chemically hazardous working environment (40% of 344 sanitation workers in Hanoi are regularly exposed to hazardous chemicals during work), and heavy physical labor. However, when asked about what they would do when they are sick, respondents report that they often self-medicate as they did not think their ailments necessitate professional medical attention. Not only that, our results showed that workers have not fully utilized their health insurance provided by employers, with only 36.6% of all respondents choosing to use their medical insurance when they are sick.

Generally, a large number of surveyed sanitation workers in Hanoi regularly face financial difficulties as late payment of salary (52.5% of 162 have experienced late payment of salary) or lack of compensation for overtime work (only 16.1% of 162 rural respondents have received overtime payment). As mentioned before, although rural sanitation workers are not exposed to as many hazards as their urban counterparts, they are subject to more severe levels of financial insecurity. Our results showed that rural workers are more likely to not be compensated for overtime work, more likely to have their payments withheld by employers, and not as likely to benefit if they have unused paid leave days.

On a whole, our results showed that sanitation workers are faced with high levels of discrimination. The most common symptoms of discrimination include being mocked and being treated with contempt (27.0% of 344 respondents have sometimes been the subject of these acts). This seems to have an effect on workers' sense of self-worth and how they perceive the attitude of those around them about their profession, as only around half of respondents across all groups feel proud about their jobs and only 30-40% of respondents across all groups reported that others feel proud about respondents' job. Most respondents reported that their immediate families are proud of their jobs, while they think that other people in society (strangers, friends, etc.) are less likely to support or have positive opinions toward their sanitation workers' jobs.

Regarding the legal framework protecting workers' rights and regulating the delivery of sanitation work, through desk review, the research team sees that there exists a system of documents from central to local levels. In detail, within our study conducted with 344 sanitation workers in Hanoi, sanitation companies basically comply with regulations in providing a good and safe working environment for workers, as nearly every worker is fully equipped with PPE by their employers, more than half of 344 workers (68.8%) participated in labor safety training in their companies, and more than half of respondents shared that their companies have organized training sessions in labor safety topics. In terms of insurance and benefits, nearly all workers are participating in

social insurance (71,2% of 344 respondents) and health insurance (85,2% of 344 respondents), half of them have their salary raised since working in this sector, and more than half of workers (from 70%) have paid sick leaves, pregnancy leaves or compensation for work-related injuries, which suggests that sanitation companies have secured basic rights for their workers.

Workers are not entitled to other benefits, bonuses or allowances, as only half of 344 surveyed workers have received toxic allowances, however, other types of allowances including seniority, perdiem, housing, skills, etc., are hardly provided by the employers. Furthermore, other benefits in terms of career development, skills training, and promotions for sanitation workers are not prioritized and less provided by employers compared to benefits that secure labor safety. This finding reflects the gap in policies that the research team has reviewed, as legal documents in the sanitation sector do not focus on regulating career prospects and skills development for workers.

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## 7. ANNEXES

### Annex 1. Characteristics of respondents

Figure 27. Sex of respondents

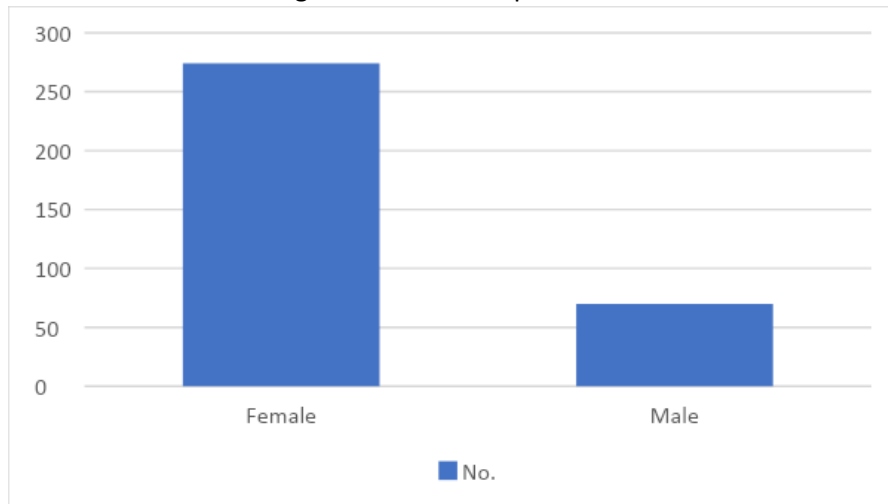


Figure 28. Migrant status

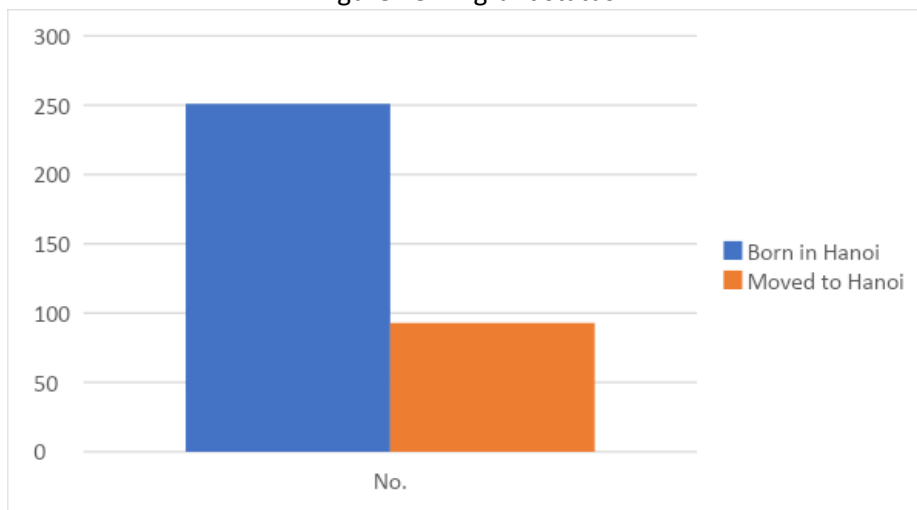




Figure 29. Urban versus rural workers

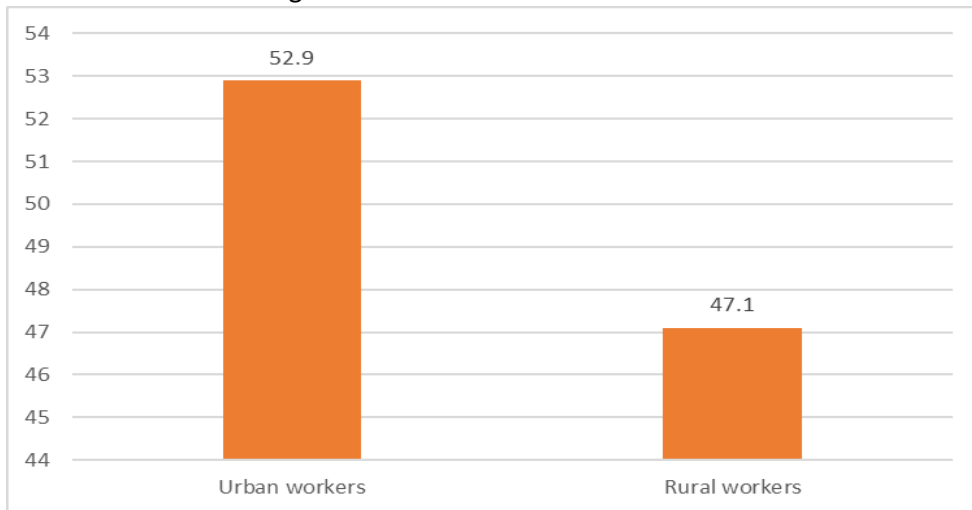


Figure 30. Education level

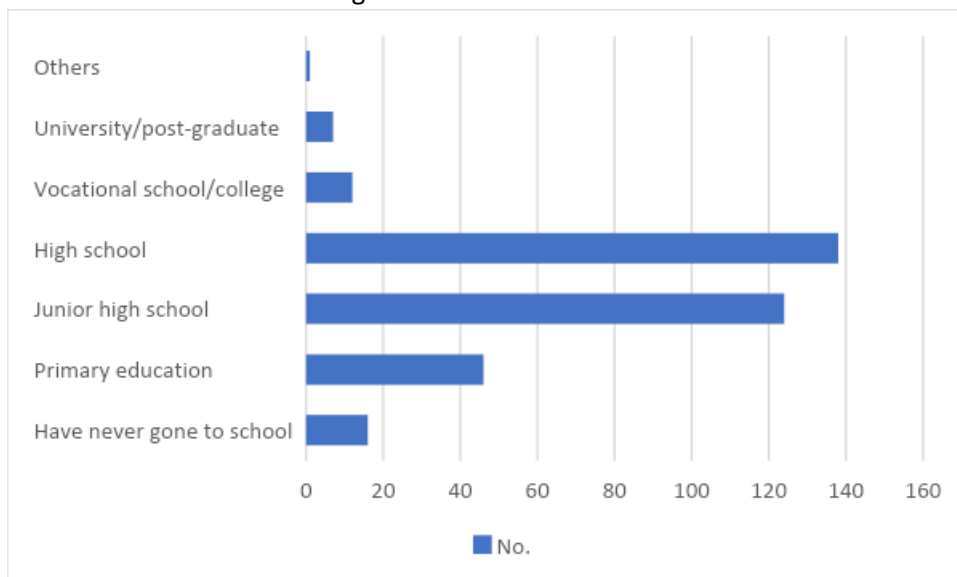


Figure 31. Type of job

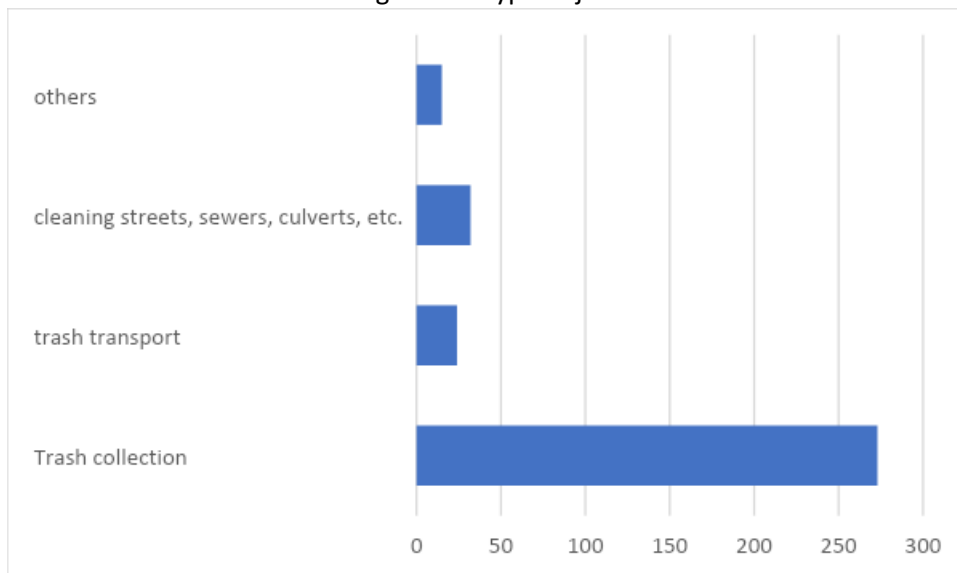


Figure 32. Age of respondents

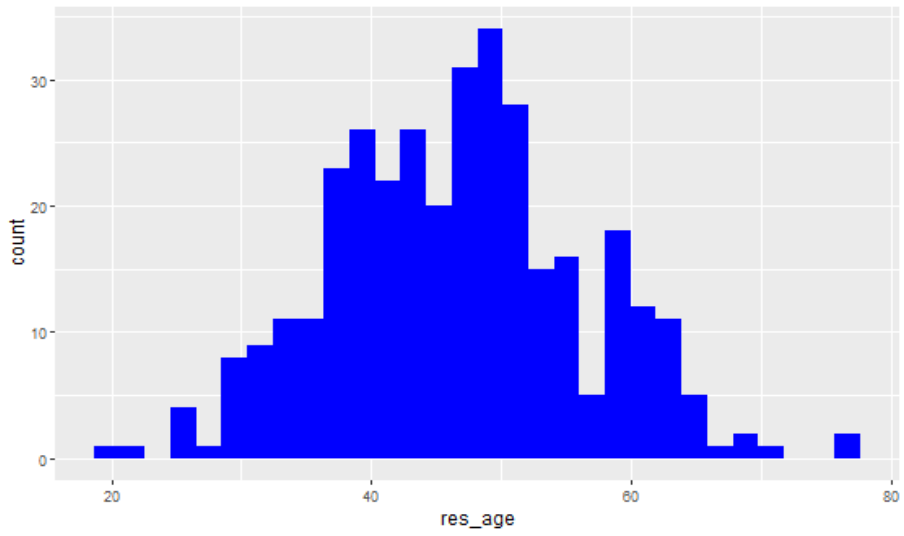


Figure 33. Years of experience

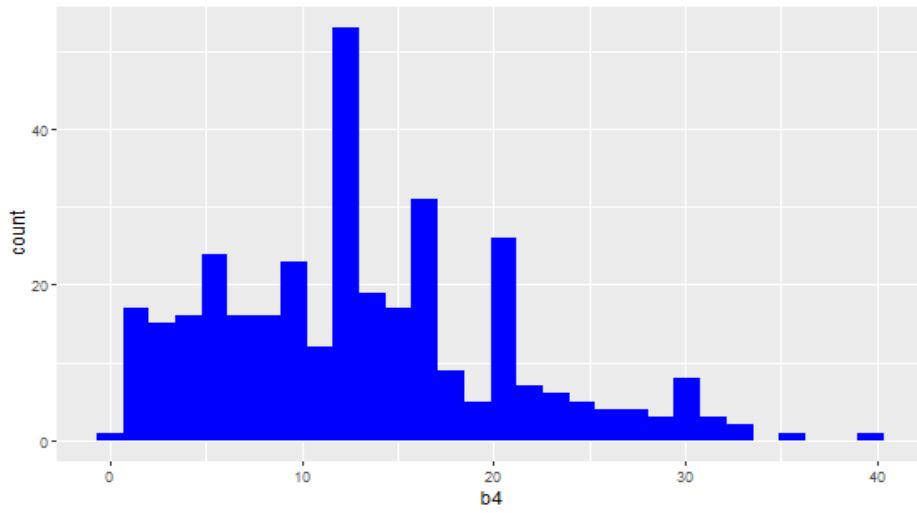
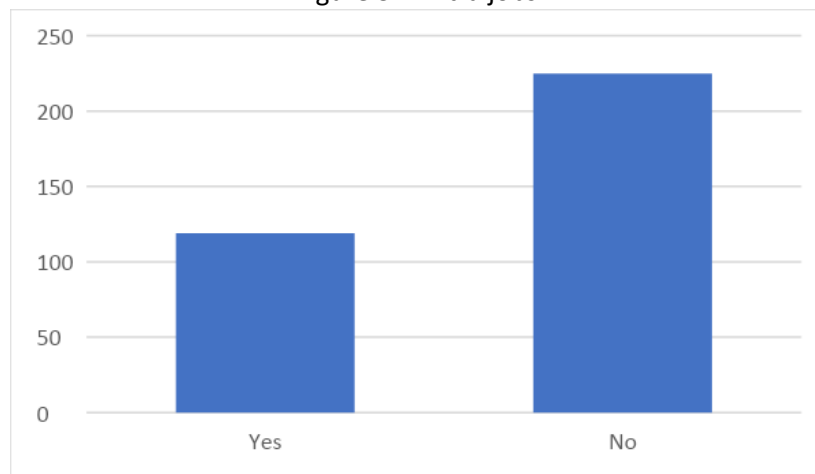


Figure 34. Extra jobs



## Annex 2. Hierarchy of legal documents in Viet Nam

### 7.8.2 Hierarchy of legal documents in Vietnam

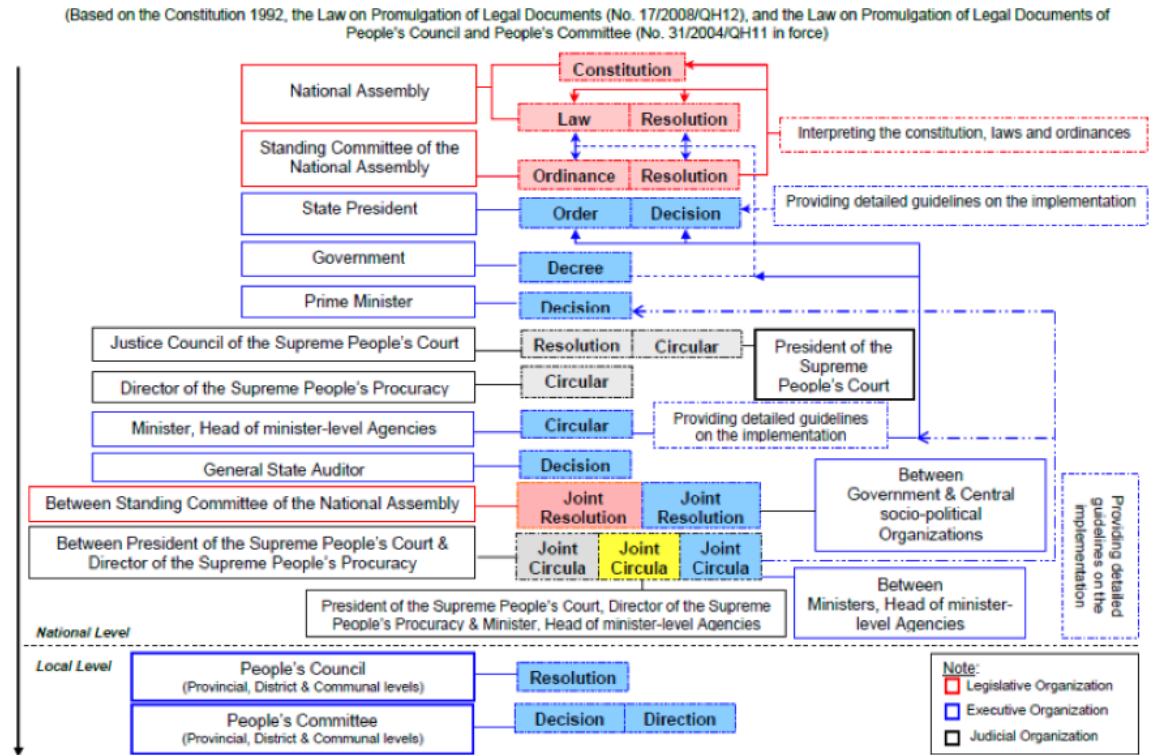


Figure 6: Hierarchy of legal documents in Vietnam (Nguyen 2009)

Source: SFD Promotion Initiative Report of Hanoi, Sandec- Eawag, 2016

### Annex 3. Policies regulating the delivery of sanitation work in Hanoi

No.	Name of legal document	Main points
1	<a href="#">Law on Protection of the Environment of Vietnam no. 72/2020/QH14, issued on 2020</a>	<ul style="list-style-type: none"> <li>● <b>Article 4, point 4. Waste management</b> is belonged in <b>environmental protection planning</b></li> <li>● <b>Article 4, point 8. Environmental license</b> is a document issued by a competent state management agency to an organization or individual engaged [...] waste management [...] with requirements and conditions on environmental protection as prescribed by law.</li> <li>● <b>Article 4, point 18. Waste</b> is matter in solid, liquid, gaseous or other forms discharged from production, business, service, daily life or other activities.</li> <li>● <b>Article 4, point 19. Solid waste</b> is waste in solid form or sludge.</li> <li>● <b>Article 72. Requirements on waste management.</b> Point 1. General requirements for management of daily-life solid waste, hazardous waste and ordinary industrial solid waste are prescribed as follows: a) Waste must be managed in the entire process of generation, reduction, classification, collection, storage, transshipment, transportation, reuse, recycling, treatment and destruction; d) Organizations and individuals transporting daily-life solid wastes, hazardous wastes and ordinary industrial solid wastes that must be treated are responsible for transporting wastes to establishments with appropriate environmental functions and permits. or transfer it to another transport organization or individual for transportation to an establishment with appropriate environmental functions and permits;</li> <li>● <b>Article 71, point 7. Provincial-level People's Committees are responsible for waste management in the area;</b> promulgate regulations on waste management and implement preferential and supportive policies for waste management activities in accordance with law.</li> <li>● <b>Article 76. Daily-life solid waste collection points and transfer stations.</b> Point 1. Daily-life solid waste collection points and transfer stations must have different areas for storing classified domestic solid wastes, ensuring that classified wastes are not mixed with other types of waste. together. Point 2. The People's Committees of all levels are responsible for arranging the premises of gathering points and transfer stations to meet technical requirements on environmental protection according to regulations of the Ministry of Natural Resources and Environment.</li> <li>● <b>Article 77. Collection and transportation of daily-life solid waste.</b> Point 1. People's Committees at all levels shall select domestic solid waste collection and transport facilities through the form of bidding in accordance with the law on bidding; In case it is not possible to choose through bidding, it will be done in the form of ordering or assigning tasks as prescribed by law. 3. Daily-life solid waste collection and transport establishments shall have to coordinate with the commune-level People's Committees, residential communities and residential area representatives in determining</li> </ul>

No.	Name of legal document	Main points
		<p>the time, location, frequency and daily-life solid waste collection route and publicize it.</p> <ul style="list-style-type: none"> <li>● <b>Article 78. Daily-life solid waste treatment.</b> Point 2. People's Committees at all levels shall select daily-life solid waste treatment facilities through the form of bidding in accordance with the law on bidding; In case it is not possible to choose through bidding, it will be done in the form of ordering or assigning tasks as prescribed by law. Point 3. Establishments providing daily-life solid waste treatment services must satisfy requirements on environmental protection as prescribed in this Law. It is not advisable to invest in establishments providing domestic solid waste treatment services that only serve within a commune-level administrative unit.</li> <li>● <b>Article 79. Expenses for collection, transportation and treatment of daily-life solid waste.</b> Point 6. Provincial-level People's Committees shall detail the management of domestic solid waste of households and individuals in the locality; stipulate specific prices for services of collection, transportation and treatment of daily-life solid waste; specify the form and level of funding that households and individuals must pay for the collection, transportation and treatment of daily-life solid waste based on the volume or volume of classified waste.</li> </ul>
3	<a href="#">Law on Planning no. 21/2017/QH14, issued on 2017</a>	<ul style="list-style-type: none"> <li>● <b>Article 27. Provincial planning.</b> 2. Provincial planning includes the following main contents: i) <u>The plan for development of waste treatment zones</u>, including regional and inter-provincial hazardous waste treatment zones identified in the national and regional plans in the area; inter-district waste treatment zones;</li> </ul>
4	<a href="#">Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management</a>	<ul style="list-style-type: none"> <li>● <b>Article 3. Point 1. Solid waste management activities</b> include activities of management planning, investment in construction of solid waste management facilities, activities of classification, collection, storage, transportation, reuse, recycle and treat solid waste in order to prevent and minimize harmful impacts on the environment and human health;</li> <li>● <b>Article 3. Point 18. Solid waste treatment costs</b> include costs of site clearance, construction investment costs, procurement of means and equipment, <u>labor training, management and operation costs of solid waste treatment facilities [...]</u>;</li> <li>● <b>Article 3. Point 19. Costs of solid waste collection and transportation</b> include costs of investment in means and equipment, <u>labor training, costs of management and operation of solid waste collection and transportation facilities [...]</u></li> <li>● <b>Article 13. Investment in solid waste management. Point 1.</b> Investment in construction of solid waste treatment facilities: b) Procurement of technology, equipment and supplies for solid waste treatment;</li> <li>● <b>Article 24. Collection, storage and transportation of solid waste. Point 1.</b> The collection, storage and transportation of solid waste is normally carried out by <u>service companies, service cooperatives or households</u> (hereinafter referred to as <u>solid waste collectors and transporters</u> for short) via service contract.</li> </ul>

No.	Name of legal document	Main points
5	<a href="#">Decree 37/2010/ND-CP dated April 7, 2010 of the Government on formulation, appraisal, approval and management of urban planning</a>	<ul style="list-style-type: none"> <li>● <b>Article 28. Responsibilities of authorities, mass organizations and residential communities in solid waste collection and transportation. Point 1.</b> Provincial- and district-level People's Committees are responsible for organizing solid waste management activities in their respective localities; publicize and publicize solid waste management planning; organize the inspection, examination and handling of violations of the law in the field of solid waste collection and transportation. <b>Point 2.</b> The People's Committees of wards and communes, mass organizations and residential communities shall have to supervise the process of solid waste collection and transportation in their respective localities. 3. Contents of supervision of solid waste collectors and transporters include: [...] c) Requirements on means and protective equipment for workers;</li> <li>● <b>Article 19. Contents of zoning planning project. Point 5.</b> Planning on system of urban technical infrastructure works: The urban technical infrastructure system is arranged to the regional road network, including the following contents: [...] e) Determination of the total volume of wastewater and garbage; drainage network; location and scale of wastewater and waste treatment works.</li> <li>● <b>Article 28. Contents of solid waste treatment planning project.</b> Point 1. Assessment of the current status of emission sources, composition, properties and determination of the total volume of common and hazardous solid wastes; Point 2. Assessment of segregation at source and recycling and reuse of solid waste; Point 3. Determine criteria, forecast sources and forecast total waste; Point 4. Determine the location and scale of the collection points, transfer stations, complexes, solid waste treatment facilities [...]</li> </ul>
6	<a href="#">Decision 609/QD-TTg dated April 25, 2014 approving the master plan on solid waste treatment of Hanoi capital until 2030, with a vision to 2050</a>	<ul style="list-style-type: none"> <li>● <b>Article 1. Point 2. Planning perspective:</b> Hanoi solid waste treatment planning aims to minimize solid waste generation at source, increase reuse and recycling to reduce the volume of solid waste to be buried; meet the city's demand for solid waste collection, transportation, and treatment in each period.</li> <li>● <b>Article 1. Point 4. Standard of planning for solid waste treatment.</b> Standard for calculation, solid waste collection rate: <ul style="list-style-type: none"> <li>- Domestic solid waste: <ul style="list-style-type: none"> <li>+ In 2020: The collection rate in urban areas will be about 85% - 100%, and about 70% - 80% in rural areas.</li> <li>+ By 2030: The collection rate in urban areas will be about 90% - 100%, and about 80% - 95% in rural areas.</li> </ul> </li> <li>[...]</li> <li>- Septic sludge: <ul style="list-style-type: none"> <li>+ In 2020, the collection rate will be about 85% - 100% in urban areas, about 65% - 85% in rural areas;</li> <li>+ By 2030, the collection rate will be about 90% - 100% in urban areas, about 70% - 90% in rural areas.</li> </ul> </li> <li>- Sewage sludge: The collection rate is 100%.</li> </ul> </li> <li>● <b>Article 1. Point 5.</b> Forecast of planning needs: a) Forecast of generated waste volume. (1) Domestic solid waste: 8.500 tons per day by 2020, 11.300 tons per day by 2030, [...]; Septic sludge: 1.500</li> </ul>

No.	Name of legal document	Main points
7	<a href="#">Decree 80/2014/ND-CP on drainage and wastewater treatment</a>	<p>tons per day by 2020, 1.800 tons per day by 2030, [...]; Sewage sludge: 260 tons per day by 2020, 350 tons per day by 2030, [...];</p> <ul style="list-style-type: none"> <li>● <b>Article 1. Point 6. Planning contents: a) Planning on solid waste treatment zoning:</b> <ul style="list-style-type: none"> <li>+ Region I - Northern region: Including historical inner city area, districts (Nam Tu Liem, Bac Tu Liem, Long Bien and part of Thanh Tri district), districts (Me Linh, Dong Anh, Gia Lam, Soc Son), an area of about 1,150 km<sup>2</sup>.</li> <li>+ Region II - Southern region: Including a part of Thanh Tri district, a part of Ha Dong district, districts (Phu Xuyen, Thuong Tin, Thanh Oai, Ung Hoa, My Duc), an area of about 990.0 km<sup>2</sup>.</li> <li>+ Region III - Western region: Including part of Ha Dong district, districts (Dan Phuong, Hoai Duc, Phuc Tho, Quoc Oai, Ba Vi, Thach That, Chuong My), inner and outer town of Son Tay, the area is about 1,204.6 km<sup>2</sup>.</li> </ul> </li> <li>● <b>Article 1. Point 6. Planning contents: b) Sorting, collecting and transporting solid waste</b> <ul style="list-style-type: none"> <li>- Collection and transportation of solid waste: <ul style="list-style-type: none"> <li>+ Daily-life solid waste, ordinary industrial solid waste, ordinary medical solid waste shall be collected from the place of generation to the solid waste transfer station and then transferred to solid waste treatment zones according to the planning of the Government in each region. [...]</li> <li>+ Sludge is collected by specialized units from the place of generation and transported to solid waste treatment zones as planned.</li> <li>+ Sewage sludge is collected by specialized units from the place of origin and transported to the planned sludge landfills.</li> </ul> </li> <li>- Solid waste transfer stations <ul style="list-style-type: none"> <li>+ The forecasted volume of solid waste collected and transported to the transfer station with technical infrastructure serving Hanoi city is about 6,700 - 10,200 tons/day with 5 transfer stations in 3 regions [...]</li> </ul> </li> </ul> </li> <li>● <b>Article 2. Implementation organization. Point 1. People's Committee of Hanoi City:</b> <ul style="list-style-type: none"> <li>- Organize the implementation of the master plan on solid waste treatment of Hanoi capital for the period to 2030, with a vision to 2050.</li> <li>- To assume the prime responsibility for, and coordinate with ministries and branches in, organizing the effective implementation of investment projects according to the Master Plan on solid waste treatment of Hanoi capital to 2030, with a vision to 2050.</li> </ul> </li> <li>● <b>Article 2. Term definition. Point 21. Sewage sludge</b> is organic or inorganic sludge dredged and collected from septic tanks, collection and transmission networks, regulation lakes, canals, inlets, rainwater wells, and rainwater pumping stations, sewage, outlet, and wastewater treatment plant.</li> <li>● <b>Article 3. General principles of water drainage and wastewater treatment. Point 1.</b> Drainage service in urban areas and concentrated rural residential areas is a type of <u>public-utility</u></li> </ul>

No.	Name of legal document	Main points
		<p>activity, which is supported, prioritized, and encouraged by the State for investment in order to meet the requirements of drainage and wastewater treatment, ensure sustainable development.</p> <ul style="list-style-type: none"> <li>● <b>Article 10. Owners of drainage works. Point 1.</b> The People's Committee of the province is the owner or authorizes or decentralizes the People's Committee of the district and commune to be the owner of the drainage system</li> <li>● <b>Article 17. Selection of drainage unit. Point 1.</b> For urban drainage systems, concentrated rural residential areas invested with state budget capital, the selection of drainage units must comply with current law provisions on supply of public service products. <b>Point 2.</b> Organizations and individuals doing business in and developing new urban areas and industrial parks shall manage and operate the drainage system they have invested in until they are handed over to the People's Committee of the province in accordance with regulations. <b>Point 3.</b> The drainage unit must have the necessary human resources, equipment and technical means to fulfill the requirements and tasks of the management and operation of the rainwater and wastewater drainage system.[...]</li> <li>● <b>Article 25. Waste sludge management. Point 1.</b> Waste sludge must be classified for management and selection of appropriate treatment technology, contributing to reducing transportation costs, treatment costs and convenience in management and operation of landfills. [...] 4. Collection, transportation and treatment of sewage sludge: a) Sewage sludge is collected, stored and transported to the planned treatment sites or locations approved by the competent authority for treatment to ensure environmental sanitation as prescribed; It is not allowed to discharge untreated sewage sludge into the environment</li> <li>● <b>Article 25. Point 5. Draining, transporting, and treating sludge from septic tanks:</b> <ul style="list-style-type: none"> <li>a) Sludge from households, administrative agencies, production, business and service establishments must be periodically drained;</li> <li>b) The suction and transportation of sludge from septic tanks must be done by specialized means and equipment to ensure technical requirements and environmental protection;</li> <li>c) The collected and stored septic tank sludge must be transported to locations approved by the competent authority for treatment. It is strictly forbidden to directly discharge septic tank sludge into the drainage system as well as the surrounding environment;</li> <li>d) The treatment of sludge and reuse of septic tank sludge must comply with regulations on environmental protection;</li> <li>e) Expenses for draining, transporting, and treating sludge from septic tanks shall be paid by household heads, administrative agencies, and service production and business establishments under contracts with service providers. service.</li> </ul> </li> </ul>



## Annex 4. Policies regulating the working conditions of sanitation workers in Hanoi

No.	Name of legal document	Main points
Viet Nam Law of Labour 2019		<ul style="list-style-type: none"> <li>● <b>Article 3. Interpretation of terms. Point 8. Labor discrimination</b> is an act of discrimination, exclusion, or preference based on race, color, national or social origin, ethnicity, sex, age, or pregnancy status. property, marital status, religion, beliefs, political beliefs, disability, family responsibilities or based on HIV status or because of the establishment, membership and activities of a trade union or organization of employees at the enterprise have an impact on equality in employment or career opportunities. Discrimination, exclusion or preference stemming from the specific requirements of the job and the acts of maintaining and protecting jobs for vulnerable workers are not considered discriminatory.</li> <li>● <b>Article 3. Interpretation of terms. Point 9. Sexual harassment</b> in the workplace is a sexual conduct by any person towards another person in the workplace that is not desired or accepted by that person. A workplace is any place where an employee actually works as agreed or assigned by the employer.</li> <li>● <b>Article 4. State policies on labor. Point 1.</b> Ensuring the lawful and legitimate rights and interests of employees and employees without labor relations; encourage agreements to ensure employees have more favorable conditions than those prescribed by the labor law. <b>Point 2.</b> Ensure the legitimate rights and interests of the employer, manage labor in accordance with the law, democracy, fairness and civilization, and enhance social responsibility. <b>Point 4.</b> Having policies on development and distribution of human resources; improve labor productivity; training, fostering, and improving professional qualifications and skills for employees; [...]; preferential treatment for workers with high professional and technical qualifications [...]. <b>Point 7.</b> Ensuring gender equality; stipulate labor regimes and social policies to protect female employees, workers with disabilities, elderly workers, and underage workers.</li> <li>● <b>Article 5. Rights and obligations of employees. Point 1. Employees have the following rights:</b> <ol style="list-style-type: none"> <li>a) Working; freedom to choose jobs, workplaces, occupations, vocational training, and professional improvement; <u>not be subjected to discrimination</u>, forced labor, or sexual harassment at work;</li> <li>b) To receive a <u>salary suitable to vocational qualifications and skills based on an agreement with the employer</u>; <u>have labor protection, work in conditions that ensure occupational safety and hygiene</u>; leave according to the regime, take annual leave with salary and enjoy collective benefits; [...]</li> <li>d) Refuse to work if there is a clear and direct threat to life and health in the course of performing the work;</li> </ol> </li> <li>● <b>Article 13. Labor contract. Point 1.</b> Labor contract is an agreement between an employee and an employer on paid jobs, wages, working conditions, rights and obligations of each party in the labor</li> </ul>

No.	Name of legal document	Main points
		<p>relationship. In case two parties agree by another name but with contents showing paid employment, salary and the management, administration and supervision of one party, it shall be considered as an employment contract. <b>Point 2.</b> Before accepting employees to work, the employer must enter into a labor contract with the employee.</p> <ul style="list-style-type: none"> <li>● <b>Article 105. Normal working hours. Point 1.</b> Normal working hours shall not exceed 08 hours in a day and not more than 48 hours in a week. <b>Point 2.</b> The employer has the right to determine the working time by day or week but must notify the employee of it; In the case of a week, the normal working time shall not exceed 10 hours in a day and 48 hours in a week. <b>Point 3.</b> Employers are responsible for ensuring that the working time limit for <u>exposure to dangerous and harmful factors</u> strictly complies with national technical regulations and relevant laws.</li> <li>● <b>Article 106. Night working hours.</b> Night work hours are calculated from 10 pm to 6 am the next day.</li> <li>● <b>Article 109. Rest during working hours. Point 1.</b> Employees who work according to the working hours specified in Article 105 of this Code from 06 hours or more in a day shall be entitled to a break between hours of at least 30 minutes continuously, working at night shall be entitled to a break between hours. at least 45 minutes continuously.</li> <li>● <b>Article 113. Annual leave. Point 1.</b> An employee who has worked for full 12 months for an employer shall be entitled to annual leave and full salary under the labor contract as follows: c) 16 working days for people doing particularly heavy, hazardous or dangerous occupations or jobs.</li> <li>● <b>Article 137. Maternity protection. Point 2.</b> <u>Female employees doing heavy, hazardous, dangerous or extreme heavy, hazardous or dangerous occupations or jobs or doing occupations or jobs that adversely affect reproductive function and child rearing during pregnancy and notify the employer, the employer will switch to lighter, safer work or reduce the daily working hour by 1 hour without any reduction in wages and rights and benefits until the end of the period of raising children under 12 months of age. [...] Point 4. Female employees are entitled to a break of 30 minutes each day during their menstrual period, and 60 minutes of rest per day while raising children under 12 months of age.</u> The time off is still entitled to full salary according to the labor contract.</li> </ul>
	<p><a href="#">Circulars 11/2020/TT-BLĐTBXH issuing a list of hard, hazardous, and dangerous and extreme</a></p>	<ul style="list-style-type: none"> <li>● <b>XX. Environmental sanitation works</b> <b>Working conditions type IV<sup>42</sup>:</b> Maintenance and dredging of mud ditches, rivers, sewers (Working outdoors, heavy work, contact with mud, dirty water); Clean up trash from docks and vehicles, street sweeper (Frequently exposed to dirt and dust with high</li> </ul>

<sup>42</sup> According to [Circular 29/2021/TT-BLĐTBXH](#) issued on 2021 by The Ministry of Labour - Invalids and Social Affairs, occupations and jobs with working conditions classified as IV are heavy, hazardous and dangerous; occupations and jobs with working conditions classified as V and VI are particularly heavy, hazardous and dangerous.

No.	Name of legal document	Main points
	<a href="#">hard, hazardous, and dangerous works</a>	<p>concentrations); Driving and operating special vehicles for transporting manure and garbage (Specialized in working in an environment polluted by dirty garbage); Suction faeces, suction mud (Often working in a foul, dirty environment); Treatment of sewage waste at the mud dump (Hard work, exposure to toxic chemicals, often working in a heavily polluted environment, prone to accidents due to unstable dumping sites);</p> <p><b>Working conditions type V:</b> Dredging horizontal sewer sludge (Constantly exposed to dirty, stinky water, lack of light, lack of oxygen); Construction and repair of underground sewers (Hard work, contact with dirty, stinky water); Clean and renovate two-compartment latrines and bin latrines (Hard work, contact with stinky, dirty waste); Excavation, leveling landfill (Hard work, often working in a heavily polluted environment); Garbage processing (Often work in a polluted environment); Check and detect damage in the sewers by the method of tunneling (Manual work, arduous work, restrained posture, direct contact with dirt, stench, working in a heavily polluted environment, lack of light, lack of oxygen); Dredging underground public mud by mechanical equipment line (Manual work, arduous work, restrained posture, direct contact with dirt, stench, working in a heavily polluted environment, lack of light, lack of oxygen);</p> <p><b>Working conditions type VI:</b> Urban sewer dredging (Manual work, arduous, stench, lack of light, lack of oxygen)</p>
4	<a href="#">Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management</a>	<ul style="list-style-type: none"> <li>● <b>Article 14. Investment capital sources and investment incentives. Point 2.</b> The State encourages all domestic and foreign organizations and individuals to invest in and build solid waste treatment facilities and ancillary works through preferential policies and investment support, including: h) <u>Supporting labor training</u> with state budget sources through training assistance programs.</li> <li>● <b>Article 26. Responsibilities of solid waste collectors and transporters. Point 6.</b> Be responsible for <u>professional training, labor protection equipment for workers</u> collecting and transporting solid waste. <b>Point 7.</b> To be responsible for <u>organizing periodical medical examination for employees</u> in the organization of solid waste collection and transportation.</li> <li>● <b>Article 32. Responsibilities of solid waste treaters. Point 2. Responsibilities of solid waste treaters:</b> [...] e) Implement <u>occupational safety plan</u> in operation and ensure the <u>health of employees</u>.</li> </ul>
	<a href="#">Decree 80/2014/ND-CP on drainage and wastewater treatment</a>	<ul style="list-style-type: none"> <li>● <b>Article 18. Rights and responsibilities of drainage units. Point 2.</b> Drainage units have the following obligations and responsibilities: [...] g) <u>Ensure safe, effective and economical protection</u> in management and operation of water drainage and wastewater treatment systems according to regulations;</li> </ul>

## Annex 5. Policies regulating the salaries, benefits and responsibilities of sanitation workers in Hanoi

No.	Name of legal document	Main points
<a href="#">Decision 6841/QĐ-UBND on the announcement of economic – technology process, cost norms, standards and price for environmental sanitation maintenance in Hanoi city, issued on 2016</a>	<ul style="list-style-type: none"> <li>● <b>Cost norm to maintain environmental sanitation in Hanoi:</b> <ol style="list-style-type: none"> <li>1. <b>Contents of norms:</b> [...] <b>b) Labor cost:</b> <p>Is the number of working days of workers directly corresponding to the job rank to complete a unit of work volume to maintain environmental sanitation.</p> <p>The number of working days includes both main and auxiliary workers to perform and complete a unit of work to maintain environmental sanitation from the preparation stage to the final stage and clean up the construction site.</p> <p><b>Cost norm to maintain environmental sanitation works in Hanoi, divided by types of work:</b></p> <ul style="list-style-type: none"> <li>- Maintenance of street hygiene by both mechanical and manual work</li> <li>- Street sweeping; motorized divider scan</li> <li>- Street hygiene maintenance work</li> <li>- Neighborhood hygiene maintenance</li> <li>- The collection and transportation of domestic waste to the treatment site, the average distance is 20 km</li> <li>- Operation of landfill and domestic waste treatment with capacity ≤ 500 tons/day</li> <li>- Operation of landfill and domestic waste treatment with capacity ≥ 3,500 tons/day</li> <li>- Road washing by special vehicles</li> <li>- Operation of a construction waste landfill with a capacity of 500 - 1,000 tons/day</li> </ul> </li> </ol> </li> <li>● <b>Application of cost norms of urban public services</b> <p>Salary unit price:</p> <p>Wages of direct production workers; Professional, professional, execution and service workers included in the prices of public products and services are determined according to the guidance in Circular No. 26/2015/TT-BLĐTBXH dated July 14, 2015 of the Ministry of Labor, Invalids and Social Affairs on guiding the determination of wage costs as a basis for making, appraising and approving price estimates of public products and services funded by the state budget</p> <math display="block">V_{id} = T_{id} \times [(H_{cb} + H_{pc}) \times M_{Lcs} \times (1 + H_{dc}) + CĐ_{\text{ăn ca}} + CĐ_{\text{khác}}] / 26 \text{ days}</math> <ul style="list-style-type: none"> <li>- <math>V_{id}</math> is the salary of each type of labor calculated in the price of DVCI products;</li> <li>- <math>T_{id}</math> is the total number of normative working days: 26 workers.</li> <li>- <math>H_{cb}</math> is the job grade salary coefficient determined in Clause 6. “Urban public service; electricity and clean water supply” in the Appendix to Circular No. 26/2015/TT-BLĐTBXH dated July 14, 2015 of the Ministry of Labor, War Invalids and Social Affairs.</li> <li>- <math>H_{pc}</math> is the coefficient of salary allowance: <ul style="list-style-type: none"> <li>. Heavy, toxic and dangerous allowances: Calculated in the salary coefficient with heavy, toxic and dangerous allowances included in each group: Group I workers (normal working conditions); Group II workers (hard, hazardous and dangerous working conditions); Group III workers (especially hard, hazardous and dangerous working conditions).</li> </ul> </li> </ul> </li> </ul>	

No.	Name of legal document	Main points
		<p>. Responsibility allowance:  . Regional allowance; Mobile allowance; Attraction allowance and other regimes: Hanoi city does not include these allowances.  - <math>ML_{cs}</math> is the base salary: Apply according to the provisions of Decree No. 47/2016/ND-CP dated May 26, 2016 of the Government on Regulations on the base salary for cadres, civil servants and public employees. and armed forces: From May 1, 2016, the base salary is <b>1,210,000 VND/month</b>.  - <math>H_{dc}</math> is the coefficient of adjustment to increase salary:  The coefficient K adjusted to increase wages is 0.5 for region I; 0.329 for Region II is calculated on the base salary of 1,210,000 VND/month.  - <math>CD_{\text{ăn ca}}</math> is the mid-shift meal fee: It is specified in the section "General management expenses" of the Circular No. 06/2008/TT-BXD dated March 20, 2008 of the Ministry of Construction guiding the management of service costs urban public.</p>
	<a href="#">Decision 592/QĐ-BXD on the announcement of estimate level of collection, transportation and disposal of urban solid waste</a>	<ul style="list-style-type: none"> <li>● <b>Detailed cost norms of:</b> Sweeping and collecting garbage on sidewalks and streets manually; Mechanized collection and transportation of domestic solid waste, construction waste and medical solid waste; [...]</li> </ul>
	<a href="#">Decision 30/2020/QĐ-UBND on issuing procedure and budget cost norm for environmental sanitation maintenance of Hanoi city, issued on 2020 (new)</a>	<ul style="list-style-type: none"> <li>● <b>APPENDIX NO. 1: PROCESS - MAINTAIN ENVIRONMENTAL CLEANING IN HANOI CITY – 14 types of process</b> <ul style="list-style-type: none"> <li>- Maintain cleanliness of streets and sidewalks</li> <li>- Maintain neighborhood hygiene</li> <li>- Collect and transport domestic waste to the treatment site</li> <li>- Maintaining summer and alley sweeping by special vacuum cleaner vehicles, capacity &lt; 2m<sup>3</sup></li> <li>- Maintain hygiene in flower gardens, parks, medians...</li> <li>- Maintain road washing by special vehicles</li> <li>- Maintain brick public toilets</li> <li>- Maintain steel public toilets</li> <li>- Install and maintain portable toilets</li> <li>- Pump for suction and transport of septic tank sludge</li> <li>- Treatment of septic tank sludge (Cau Dien treatment station)</li> <li>- Construction solid waste landfill operation</li> <li>- Clearing and transporting waste land, construction solid waste</li> <li>- Operation of landfill and treatment of domestic solid waste</li> </ul> </li> </ul>
	<a href="#">Decision 491/QĐ-TTg on approving the adjustment of the National strategy on integrated solid waste management to 2025, vision to 2050</a>	<ul style="list-style-type: none"> <li>● <b>Article 1. Point 5. Solutions to adjust the Strategy</b> <ul style="list-style-type: none"> <li>e) Developing human resources to adjust the Strategy: <ul style="list-style-type: none"> <li>- Training and training to improve solid waste management capacity for officials involved in solid waste and environmental management at agencies and units from central to local levels;</li> <li>- Consolidating and expanding vocational training schools, vocational training centers... to improve the quality of training for skilled technical workers to serve the requirements of management, operation, maintenance and repair of facilities solid waste treatment facility.</li> </ul> </li> </ul> </li> </ul>

No.	Name of legal document	Main points
	<a href="#">Decree 59/2007/ND-CP dated April 9, 2007 of the Government on solid waste management</a>	<ul style="list-style-type: none"> <li>● <b>Article 14. Investment capital sources and investment incentives. Point 2.</b> The State encourages all domestic and foreign organizations and individuals to invest in and build solid waste treatment facilities and ancillary works through preferential policies and investment support, including: h) <u>Supporting labor training</u> with state budget sources through training assistance programs.</li> <li>● <b>Article 26. Responsibilities of solid waste collectors and transporters. Point 6.</b> Be responsible for <u>professional training, labor protection equipment for workers</u> collecting and transporting solid waste. <b>Point 7.</b> To be responsible for <u>organizing periodical medical examination for employees</u> in the organization of solid waste collection and transportation.</li> </ul>

## Annex 6. Survey on Sanitation Workers in Hanoi

### SURVEY ON SANITATION WORKERS IN HANOI

Hello Sir/Madam. My name is....., an enumerator of Development and Policies Research Center. We are conducting a "*Survey on work and life of environmental sanitation workers in Hanoi*". This survey helps us understand the context and expectations about the work and life of workers in the sanitation sector in Hanoi, from which we can develop proposals to improve the working environment for workers in this field.

Your participation in this survey is completely voluntary. All the information that you provide will be aggregated to visualize the characteristics of the group of workers in the sanitation sector in general, no identifying information will be disclosed and the information gathered will only be used for research purposes. You have the right to refuse to answer any question or to stop the interview at any time. Refusing or stopping the interview will not affect your rights and work. Completing the questionnaire will take about 30-40 minutes. At the end of the survey, the team would like to send you a small gift equivalent to **100,000 VND** to thank you for taking the time to participate in the survey.

Do you have any more questions about this survey?

For the purposes of recording and synthesizing information, I request permission to record this interview. All your personal information will be encrypted and anonymous. The information you provide will only be used for this report and not distributed.

Do you agree to record this interview?

**\*\* (Recording on) Yes, I would like to start recording the interview. \*\***

Do you agree to participate in this survey? (The interview will only begin when you agree to participate.)

1. Enumerator's name: \_\_\_\_\_
2. Survey location: \_\_\_\_\_ District/District:  
Wards:
3. GPS:

#### A. GENERAL INFORMATION ABOUT RESPONDENTS AND FAMILY

1. **What is your name?:** \_\_\_\_\_
2. **Phone number:** \_\_\_\_\_
3. **What company are you currently working at?:**
  1. Urban Environment Company - Hoan Kiem branch (URENCO 2)
  2. Urban Environment Company - Dong Da Branch (URENCO 4)
  3. Urban Environment Company - Hai Ba Trung branch (URENCO 3)
  4. Urban Environment Company - Nam Son branch (URENCO 8)
  5. Soc Son Urban Environment Joint Stock Company
  6. Gia Lam Urban Environment Joint Stock Company
  7. Other (specify)
4. **Gender of respondents (self-filling by enumerator):**
  1. Female
  2. Male
  3. Other
5. **Year of birth:** \_\_\_\_\_
6. **Hometown (province):** \_\_\_\_\_
7. **Current residence:**
  1. Your home/wife's or husband's
  2. Parents' house (husband/wife) or sibling's house (no charge)
  3. Rental house
8. **Since when have been you living in Hanoi:**
  1. Born in Hanoi
  2. Moved to Hanoi from (specify): Year ..... (if respondents don't remember the exact year, ask them to estimate the time period, if you can't remember, write -99) (Record the most recent year you moved to)
9. **Ethnicity**
  1. Kinh
  2. Other (specify): \_\_\_\_\_

**10. Highest level of education**

1. Did not go to school, did not finish primary school.	5. Intermediate School/College
2. Elementary	6. Bachelor/Postgraduate
3. Secondary High School	7. Other (specify).....
4. High School	

**11. What is your current marital status?** (Select only one option. The enumerator may not need to read the option. If the enumerator says *Married*, the enumerator needs to ask whether the respondent register for marriage or not; If the respondent says he/she has a partner, the enumerator needs to ask if he or she is living together or not)

- 1.  Married
- 2.  Single
- 3.  Divorced
- 4.  Widowed

**12. How many children do you have?**

- 1. I haven't had any children yet
- 2. I have ..... (number) child

**B. EMPLOYMENT**

**1. What is your job type?** (choose 1 answer)

- 1.  Sweeping garbage and collecting household garbage
- 2.  Transporting garbage, waste, sludge
- 3.  Sanitizing streets, sewers, sewers, public drainage systems
- 4.  Other (specify)

**2. Do you plan to continue doing this work in the future?**

- 1.  Definitely continue this work
- 2.  Maybe
- 3.  Definitely not
- 4.  Other, specify: -99.  Don't know

**3. Since when have you worked at this company/unit: Month ..... Year ..... (specify month/year)**

**4. How many years of experience do you have in this work or in similar work as a sanitation worker? (including time working elsewhere)**

**Number of years..... (decimals number can be entered)**

**5. Type of your labor contract**

1. Labor contract with indefinite term	4. No labor contract
2. Fixed-term labor contract from full 12 to 36 months	5. Other (please specify).....
3. Labor contract with term from 3 months to less than 12 months	

**6. What is your usual working time in 2022?**

- 1. Weekdays: .....(average number of hours per day)
- 2. Number of hours per shift: ...hours/shift
- 3. How long is your working shift?  
Shift (morning/noon/afternoon/evening-night) ..... from .... hours to .... hours (fill in 24 hours system)
- 4. Break time during the shift: .....(minutes)
- 5. Number of working days in a week: .....(days)
- 6. [Only for women] During your period, do you have a 30-minute break/day?
  - a. Have a break of 30 minutes/day
  - b. No break
  - c. The company accumulates time off and then pays in cash
  - d. Other regulations: .....(minutes)
  - e. I didn't know there was these regulations.



- 7. **How long does it take to change shifts?**
  - 1. Once a week
  - 2. Every two weeks
  - 3. Once a month
  - 4. No change, fixed working time
  - 5. Other (specify).....
- 8. **In a year, what is the busiest time of the year? From month... to month...**
- 9. **Why is that time the busiest time of the year (multiple options can be chosen)**
  - 1. Tet holiday
  - 2. Other holidays
  - 3. Festivals, sports festivals, sports event
  - 4. Weather: rainy season, flooding, etc.
  - 5. Other (specify).....
- 10. **During that time, did you work overtime?**
  - 1. Yes
  - 2. No -> go to B14
- 11. **Average hours of overtime per day of yours during that time: \_\_\_\_\_**
- 12. **Do you get paid for overtime?**
  - 1. Yes -> go to B14
  - 2. No
- 13. **What is the reason you are not being paid overtime?**

- 14. **During the period of COVID-19 (2020 – 2022) is there any month that you are payless?**
  - 1. Yes
  - 2. No -> go to sentence B16
- 15. **When there is a shortage/no job, how does your company handle payment of salary?**
  - 1. Leave without being paid
  - 2. Leave and enjoy 70% of the insurance salary
  - 3. Get unemployment benefits
  - 4. Other, specify .....
  - 99. Don't know
- 16. **From the beginning of 2022 until now, has the company paid your salary late / owed your salary?**
  - 1. Yes
  - 2. No -> go to B18
- 17. **How long does the company withhold salary/owe your salary?**  
 \_\_\_\_\_(week) (take the longest delay period)
- 18. **Please indicate your number of paid leave per year. (if you do not have any, write 0) .....(days)**
- 19. **If your number of allowed annual leave does not expire this year, how will the remaining leave days be calculated?**
  - 1. Compensation in cash
  - 2. Transfer the leave days to the next year
  - 3. No compensation/no added leave
  - 4. Other (specify).....
  - 99. Don't know

20. **How often do you encounter the following problems when you do this job?**

	1. Regularly	2. Occasionally	3. Rarely	4. Never	-99. Not suitable
1. The company pays less than the original agreement without any appropriate reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Being robbed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Occupational accidents (occurring in the course of work or associated with the performance of work)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Traffic accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1. Regularly	2. Occasionally	3. Rarely	4. Never	-99. Not suitable
5. Forbidden to work/ chased off of certain workplaces (due to not having a fixed location, affecting the environment, other people's rights ...)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Belittled/denied/ridiculed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**C. INCOME (calculated for the period in 2022)**

**1. In 2022, what is your average income from this company/job (monthly average) ?**

Type	Amount (million VND) – can enter decimals
Basic salary (not including overtime)	
Overtime	
Other (specify).....	
<b><i>Cl.a. Average monthly income</i></b>	

**2. In 2022, what is the average monthly income of your whole family: ... million VND/month**

**3. Besides this job, do you have any other jobs?**

1. Yes    2. No -> Switch to C6

**4. What is your part-time job?**

1. Online sale
2. Subsistent agriculture, forestry and fishery
3. Self-employed business or service (selling at markets/at home/shop)
4. Transportation, logistics, motorbike taxi, delivery
5. Other, specify

**5. Average monthly income from this part-time job: ..... (million VND/month)**

**6. Is your household income enough to cover basic household expenses?**

1. Enough, can have saving    2. Enough, no savings  
 3. Not enough, partially sustain expense    4. Not enough, have financial difficulties

**7. What is the average monthly expenditure of your household: ..... (million VND/month)**

**8. [C6 = 3, 4] If your income is not enough, how do you make up for it? (choose multiple options)**

1. Minimize spending	5. Debt (with interest payment)
2. Use former savings	6. Support from family
3. Property sale	7. Other (specify).....
4. Borrow money (no interest) from relatives and friends	

**9. [C8 = 4, 5] How much are you currently borrowing: ... (million VND)**

**10. Do you have a savings account or a savings book?**

1. Yes  
 2. No

**D. INSURANCE AND OTHER BENEFITS (from the beginning of 2022 to now)**

**1. Which of the following insurance policies are you participating in? (Choose multiple options)**

1. Social Insurance (according to Labor Contract)
2. Voluntary social insurance
3. Health insurance
4. Unemployment Insurance
5. Other insurance (specify)
6. Don't know
7. Not participating in any insurance scheme

**2. Does the enterprise have policies or regulations that support or deal with the following regimes?**

Regime	1. Yes	2. No	-99. Don't know
a. Sick			
b. Maternity			

c. Accidents, injuries caused by work			
d. Other (specify)			

**3. From the beginning of 2022 until now, have you received any of the following allowances from the company?** (answer all the content, if there is support but not in cash, the amount is 0)

Type of allowance	a. Support 1. Yes 2. No)	b. Amount (million VND)	c. Payment method 1: Monthly; 2: Quarterly 3. Annually; 4. Other (specify)
1. Seniority (if seniority is converted to salary, it is not counted)	.....	.....	.....
2. Workmanship	.....	.....	.....
3. Toxic/heavy labour	.....	.....	.....
4. Responsibility	.....	.....	.....
5. Raising children	.....	.....	.....
6. Attendance allowance	.....	.....	.....
7. Travel, gas	.....	.....	.....
8. House	.....	.....	.....
9. Money for meals	.....	.....	.....
10. Other, specific.....	.....	.....	.....

**4. From the beginning of 2022 until now, have you received any of the following payments?** (answer all content)

a. Bonus Type	b. Format (choose multiple options) 1. Gift; 2. Cash ; 2. 3. Not rewarded	c. Total amount received (million dong)
1. Bonus at the end of 2022 (January 13)	.....	.....
2. Bonus for work performance (from the beginning of 2022 to now)	.....	.....
3. Holiday gifts (September 2, April 30, New Year's Day, Lunar New Year ...) (from the beginning of 2022 to now)	.....	.....
4. [Only for women] Gifts on Women's days (from the beginning of 2022 until now)	.....	.....
5. [Only ask people with children] Gifts on June 1 (for people with small children - from the beginning of 2022 to present)	.....	.....
6. Mid-Autumn Festival gifts (from the beginning of 2022 to now)	.....	.....
7. Other (from the beginning of 2022 until now), specifically.....	.....	.....

**5. Since working at the company, have you ever received a raise?**

1. Raised salary      2. Not yet      3. Don't know

**6. Has your company organized the following activities from the beginning of 2022 to present? Please tell us how many times you participate in those activities (including participating in competitions, performances, cheering, watching performances)?**

	<b>Did the company organize the event?</b>	(number of times/year)
--	--	------------------------

	<i>1. Yes; 2. No;</i>	<b>Number of participations from the beginning of 2022 to present (write "0" if not participating)</b>
1. Contests	.....	.....
2. Sightseeing/travel	.....	.....
3. Performing arts	.....	.....
4. Sports activities	.....	.....
5. Other, specific.....	.....	.....

**7. How do you evaluate the welfare of the company ?**

	<b>D7a. Are there any benefits?</b> <i>1. Yes; 2. No; -99. Don't know</i>	<b>If yes, how satisfied are you?</b> <i>Very satisfied    2. Satisfied    3. Average    4. Unsatisfied    5. Very dissatisfied    -99. Don't know)</i>
1. Insurance		.....
2. Allowance		.....
3. Bonus		.....
4. Training opportunities		.....
5. Chance of promotion/Development prospects		.....

**8. According to you, in the cases of female workers who are pregnant and raising children under 1 year old that you know, do they have any of the following problems?**

	<b>Observe</b>	<b>Frequency</b> <i>1. All or many cases    2. Many cases 3. Few cases 4. There is no case -99. Don't know</i>
<b>a</b>	Moved to a less dangerous job and kept the same salary	
<b>b</b>	Salary reduction	
<b>c</b>	Reduced working time by 1 hour/day	
<b>d</b>	Being laid off	
<b>e</b>	Taking maternity leave during pregnancy	
<b>f</b>	Get 6 months maternity leave and get salary paid by insurance	

**E. ENVIRONMENT – WORKING CONDITIONS**

**1. Since joining the company/unit, have you participated in any of the following training activities? (include the most recent training/training activity attended)**

	<b>a. Participated?</b> <i>1. Participating 2. Do not participate - 90. Not suitable (no training/training activities held)</i>	<b>b. How necessary is that training/training activity for you?</b> <i>1. Very necessary 2. Necessary 3. Normal 4. Not necessary</i>	<b>c. How responsive is the training/training activity to the job requirements?</b> <i>1. Fully met 2. Partially met 3. Failed 4. Not suitable</i>
1. Apprenticeship (new training)			
2. Apprenticeship (advanced)			
3. Training occupational safety			



	Frequent	Sometimes	Seldom	Never
c. Abdominal pain/stomach pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Bone/joint pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Gynecological diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Sinus, allergic rhinitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Respiratory (cough/pneumonia, bronchitis, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Eye disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Skin diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Other, specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. **In your opinion, what are the main causes of your health problems?** (list up to 3 options – if not, write 0)

1. \_\_\_\_\_
2. \_\_\_\_\_
2. \_\_\_\_\_

3. **How often have you been injured/had accident while working?** (eg: arm/leg cut, bleeding, etc. during garbage collection)

1. Regularly
2. Occasionally
3.  Rarely
4. Never

4. **Could you please list the common types of injuries during work?** (if not, write 0)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

5. **If you have any health problems, how do you usually handle them?** (choose up to 2 options)

1.  Buy own medicine at a pharmacy or treat it yourself at home (sauna, cupping ...)
2.  Go to private clinics
3.  Go for insurance check-ups at public hospitals/health centers
4.  Diagnostic services at public hospitals/health centers
5.  Do nothing
6.  Other, specify

6. **[ F5 =1] Why did you not go to the doctor but buy medicine or treat it yourself?**

1. High cost	4. Did not find it necessary
2. Complicated and cumbersome paperwork	5. Other (specify): .....
3. Do not have time	

7. **Did you use health insurance for your most recent visit?**

1. Yes -> Change to F8
2. No

**F7b. Why not?**

1. I don't have a health insurance card, so I have to get medical examination and treatment services.
2. Have a health insurance card but not accepted.
3. I have a health insurance card, but the medical examination and treatment service is not good compared to the medical examination and treatment services.
4. Having a health insurance card but not enjoying the health insurance rate according to regulations
5. Have a health insurance card, but it takes longer than medical examination and treatment services.
6. Have a health insurance card, but the cost of medical examination and medicine is low, so there is no need (mild illness)
7. Other, specify:

8. Have you ever experienced any of the following behaviors (including your husband/wife/lover/family member...)?

<b>Behavior</b>	<b>F8.a. If yes, who is the perpetrator?</b> (multiple options can be selected - <i>enumerator do not read the options</i> )
1. <input type="checkbox"/> Beaten	1. Husband/lover
2. <input type="checkbox"/> Being scolded, insulted, and degraded	2. Wife/lover
3. <input type="checkbox"/> Belittled, demeaned, discriminated	3. Other people in the family
4. <input type="checkbox"/> Being starred at body parts (chest, waist, buttocks, etc.) that makes you feel annoying	4. People in the same field/colleague
5. <input type="checkbox"/> Comments about offensive physical or external appearance	5. Upper management/tenant
6. <input type="checkbox"/> Intentionally touching some parts of the body causing discomfort	6. Unknown people in public
7. <input type="checkbox"/> Forced sex	7. Other (specify)
	-99: Refused to answer
	<b>F8.b. Who helped then</b> (can choose multiple options, maybe don't need to read options)
	1. Family
	2. Friends/acquaintances
	3. Friends/acquaintances met after moving here
	4. Landlords
	5. Employer/Your company
	6. Local government, mass organizations
	7. Nobody
	8. Other, specify

9. Please indicate which issue you would most like to receive assistance with now (specify maximum 03 issues respondents would like to receive the most support in order of priority from 1 to 3. If respondents cannot think of anything, write 0)?

**Issues that need help most:**

Specify the way/content that you want to be supported:

.....

**Second problem to help:**

Specify the way/content that you want to be supported:

.....

**Third problem needing support:**

Specify the way/content that you want to be supported:

.....

**G. GENERAL ASSESSMENT**

**1. How do you and your acquaintances think about your work?**

People	Rating scale
a. Your Sister/brother	1. Proud 2. Normal 3. Self-deprecating/Embarrassed -90. Not suitable -99. Don't know/Refuse to answer
b. Wife/husband/lover	1. Positive 2. Not positive not negative 3. Negative -90. Not suitable -99. Don't know/Refuse to answer
c. My Children (only ask people who have children)	1. Positive 2. Not positive not negative 3. Negative -90. Not suitable -99. Don't know/Refuse to answer
d. Other relatives (parents, grandparents, relatives, etc.)	1. Positive 2. Not positive not negative 3. Negative -90. Not suitable -99. Don't know/Refuse to answer

e. Friend	1. Positive 2. Not positive not negative 3. Negative -90. Not suitable - 99. Don't know/Refuse to answer
f. Neighbor	1. Positive 2. Not positive not negative 3. Negative -90. Not suitable - 99. Don't know/Refuse to answer
g. Society in general	1. Positive 2. Not positive not negative 3. Negative -90. Not suitable - 99. Don't know/Refuse to answer

2. How do the opinions of the people around you about your work affect/affect you?

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3. [Only ask people who have children] Here are some comments about situations that your child may encounter at school or in classrooms. Could you please express your views on these statements:

Phenomena	1-Strongly disagree	2-Disagree	3-Agree	4-Strongly agree	-99-Don't know/Refuse to answer
1. My child gets along well with his/her friends in school and class					
2. My child's friends at school are friendly and sociable with my child					
3. My child's classmates and classmates bully, threaten, or tease my child					

*G3a. Why is your child being teased and bullied at school? (G3.3 = 3, 4)*

1. Because the family's financial condition is not as good as that of peers
  2. Because of their appearance
  3. Because of my job
  4. Other (specify)
- 99. Refuse to answer

4. [Only ask people who have children] Here are some comments about your child's attitude towards your work. Could you please express your views on these statements:

Opinion	1-Strongly disagree	2-Disagree	3-Agree	4-Strongly agree	99-Don't know/Refuse to answer
1. My child sympathizes and understands my work					
2. My child is embarrassed, self-deprecating, does not want to tell anyone that I do this job					
3. My kids don't like it and get annoyed when I do this job					



## **Annex 7. Data**

Data folder: [see here](#)

- Raw data
- Data cleaned and labelled (do-file)
- Data analysis (do-file)
- Check “other” options
- Fix “other” options
- Graphs visualization (R)