AUS4REFORM Australian Aid UNDP ecua

EXECUTIVE SUMMARY

IMPACT OF EXTREME WEATHER ON OUTDOOR WORKERS IN HANOI & SUGGESTED RESPONSES

Ha Noi, September 2025

Impact of Extreme Weather on Outdoor Workers in Ha Noi and Suggested Responses

Research Team

Le Quang Minh

Nguyen Hoang Hiep

Le Quang Binh

(ECUE Social Enterprise)

This research was conducted with technical support from the United Nations Development Programme (UNDP) in Viet Nam and financial support from the Australian Department of Foreign Affairs and Trade (DFAT) through UNDP's Viet Nam Provincial Governance and Public Administration Performance Index (PAPI) Research Programme.

Research Context

Amid rapid urbanization, Ha Noi is increasingly facing extreme weather events such as prolonged heatwaves, cold spells, storms, flooding, or air pollution. Outdoor workers are among the groups most directly and severely affected. However, research on this issue in Viet Nam remains limited, particularly in terms of multi-dimensional analysis of how climate change impacts outdoor workers' health, livelihoods, social life, as well as their ability to access response and support services.

In this study, "outdoor workers" are defined as those whose jobs take place primarily outdoors. While part of their work may be carried out indoors or under partial shelter—for example, street vendors selling under trees or eaves, or construction workers working inside unfinished buildings—the nature of their work requires that most activities occur outdoors, directly exposed to weather conditions and the natural environment.

Research Objectives, Methodology, and Target Group

Research Objectives:

1. To explore and analyze the multidimensional impacts of extreme weather events on the health, livelihoods, social life, and access to response services of outdoor workers;
2. To synthesize and assess outdoor workers' adaptation measures and coping solutions to mitigate the impacts of extreme weather on their health, livelihoods, social life and access to response services; and,
3. To propose co-designed recommendations and solutions aimed at strengthening the capacity to cope with and adapt to harsh weather conditions, while promoting inclusiveness and social equity for outdoor workers.

Research Methodology:

- **Quantitative and qualitative methods**: A combination of quantitative methods (a survey of 304 outdoor workers in Ha Noi) and qualitative methods (15 in-depth case interviews) was used. The survey was implemented through multiple channels, both online and in-person fieldwork, to ensure the representativeness and diversity in terms of occupation, gender, age, and disability status of the outdoor workers reached.
- **Co-research approach**: Outdoor workers also participated in the research process by taking photos to document their work realities, sharing personal and colleagues' daily work stories, and describing situational solutions they use to cope with extreme weather events.

Main Research Findings

1. Extreme Weather Creates a Double Burden of Risks

Extreme weather affects outdoor workers through two main risk mechanisms:

- **Cumulative Risks**: Heatwaves, extreme cold, air pollution, and noise gradually erode the physical and mental health of outdoor workers.
- **Event-based Risks**: Storms, floods, and strong winds cause immediate disruption to work, damage to property, and loss of income.

These overlapping risks reinforce one another, further deepening the vulnerability of outdoor workers.

2. Differentiated Impacts of Extreme Weather by Type of Outdoor Work, Gender, and Disability

By Type of Outdoor Work:

- **Outdoor construction workers** face high risks of health issues, accidents, and occupational diseases. Extreme weather—especially intense heat—reduces productivity. At the same time, this group is exposed to workplace accidents, as many construction workers still lack adequate or standardized protective equipment.
- **Outdoor service-based workers** (motorbike drivers, delivery drivers, street vendors) have unstable incomes that are easily disrupted by storms or floods, because their work requires continuous mobility in public spaces with no fixed workplace. This group is also exposed to health risks from dust and air pollution due to their constant outdoor presence.
- **Outdoor waste pickers and sanitation workers** operate in polluted environments without adequate protection, frequently exposed to waste and hazardous chemicals. Extreme weather events increase the workload pressures for this group, particularly during storms when falling tree branches clutter roads.

By Gender:

- Extreme weather deepens gender inequalities. Men are tied to heavy, hazardous jobs and the role of household breadwinner, while women are often "trapped" in petty, unstable street trade while also shouldering caregiving responsibilities within the family.

By Disability:

- Workers with disabilities face a double exclusion. They encounter barriers in accessing urban infrastructure during storms, floods, or heatwaves, and their health deteriorates more quickly under harsh conditions. Limited adaptive capacity puts them at a greater risk of job loss and livelihood insecurity.

3. Proactive Adaptation Measures by Outdoor Workers

Most proactive measures adopted by outdoor workers are individual and spontaneous, relying heavily on their limited personal resources. While these measures help reduce immediate risks, they lack long-term sustainability. Some of the measures applied include:

- Equipping themselves with personal protective gear (raincoats, masks, sun-protective clothing, etc.);
- Taking nutritional supplements, medicines, and other health-support products;
- Participating in community activities and raising their own awareness of environmental protection; and,
- Adjusting working hours (for example, starting earlier, taking longer midday breaks, working in the evening to reduce the impact of heatwaves) or temporarily suspending work.

4. Solutions Proposed by Outdoor Workers to the Ha Noi City Government

Apart from their own coping strategies, the outdoor workers in this study also expressed their expectation that the Ha Noi city government should adopt concrete measures to mitigate the impacts of extreme weather and environmental conditions. Among the 304 outdoor workers surveyed, nearly 80 percent selected **planting more trees and creating shaded areas** as their most preferred option.

Solutions aiming at **reducing emissions and urban pollution** also received considerable attention: 48.7 percent of the respondents chose the option of promoting energy-saving and

renewable energy solutions, while 43.8 percent opted for the implementation of policies to improve waste and emissions treatment systems. Flood-prevention infrastructure was also emphasized, with 27.3 percent of respondents supporting improvements to the drainage system and 24.7 percent calling for disaster-prevention policies.

Measures related to **improving and expanding public amenities** were likewise highlighted, reflecting the essential needs of outdoor workers for adequate urban living space conditions. Specifically, 38.5 percent of respondents selected the solution of improving public transportation; 26.0 percent supported the development of public parks; 25.7 percent chose the installation of public drinking water stations; 23.4 percent opted for the creation of public cooling shelters; and 16.8 percent supported adding more public benches.

Recommendations

Based on the survey results and insights gathered from outdoor workers in Ha Noi, the following policy and practical recommendations are proposed:

1. Improve urban infrastructure through "greening" and expanding public spaces

- Renovate unused buildings into public spaces that can serve as shelters for outdoor workers.
- Add convenient sheltered rest and/or cooling stations in areas with high concentrations of workers (such as markets, bus stations, road intersections).
- Transform areas beneath flyovers and elevated roads into green spaces and public shelters equipped with amenities such as drinking water fountains and public restrooms.
- Increase the density of urban trees to create shaded corridors.

2. Prioritize environmental protection and climate change mitigation

- Strengthen air quality monitoring, waste management, clean energy adoption, and green urban development to improve public health and mitigate climate change.

3. Ensure inclusiveness and integration between extreme weather response policies and social protection measures

- Mainstream climate adaptation policies into social protection and vice versa, following the principle of "right group, right place, right time."
- Establish minimum safety and benefit thresholds for all, while enhancing targeted support for vulnerable groups.
- Strengthen institutional coordination among the labor, health, construction, transport, environment, and home affairs sectors as well as between local authorities, along with rapid feedback mechanisms from the field. Shift the focus from "self-coping" to "systematic protection," thereby reducing immediate income and health shocks while building sustainable livelihoods for outdoor workers.

4. Promote the participation and amplify the voices of outdoor workers

- Strengthen mechanisms for direct consultation and dialogue with outdoor workers in the policymaking process related to urban planning, environment, and labor.
- Enhance communication activities that highlight the role of outdoor workers, clarify the negative impacts of extreme weather on their lives and work, and foster attention, listening, and concrete support from stakeholders such as the government, businesses, and civil society organizations.