

Viet Nam's craft villages and occupational air pollution

Socioeconomic disparities and gendered exposures



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Key findings

- In Viet Nam's craft villages, workers experiencing pre-existing inequalities related to gender, age and other socioeconomic and cultural factors (e.g. income, migration status, gender norms, employee status, etc.) are more exposed to air pollution as an occupational hazard.
- Men tend to participate more in hazardous tasks, while earning higher wages in general. Women tend to earn lower wages in production facilities because their assigned work is typically perceived as less physically demanding. However, due to the nature of the tasks, women are largely confined within production facilities and spend more time being exposed to concentrated air pollution.
- Women tend to be more dependent on craft village work and have limited alternative livelihoods. They also report taking more time off for health-related reasons as a result of occupational exposures, which negatively affects their incomes.
- Although the majority of the labour force consists of middle-aged workers, young men are the most likely to undertake heavy work with the most direct exposure to pollutants.
- Migrant workers in craft villages tend to have prolonged exposure to air pollution due to living and working right next to the production facilities. Since many migrants only work in the craft villages temporarily, they are more willing to accept riskier jobs with higher exposure in exchange for a better income.
- Due to the informal nature of craft village work, mechanisms to protect worker rights are limited. Most workers are unaware of their labour rights, and employer commitment and resources to ensure worker protection are often lacking. Existing policies and regulations from the state and local governments are insufficient in accounting for the differentiated impacts of air pollution on workers.

In Viet Nam, "craft villages" are residential clusters at the village or commune level that produce one or more different types of handicraft products, while typically still being engaged in agricultural occupations. Although craft villages have created jobs and generated incomes in rural areas, the majority of workers employed are informal labourers and face many risks in production facilities, such as exposure to air pollution and other environmental pollution.

Studies in Viet Nam have shown that environmental pollution in general, and particularly in craft villages, negatively affects both local villagers and inhabitants of neighbouring areas. Air pollution in craft villages results from activities such as ceramic

IMAGE (ABOVE): © VU THI THANH

manufacturing, wood processing, spray painting, surface polishing and bleaching (Ministry of Natural Resources and Environment, 2008, 2021). Health problems as a result of exposure to chemicals, particulates and sound pollution include respiratory, ear, nose, throat, neurological and skin diseases, as well as deafness (Ministry of Natural Resources and Environment, 2014). The average life expectancy of residents in craft villages is also 10 years lower than the national average due to the exposures to such pollutants (Ministry of Natural Resources and Environment, 2008).

Few studies in Viet Nam examine the socio-cultural dimensions of air pollution issues, with the majority focused on environment and health costs. Although many policies are in place to manage air pollution in craft villages, they are usually insufficient in tackling nuances related to gender, age, socioeconomic status and other factors that influence unequal exposures and impacts.

Aiming to fill this gap, the Institute of Human Studies, in cooperation with the Institute of Human Geography and SEI, conducted the research project “Intersectional impacts of air pollution on the world of work of informal labour groups in craft villages in Hanoi, Vietnam”. The study draws on in-depth interviews, focus-group discussions, photovoice¹ and labour diary analysis.

Researchers collected these data from three craft villages in Hanoi. Two are in Quang Phu Cau commune, Ung Hoa district: an incense production village, Phu Luong Thuong, and a plastic recycling village, Xa Cau. The third is a lacquer production village named Ha Thai, in Duyen Thai commune, Thuong Tin district.

Air pollution from lacquer production includes dust and chemical off-gassing, especially from paint. Gases from paints are known to be volatile organic compounds (VOCs), which can contribute to the formation of PM_{2.5}.

In the plastic recycling village, the process of purchasing, transporting, sorting and crushing plastic generates dust and unpleasant odours. Washing the plastic generates microplastics and releases additives such as chemical plasticizers into wastewater. The burning of plastic waste releases free radicals, heavy metals, and polycyclic aromatic hydrocarbons (PAHs), known to be carcinogenic or cancer-causing.

In the incense production village, air pollution is mainly caused by dust emissions, especially at the stages of scrubbing and cutting sticks.

A total of 120 informal labourers in the three craft villages participated: 60 men and 60 women, aged between 17 and 61. As per the ethics procedure, all participants were ensured confidentiality and informed of their rights to withdraw from the study.

Based on the research findings, this policy brief summarizes key issues related to the different extent that village workers are exposed to air pollution, based on pre-existing socioeconomic and gender differences. We describe the role of stakeholders in reducing and protecting workers from air pollution. Finally, policy recommendations are provided for both national and local governments on how to improve air quality for informal workers in craft villages.

¹ Photovoice is a qualitative method that utilizes photographs to document and reveal participant experiences.

Gender differences

The study found that gendered work expectations play a key role in the division of labour and the types of jobs that craft village workers undertake. This differentiation in turn affects exposures to air pollution in craft village production facilities.

Gender norms impact workers' choice of work, which influences their exposure to air pollution. For example, many women reported they choose to work in craft villages because it gives them the flexibility to carry out other domestic care tasks. Jobs for elderly women are often simple, whereas young women are hired to do work that requires more agility and activity; elderly women's income is usually less than that of younger women.

Men reported that gender norms that consider men the main breadwinner in a family led them to take on more strenuous jobs and participate more in hazardous stages of production with higher exposure to air pollutants. These jobs bring a higher income compared to other work in the craft production facilities.

At the same time, men tend to have more task options than women: they often take on activities outside the production facilities, such as transportation and delivery, which decreases their time exposed to pollutants at production establishments. In comparison, women tend to be more confined within indoor production facilities, given the positions available to them, according to gendered work expectations.

While air pollution affects the health of both men and women, women tend to report suffering more health-related impacts more than men do. Men are less likely to mention health issues, and most believe they do not have health problems or that they are immune to air pollution exposures. As a result, women report taking more days off work than men do. Thus, women tend to lose disproportionately more income for health reasons. Furthermore, due to prolonged exposures to air pollution, women are more likely to experience reduced productivity at work, which may also negatively impact their incomes. No matter their position, women's wages in craft production facilities are often lower than men's.

Wages are based solely on the work, with no compensation for exposure to pollutants. While a few jobs are considered hazardous and are compensated with extra wages, these jobs are often done by men.

Age differences

The majority of the craft village labour force consists of middle-aged workers, which puts this age group most at risk overall. Middle-aged workers are more likely to have pre-existing health conditions than their younger counterparts, making them more vulnerable to the impacts of air pollution.

At the same time, youths, especially young men, are more likely to undertake physical work with the most direct exposure to pollutants. This may in turn make young men disproportionately exposed and impacted by air pollution. On the other hand, elderly women in craft villages are often responsible for handiwork, thus making them relatively less exposed to air pollution than their younger counterparts.

Employment status

Most production facilities in craft villages belong to households, not enterprises. In many cases, employers work for their establishments. However, the employers have more power in choosing their jobs. They seldom do jobs that heavily expose them to air pollution and often hire other workers to take on the most hazardous tasks.

At the same time, employers' awareness and action around air quality assurance and work protection remains limited. Measures to reduce air pollution in production facilities are generally basic and without strict technical standards, relying on manual control. For example, methods of dust reduction in production facilities are usually shielding, suction pipes, or exhaust fans, which are limited in their effectiveness. Some production facilities provide simple protective equipment for workers, such as gloves, masks, glasses, etc. Local authorities also sometimes fail to sanction production facilities that violate environmental regulations.

The majority of hired workers interviewed have little awareness of their labour rights and any legal regulations that can protect them from workplace air pollution. Furthermore, hierarchies in village community relations can restrict workers from voicing their complaints to employers and other stakeholders about workplace air pollution.

Migrant workers

Many migrant workers live right next to the production facilities in which they work, exposing them to air pollution even during non-working hours. Since many migrants only work in the craft villages temporarily, they are more willing to accept riskier jobs with higher exposures in exchange for a better income.

Young migrant workers are often disadvantaged, as they do not have the same skillsets as their local counterparts, who have more experience working in the craft villages. Therefore, young migrant workers, especially male migrant workers, are much more likely to accept strenuous jobs that put them at increased risk of pollutant exposure.

Because of their outsider status, migrant workers do not participate in political or social organizations in the craft villages, such as the local Women's Union or Youth Union. Therefore, they have little protection or representation when their rights and occupational safety are violated, including with regard to air quality in the workplace.

Current gaps in policies and institutional capacities

Policies and regulations from the national and local governments, village conventions, and self-governing community organizations influence the management of air pollution and the support given to workers in craft villages. Currently, the implementation of policies and laws on air pollution in craft villages has not been effectively implemented. Existing regulations are scattered and not specific, leading to a lack of comprehensive regulations on ensuring safe working conditions for informal workers in the craft villages.

Relevant national laws and plans that have been promulgated include the Law on Environmental Protection 2020 and the National Plan for Air Quality Management 2021–2025. However, the documents only introduce general regulations on the production and use of environmentally friendly products, without specific recommendations for craft villages. Similarly, the National Emission and Noise Standards do not set specific regulations for craft villages.

This policy brief is based on the project results report *Các ảnh hưởng giao thoa của ô nhiễm không khí tới thế giới việc làm của các nhóm lao động phi chính thức ở các làng nghề tại Hà Nội, Việt Nam* [The Intersectional Effects of Air Pollution on the World of Work of Informal Labor Groups in Craft Villages in Hanoi, Viet Nam].

At the local level, the village conventions contain some environmental regulations. These include regulations on installing ventilation pipes, setting time allowed for spraying paint and grinding plastic, and prohibiting the discharge of dust from production facilities to the street. However, supervision and resources are lacking to ensure that these regulations are implemented.

Similarly, no formal or informal systems of accountability are in place to ensure and monitor occupational safety and health at the workplace. Measures such as carrying out air pollution assessments or installing monitoring systems in production facilities are not well implemented due to a lack of financial and technical capacities at the local level.

Existing policies do not take into account the vulnerability of informal workers and in particular of migrant workers. Advocacy for informal and migrant workers' rights has been implemented by international organizations, such as the International Labour Organization, and national trade unions, such as the Viet Nam General Confederation of Labour. Yet the extent of these efforts remains limited. Furthermore, policies on environmental protection in Viet Nam are largely gender-blind and lack the nuances to address gender-related vulnerabilities or gendered dimensions of exposure.

Policy Recommendations

The following recommendations address national and local government regulations and policies. The goal is to improve conditions for workers and related challenges they face based on socioeconomic and gender dimensions as addressed above.

Amend existing policies at the national level

- Ensure that environmental policies and labour protection programmes are holistic and address the needs of vulnerable groups, including migrant workers and young workers. This includes ensuring gender mainstreaming across policies and creating opportunities to promote women's rights in the field of environment and health.
- Recognize workers equally in the Labour Law, regardless of the nature of their work. The current distinction between formal and informal workers has led to discrimination and unequal protection under the law.
- Expand occupational safety and health management models in craft villages. Since 2010, the National Institute of Occupational Safety and Health has cooperated with the Institute of Labour and Social Affairs and the Ministry of Labour, Invalids and Social Affairs to develop occupational safety and health management models for some craft villages. The implementation of these models has been well received by local authorities and production facilities. The models increased employer and employee awareness and management around occupational safety and health.

Enforce regulations at multiple scales

Local and national efforts will be needed to enforce regulations that are set at all scales. Several recommendations follow, to address both informal working conditions and the capacity to reign in polluters.

- Require businesses to sign formal working contracts with workers, ensuring worker protection under existing national labour laws.
- Establish official occupational hygiene and safety criteria for craft villages, specifically.
- Strengthen the implementation and monitoring mechanisms, including (a) tailoring regulations to the specializations of different craft villages, based on the general legal framework of the environmental protection law; (b) organizing the local environmental management apparatus, so that the Commune People's Committee assigns environmental responsibility to the staff in charge of the craft manufacturing as well as to local departments and agencies, giving each village and hamlet responsibility to facilitate management; and (c) strengthening inspection of production facilities and implementing penalties for violations.
- Conduct air quality monitoring regularly at production facilities to detect and warn about air pollution. Such data provide a basis for penalization of establishments that cause air pollution in craft villages and surrounding environs.
- Encourage community participation in monitoring the implementation of the law on environmental protection in craft villages by setting up self-management groups or building community-based models of air environment protection.

Develop resources and capacity

For national government:

- Clearly define roles and responsibilities among stakeholders, as well as strengthen coordination mechanisms.
- Develop a legal support system for informal workers, especially for young people and for women of all ages.
- Create official training courses or documents on occupational safety and health for craft village production facilities. These should include information on how to comply with regulations on occupational safety, hygiene, accidents and diseases.

For local government:

- Strengthen the role of local socio-political organizations, such as the unions for women, youth and farmers and local veterans associations, in inspecting, monitoring, supervising and especially supporting workers in protecting their rights.
- Ensure production facilities in craft villages receive adequate technological and financial support to improve machines, vehicles and equipment to reduce air pollution from production-related activities.
- Educate production facilities' managers about the responsibilities of businesses in environmental protection and air pollution mitigation.
- Educate and inform workers about occupational air pollution, via workplace training and disseminating accurate information via social media, local loudspeaker systems, leaflets, posters, etc.
- Develop appropriate reporting channels and empower workers to use them to report concerns around occupational health hazards.

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