

POLICY RECOMMENDATIONS

STRENGTHENING HEALTH PROTECTION FOR INFORMAL OUTDOOR WORKERS IN THE CONTEXT OF CLIMATE CHANGE IN HO CHI MINH CITY

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June, 2026

Funded by
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1. BACKGROUND

Ho Chi Minh City is Vietnam's largest economic centre and is also one of the cities experiencing increasingly evident effects of climate change, rapid urbanisation and extreme weather.

In recent years, the city has regularly faced:

- Prolonged heat and the urban heat-island effect, where built-up urban areas are warmer than surrounding areas;
- Extreme rainfall and localised flooding;
- Air pollution, including traffic-related fumes and dust, and other forms of urban environmental pollution;
- More frequent unusual weather events affecting daily life, transport and public health.

Ho Chi Minh City is among the urban areas at risk of serious impacts from climate change and sea-level rise in the coming decades. These pressures affect not only infrastructure and urban development, but also people's health, livelihoods and resilience, particularly among vulnerable groups of workers.

Informal employment accounts for a substantial share of employment in Vietnam. In Ho Chi Minh City, informal outdoor workers form an important part of the urban workforce, but this brief does not reproduce the earlier citywide workforce estimates because their reference year, denominator and source require separate verification.

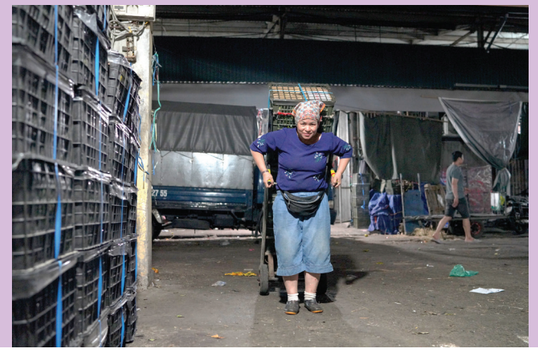
This workforce helps keep the city's everyday activities running, supporting the movement of goods, services and urban economic activity. Yet these workers often work for long hours in the heat, heavy rain, flooding and pollution, with unstable incomes, limited protective equipment and restricted access to social protection and health-care services.











This group includes:

- Traditional motorcycle taxi drivers, app-based ride-hailing drivers and delivery workers
- Construction workers
- Street vendors, waste and recyclable collectors
- Porters and transport workers, workers at wholesale markets, in public spaces and in other outdoor service activities.

In recent years, Ho Chi Minh City has made important efforts in:

- Responding to climate change
- Sustainable urban development
- Improving the living environment
- Strengthening primary health care and community health
- Implementing poverty reduction and social protection programmes.

The city has also issued and implemented a range of programmes and plans on climate adaptation, disaster risk management, green growth, smart urban development, and improvements in health services and quality of life.

However, current policies have not yet given sufficient attention to informal outdoor workers, who are directly and repeatedly exposed to extreme weather and climate-related health risks.

The research findings show that climate change is not only an environmental or urban infrastructure issue. It is increasingly a matter of public health, occupational health, social protection and the adaptive capacity of the urban workforce.

2. EVIDENCE BASE FOR THE POLICY RECOMMENDATIONS

These policy recommendations draw on two complementary sources of evidence conducted by the Vietnam Medical Association (VMA) and the Institute for Development and Community Health (LIGHT): field research in four major cities and a review of relevant legal and policy documents. Both were undertaken as part of the Wellcome-funded research project, The Health Impacts of Climate Change on Precarious Outdoor Workers in Vietnam's major cities. The research programme is led by the National Centre for Social Research (NatCen), United Kingdom, in collaboration with VMA, LIGHT, the SocialLife Research Institute and the University of Bristol. The Medical Associations of Ho Chi Minh City, Da Nang and Can Tho contributed to the implementation of the research in the study cities.

SOURCE 1: FIELD RESEARCH IN FOUR MAJOR CITIES - HANOI, DA NANG, HO CHI MINH CITY AND CAN THO (MAY–DECEMBER 2025)

- A quantitative survey of 1,208 informal outdoor workers in four occupational groups, including **406 participants** in Ho Chi Minh City.
- The qualitative research comprised **76** in-depth interviews and eight focus-group discussions involving **48 participants**.

SOURCE 2: REVIEW OF 45 POLICY DOCUMENTS (2024)

- A systematic review of legal and policy documents relating to climate change, labour, health and social protection at both central and local levels.

The research was funded by the Wellcome Trust, and conducted by the Vietnam Medical Association (VMA), the LIGHT Institute for Community Health Development and the Ho Chi Minh City Medical Association, with technical and financial support from the National Centre for Social Research (NatCen), United Kingdom.

The research found that:

- Outdoor workers experience very high levels of climate and environmental exposure;
- Effects on physical health, mental health and livelihoods are already evident;
- Access to social protection and health-care services remains limited;
- A policy gap remains: there is currently no policy that brings together health protection, climate change response and social protection for informal outdoor workers.

Taken together, the field research and policy review suggest that **protecting the health of informal outdoor workers should be considered a priority in climate adaptation and sustainable urban development in Ho Chi Minh City.**





3. KEY RESEARCH FINDINGS

3.1. Informal outdoor workers in Ho Chi Minh City experience very high levels of climate and environmental exposure

Ho Chi Minh City is experiencing increasingly evident effects of climate change, including extreme heat, heavy rainfall, urban flooding and air pollution. Alongside these climate pressures, the urban heat-island effect is becoming more pronounced, with temperatures in many inner-city areas substantially higher than in outlying areas. This increases health risks for people who work outdoors for long periods.

The study found high levels of exposure among outdoor workers in Ho Chi Minh City:

- In Ho Chi Minh City, 93.0% of workers reported exposure to hot weather during the 12 months before the survey;
- 57.9% had been exposed to heavy rain, 12.7% had experienced flooding, and 3.6% had been exposed to storms or severe thunderstorms;
- Average working time was about 55 hours per week;
- Across the full study sample, only 19.1% were able to avoid working during periods of peak heat, and only 1.4% were able to move to work that was less affected by the weather.

In addition to high temperatures, outdoor workers in Ho Chi Minh City are regularly exposed to traffic fumes and dust, air pollution, urban noise, heavy rain, flooding and unsafe working conditions.

Outdoor workers were exposed to multiple unsafe working conditions:

- Across the full study sample, 55.6% of workers were simultaneously exposed to 6–10 climate- and environment-related health risk factors;
- 29.1% were exposed to 11–15 risk factors.

This indicates that many outdoor workers face multiple overlapping health risks at the same time, increasing the cumulative risk to their physical health, mental health and ability to work over the longer term.

3.2. Climate change and outdoor working conditions are already having clear health effects

Effects on physical health

The research shows that extreme weather and outdoor working conditions are having clear effects on workers' physical health.



Across the full study sample, the following health symptoms and conditions were reported:

- 74.8% of workers frequently felt tired or exhausted during periods of hot weather;
- Across the full study sample, 68.5% reported at least one musculoskeletal symptom after a working day;
- 7.4% reported symptoms indicative of cardiovascular conditions;
- 6.4% had experienced respiratory illness during the previous 12 months;
- 22.8% reported other notable health problems related to working conditions and extreme weather.

In Ho Chi Minh City, 10.1% of workers reported that their work or livelihoods had been affected by extreme weather events.

Many workers said they still had to continue working in adverse weather because of livelihood pressures, increasing the risk of dehydration, exhaustion, reduced concentration and occupational accidents.

Effects on mental health

In addition to physical health problems, the research indicates that extreme weather and livelihood pressures are having notable effects on the mental health of outdoor workers in Ho Chi Minh City.

Based on workers' own assessment:

- 22.7% of workers in Ho Chi Minh City said weather events had affected their mental health;
- 10.1% said their work or livelihoods had been affected by extreme weather events.



Assessment using the DASS-21, a standardised instrument used to screen for symptoms of depression, anxiety and stress, found that 23.3% of workers in Ho Chi Minh City had symptoms of anxiety ranging from mild to extremely severe: This brief presents the anxiety and stress components of the assessment.

- 9.7% with mild anxiety;
- 7.4% with moderate anxiety;
- 3.7% with severe anxiety;
- 2.5% with extremely severe anxiety.

The DASS-21 assessment also found:

- 10.7% with mild stress;
- 6.2% with moderate stress;
- 2.0% with severe stress;
- 0.7% with extremely severe stress.

In-depth interviews also found that many workers were regularly concerned about reduced or lost income during prolonged periods of heat or heavy rain, health-care costs when their health deteriorated, their ability to maintain work as weather conditions became more severe, and family care responsibilities when income was interrupted.

The research also found a clear association between mental health and physical health risks.

- In the study's regression analysis, workers with symptoms of anxiety had 1.94 times the likelihood of reporting physical health impacts compared with those without anxiety symptoms;
- In the same analysis, workers experiencing psychological stress had 1.77 times the odds of reporting physical health impacts compared with those without psychological stress. These findings indicate associations and should not be interpreted as evidence of causal relationships.

These findings show that the effects of climate change extend beyond the working environment and livelihoods and are becoming a public and occupational health concern that warrants greater attention in urban policy. Mental health should also be recognised as an important component of future climate adaptation and worker health protection strategies.

3.3. Gaps in access to social protection and health protection

Within the study sample, 70.2% of informal outdoor workers surveyed in Ho Chi Minh City had health insurance. The earlier draft's citywide health-insurance and social-insurance comparison has been removed pending verification of its source, reference year and denominator.

However, the study found that informal outdoor workers continue to face greater difficulties in accessing insurance and social protection.

Specifically:

- 70.2% of the workers surveyed in Ho Chi Minh City had health insurance;
- Participation in voluntary social insurance remained very low;
- 70.7% lived in rented accommodation or boarding houses;
- Across the full study sample, only 8.7% had received formal professional or vocational training; the available source report does not establish this as a Ho Chi Minh City-specific estimate.

At the same time, workers expressed clear needs for support:

- 65.0% wanted support to access health insurance;
- 54.4% wanted support to participate in social insurance;
- 65.8% wanted support with the cost of care at primary health-care facilities;
- 51.6% wanted rest stations offering shelter from heat and rain at workplaces or in public areas.

This suggests that despite the city's progress in expanding social protection coverage, a substantial gap remains between formal workers and informal outdoor workers, who face higher levels of climate exposure and health risk.

4. CONCLUSION

Ho Chi Minh City has made important efforts to respond to climate change, promote sustainable urban development and improve residents' quality of life. However, the evidence from this study shows that the effects of climate change on outdoor workers are becoming increasingly evident and require greater attention in city policies.



The effects extend beyond working conditions and income. They also affect physical and mental health, labour productivity, access to social protection and the urban health system.

- The working environment;
- Income and livelihoods;
- Labour productivity;

they are also directly affecting:

- physical health;
- mental health;
- social protection;
- the urban health system.

As Ho Chi Minh City moves towards green development, a smart city and sustainable growth, stronger health protection for outdoor workers can contribute to:

- Protecting the urban workforce;
- Reducing pressure on health and social protection systems;
- Strengthening the city's resilience;
- Supporting more inclusive and sustainable development over the longer term.

5. POLICY RECOMMENDATIONS

RECOMMENDATION 1. INTEGRATE HEALTH PROTECTION FOR OUTDOOR WORKERS INTO THE CITY'S CLIMATE ADAPTATION PROGRAMMES

Ho Chi Minh City has issued a number of important plans on climate adaptation, green growth and sustainable urban development. However, these programmes do not yet clearly identify outdoor workers as a vulnerable group requiring priority attention.

The city should consider:

- Including indicators to monitor the health of outdoor workers in climate adaptation plans;
- Integrating climate-related occupational health into city action programmes;
- Giving greater priority to informal workers in policies to strengthen climate resilience.

RECOMMENDATION 2. DEVELOP A HEAT AND HEALTH ACTION PLAN

Ho Chi Minh City could take a leading role in developing a "Heat and Health Action Plan", including:

- An early-warning system for heat
- Guidance for safe outdoor work
- Recommendations on rest periods during episodes of extreme heat
- Coordination between the health sector, meteorological services and local authorities
- Appropriate multi-channel communication that can reach informal workers.

RECOMMENDATION 3. DEVELOP A NETWORK OF REST STATIONS OFFERING HEAT PROTECTION AND HEALTH SUPPORT FOR OUTDOOR WORKERS

The city could pilot these at:

- Bus stations;
- Wholesale markets;
- Parks;
- Logistics centres;
- Areas where app-based drivers and delivery workers gather.

This model could provide practical and accessible support for informal outdoor workers.

RECOMMENDATION 4. IMPROVE ACCESS TO HEALTH INSURANCE, SOCIAL INSURANCE AND HEALTH-CARE SERVICES

The city could consider:

- Forms of health insurance support for low-income workers
- Approaches to encourage participation in voluntary social insurance
- Giving priority to mobile periodic health checks for outdoor workers
- Strengthening primary health care and mental health counselling.

RECOMMENDATION 5. PILOT HEALTH PROTECTION MODELS FOR DIGITAL PLATFORM WORKERS

Ho Chi Minh City has a large number of delivery workers and app-based drivers.

The city could work with ride-hailing and delivery platform companies such as Xanh SM, Grab and Be to:

- Disseminate warnings on heat and air pollution
- Support rest stations offering shelter from heat
- Link workers to periodic health-care programmes.

RECOMMENDATION 6. STRENGTHEN RESEARCH AND MONITORING OF CLIMATE-RELATED HEALTH IMPACTS

Priority areas include:

- Monitoring heat-related illness
- Monitoring respiratory illness associated with air pollution
- Monitoring climate-related mental health
- Using health data to inform policy-making.









Protecting the health of outdoor workers is not just a social protection measure. It is a strategic investment in the urban workforce, labour productivity, climate resilience and the sustainable development of Ho Chi Minh City in the decades ahead.

As climate change worsens, the ability to protect the most vulnerable groups of workers will be an important measure of how inclusive, equitable and sustainable the city's development is.

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