



Weathering the Change

How Street Vendors are Shaping Their Future
in the Face of Climate Challenges in ASEAN



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Partners



StreetNet International is a global alliance of street and market vendors and hawkers. Founded in 2002 in South Africa, we bring together trade unions, cooperatives and associations of workers to advocate for the labour rights of street and market vendors and hawkers. Our mission is strengthening and empowering member organizations to protect and promote street and market vendors' rights and livelihood, especially of women, through advocacy actions, capacity building, education, democratic governance, representation and solidarity among all workers.

www.streetnet.org.za



Oxfam is a global movement dedicated to alleviating poverty and promoting social justice. Operating in over 90 countries, it works with local partners to address issues like inequality, hunger, and climate change. Oxfam focuses on providing humanitarian aid, advocating for policy change, and empowering marginalized communities, particularly women and girls. It promotes sustainable development and human rights, aiming to create lasting, positive change worldwide.

www.oxfam.org



About the project

Since 2017, StreetNet International has partnered with Oxfam on two five-year programs funded by Belgium Development Cooperation. In the second program, **"Improved Social Protection and Labor Rights for Women Workers in ASEAN's Agri-Food Sector,"** StreetNet focuses on **extending social protection, empowering workers, and promoting Decent Work principles.** Recent activities include training on negotiation skills in Cambodia and collaboration with the Lao Federation of Trade Unions. StreetNet is also conducting research on the impact of climate change on women street vendors in Phnom Penh, Ho Chi Minh, and Vientiane.





Introduction

These three case studies have been developed as part of an Oxfam project titled 'Improved Social Protection and Labor Rights for Women Workers in ASEAN's Agri-Food Sector', funded by DGD Belgium. StreetNet International, a long-time partner of Oxfam, has been instrumental in expanding social protection for street vendors in Cambodia, Laos, and Vietnam. In 2024, StreetNet contracted three researchers from these countries to document the types of climate risks faced by street vendors, as well as the impacts of these risks on their businesses and health. This study **aims to shed light on the climate challenges that street food vendors face, particularly the vulnerability of women vendors, and to propose solutions for enhancing their resilience.**

Street food vendors in Cambodia, Laos, and Vietnam play a critical role in the urban economy, providing affordable food options and serving as important sources of employment. However, climate change and extreme weather events pose significant challenges to their livelihoods, health, and well-being. This study explores the types of climate risks these vendors face and how they are coping with the growing unpredictability of weather patterns. By examining the situation in these three countries, we can identify similarities and differences in how climate risks affect street vendors, with a particular focus on the gendered impacts on women vendors. Furthermore, the study offers actionable recommendations to improve resilience and address the challenges faced by these vulnerable workers.

Summary

Across Cambodia, Laos, and Vietnam, street food vendors are confronted with a range of climate-related risks, including heavy rains, floods, extreme heat, and typhoons. In Cambodia, vendors in Phnom Penh are especially impacted by flash floods and rising temperatures, which disrupt their operations and raise their costs. The lack of effective drainage systems and the increasing urban heat exacerbate the problem. In Vietnam, vendors face the full spectrum of extreme weather events, including typhoons, heatwaves, and tidal surges, which result in significant business losses, health issues, and increased physical fatigue. In Laos, similar weather patterns, particularly erratic rainfall and flooding, also disrupt vendors' livelihoods.

Women vendors are disproportionately affected by these climate risks in all three countries. In Cambodia, the increasing heat and flooding threaten women's ability to sustain their businesses, especially those with caregiving responsibilities or physical limitations. In Vietnam, women face heightened risks from heat-related illnesses and mobility challenges, particularly in flood-prone areas. Women vendors are also more likely to be responsible for household care while simultaneously managing the demands of street vending, adding an additional layer of vulnerability. **Across all three countries, many vendors depend on informal coping strategies, such as consuming their own products or seeking assistance from family and social networks. However, these strategies often result in reduced well-being and financial instability.**

The case studies indicate that while vendors across all three countries face similar climate risks, their coping mechanisms and support structures vary. In Cambodia and Laos, vendors have limited access to formal support, while Vietnamese vendors benefit from informal networks and microfinance opportunities through vendor unions. **Despite these differences, all vendors experience a lack of targeted government assistance for climate-related challenges. As a result, they are left vulnerable to extreme weather events with little external support to help them recover.**



Key Findings from the Case Studies

Climate Risks:

- Cambodia: **Flash floods and extreme heat are the most prominent climate risks**, with floods causing damage to goods and disrupting business operations. Extreme heat, particularly in urban areas like Phnom Penh, raises the risk of heat-related illnesses.
- Laos: Vendors face challenges from **erratic rainfall, flooding, and fluctuating temperatures**. These weather events reduce customer traffic, disrupt sales, and damage goods.
- Vietnam: **Vendors experience a combination of typhoons, heatwaves, and tidal surges**, with typhoons causing significant damage to goods, while heat waves and floods result in health issues and business disruptions.

Impacts on Women Vendors:

- Women vendors in all three countries face **heightened risks due to additional caregiving responsibilities, limited mobility, and physical vulnerabilities**. They are often more impacted by extreme heat and flooding, which complicates their ability to move their goods quickly and manage their businesses.
- In Cambodia and Laos, **many women vendors face additional pressures from household responsibilities**, making it harder for them to recover from weather-related disruptions.

Coping Strategies:

- Vendors across the three countries employ a variety of coping strategies to mitigate the impacts of climate change. These strategies include **working in adverse weather conditions (e.g., continuing to work in light rain or extreme heat), adjusting product offerings to fit weather demands, and using savings to manage losses**.
- Informal support networks, including assistance from family, friends, and street vendor unions, helps vendors manage financial shortfalls. However, these **support systems are often limited and insufficient**.

Lack of Formal Support:

- In all three countries, **vendors report receiving minimal formal support from government or social organizations to cope with climate risks**. Most support programs are either unrelated to extreme weather or are inaccessible due to eligibility restrictions or complicated application procedures.
- The absence of weather-specific assistance and formal recognition of street vendors further **exacerbates their vulnerability to climate impacts**.

Recommendations

Based on the findings of these case studies, several recommendations can be made to improve the resilience of street food vendors in the face of climate risks:

1. Designated Vending Areas with Essential Services:

Governments should establish designated vending areas equipped with basic infrastructure, such as clean water, electricity, and security services. This would alleviate some of the logistical burdens vendors face, particularly in extreme heat and floods.

2. Formalizing Street Vending:

Formalizing and legalizing street vending will allow vendors to access social protection and government services. Simplifying the registration process and making regulations more accessible to vendors, especially those with low levels of education, is critical.

3. Financial Support and Microfinance:

Financial assistance, such as cash grants or microfinance, should be provided to vendors, especially during extreme weather events that lead to business interruptions. Street vendors' unions should be supported to offer loans and other financial services to their members.

4. Training and Capacity Building:

Vocational training and business development programs can help vendors improve their skills and business operations, making them more resilient to extreme weather. Training should also include knowledge on food hygiene, climate adaptation strategies, and access to formal support systems.

5. Gender-Sensitive Policies:

Given the disproportionate impact on women vendors, gender-sensitive policies should be implemented to address their unique needs. These policies could include child care support, mobility assistance, and specific financial support tailored to women vendors in the street food sector.

In conclusion, while street food vendors in Cambodia, Laos, and Vietnam face similar climate risks, the lack of targeted support leaves them vulnerable. A holistic approach that includes formalization, infrastructure improvements, financial assistance, and gender-sensitive policies is essential to building resilience among these vendors, ensuring they can withstand the growing impacts of climate change and continue to support their families and communities.

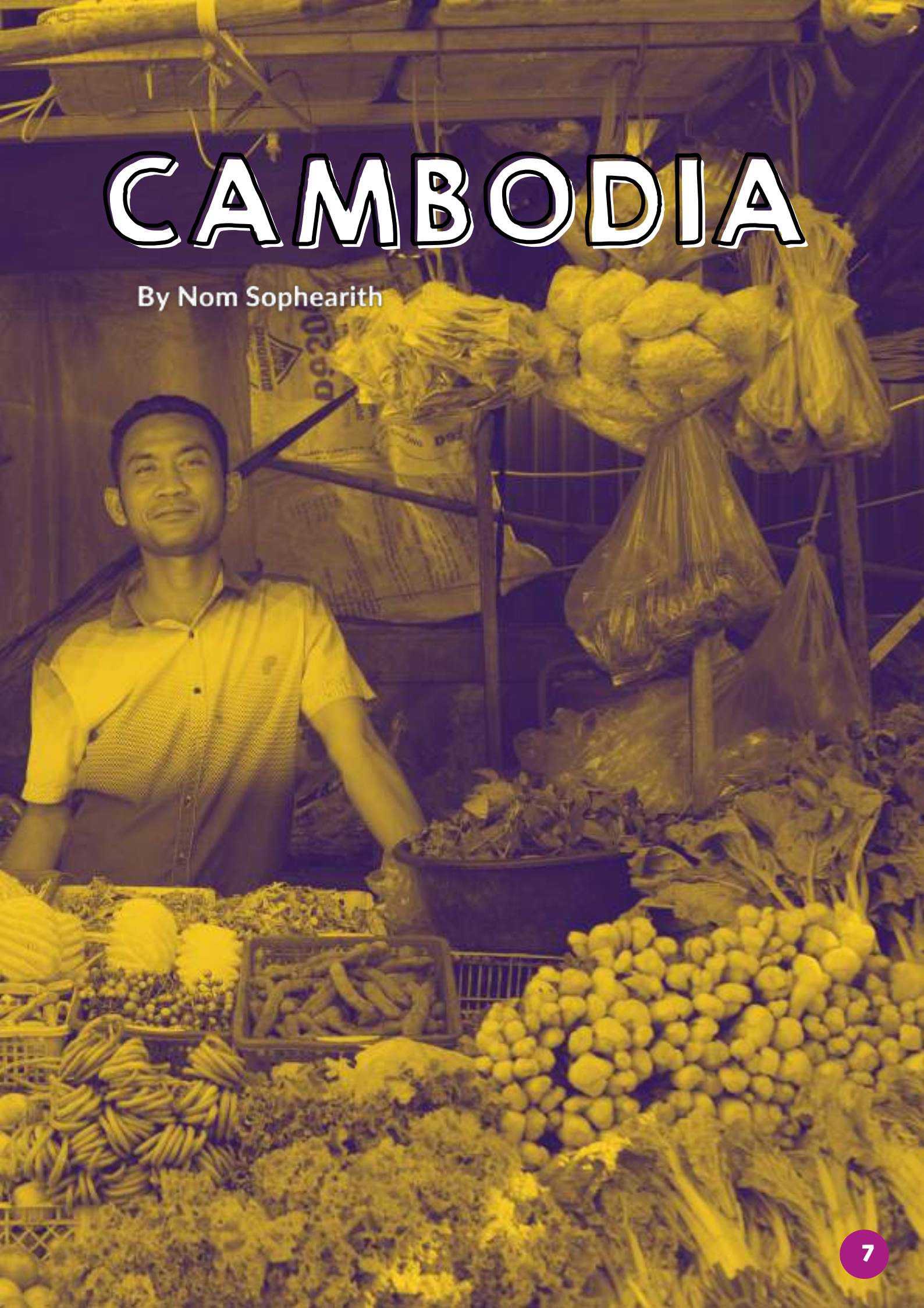
What follows are the individual case studies written by the researchers from Cambodia, Laos, and Vietnam, each offering an in-depth exploration of the conditions faced by street food vendors in these countries. **Through these case studies, readers will gain a deeper understanding of the challenges street vendors experience, particularly in relation to climate change and extreme weather.** The stories provide a glimpse into the lived realities of vendors, illustrating the significant toll that climate risks take on their businesses, health, and livelihoods.

These stories matter because street vendors form the backbone of the urban informal economy, which is a major contributor to the GDP of many countries in the region and globally. Despite their critical role in the economy, these vendors often lack recognition and support, leaving them vulnerable to external shocks like climate change. It is essential that we support these workers to organize and mobilize, ensuring they have the resources and protections necessary to thrive. By doing so, we can strengthen their resilience, improve their working conditions, and contribute to the broader goal of inclusive economic growth.



CAMBODIA

By Nom Sophearith



EXECUTIVE SUMMARY

Phnom Penh is situated at the alluvial plain of the Mekong where it is highly vulnerable to flooding. Water levels in wet-season can sometimes rise by more than 10 meters, leading to inundation in many areas. With the complicated drainage system due to the topographic area, poor system and urbanization, flash floods become increasingly common in Phnom Penh. Rainwater reached 153 cm in 2023 causing flooding in five districts. The flash floods still occurred in 2024 though there were extensive upgrades to the drainage system and flood control. In addition Phnom Penh is experiencing rising temperatures and increased heat due to the built environment and ongoing construction, and it is expected to rise by up to 4°C. By 2090, average temperatures in Cambodia are projected to increase by 3.1°C. Heatwaves are anticipated to occur more frequently and last longer, depending on emissions rates, often exceeding 35°C.

Street food businesses are easy to set up and provide quick returns. It's a good opportunity for people. The population of street vendors in Phnom Penh increases considerably while their earnings are often higher than the minimum monthly wage of US\$190 for garment factory workers.

Currently, the livelihoods of street vendors are threatened by climate change, particularly due to flooding and increased heat waves. Flash floods can lead to a decline in business of about 20% to 50% on days of extreme rainfall, depending on their location and the type of food sold. Meanwhile, rising temperatures result in increased expenses for ice to maintain product quality, as well as higher costs for drinking water and electricity to ensure health and prevent illness or heat stress. The leafy vegetables and soft skinned fruits exposed to high temperatures cannot be kept for long and are prone to perishing or damage.

There are strategic actions of street food vendors to deal with climate change in order to mitigate significant losses of profit and investment capital daily and adapt to the change. They commonly practice:

- Order and purchase of fresh foods and other ingredients, and cooking foods in quantities that align with market demand, avoiding surplus. Their decisions are based on sales experience and weather predictions expecting the number of customers served, ensuring that the foods can be sold in a timely manner.
- To avoid waste, remaining food can be chilled for later use, sold at reduced prices, or transformed into value-added products such as beef and pork floss, and 'Bok Kantoy Hes' from roasted fish.
- Vendors can reach out to their existing customers through phone calls to facilitate food orders and home deliveries when the number of customers from visiting stalls decline.
- Various facilities, such as plastic tents, umbrellas, fans, containers—including cooling boxes—and other plastic covers and ice, were used to protect their products and health from changing weather conditions, including rainfall and heatwaves.

- In addition, clean water and ice are applied to maintain freshness of foods, especially for leafy greens, soft-skinned items and seafood during the hot day.
- During hot weather, increased water intake is crucial for cooling the body, soothing throat irritation, and preventing heat stress. Staying in the shade and wearing raincoats helps regulate body temperature, reducing the risk of heat stress and fever.

There are certain government policies and programs that can help street food vendors directly and indirectly are such as the National Social Security Fund (NSSF) program and vocational and technical skills training programs. The flood control program and drainage system upgrade in Phnom Penh capital city. It benefits not only urban households but also street vendors including the poor and vulnerable families.

However, there is a policy that regulates and bans vendors from conducting business on the roadside or sidewalk, leading to traffic issues. Mobile and fixed-location street vendors who rent space from private homeowners or landowners also face challenges. Despite paying all necessary fees, including taxes, security, and hygiene collections, the rights of street vendors to these spaces are not secure, and there is no guarantee for their long-term business locations.

Given the concerns over the impact of climate change, along with government policies and programs affecting the livelihoods and health of street vendors, several suggestions have been raised below:

- Urban green spaces and forest rows should be designed to reduce heat stress for outdoor vendors and other city residents.
- To enhance flood resilience, flood control and drainage systems, including pumping engines and stations, must be upgraded with a climate-resilient design. Additionally, pavements and sidewalks should be elevated to withstand flood conditions.
- To ensure the well-being of street vendors, the government should create designated, safe vending spaces and provide access to clean water and proper sanitation facilities located away from traffic pollution, with a focus on food and health safety
- Road lighting should be installed throughout Phnom Penh to enhance traffic safety, reduce vendors' electricity costs, and attract more customers at night time.
- To maintain street vendor stability, the government should avoid forced relocations and unnecessary operational restrictions. Authorities should also refrain from disrupting vendors' business activities, allowing them to serve customers without interruption
- The government should implement price control measures to prevent significant increases in the cost of goods. Additionally, it should explore options for reducing prices and providing allowances to support poor and vulnerable families.
- To effectively register, protect, and support street vendors, carts, stalls, or kiosks should be designed to be appropriately sized, movable to minimize traffic disruption, and standardized to ensure fairness. Further research is needed to develop a street vending system that balances the needs of vendors, customers, and the public.

Background

In Cambodia, as in many other countries, there is a rapidly increasing number of street vendors, which serve as an important source of work and income for many poor households. The number of street vendors has increased during both economic boom periods and crises from 1979 through 2002. Four peaks have been recorded in the number of street vendors: (1) in 1979-1980; (2) around 1993, when UNTAC arrived and the first general election was held; (3) around 1997-98, during a domestic political crisis, the Asian financial crisis, and a series of natural disasters; and (4) around 2002, when the economy recovered (Kyoko K. 2006b). The number of street vendors continues to increase, as street vending is seen as a viable option for the poor.

Street vending is an important occupation for the urban poor in developing countries and is one of the most crucial avenues for poor women to support their families (Kyoko K. 2006b). There are approximately 62,780 street vendors in Cambodia, accounting for 3.8% of the 1,673,390 registered individuals engaged in various forms of business (NIS/EC 2011). Of these, about 16,419 (1%) are based in Phnom Penh, with 75% being women (Oxfam 2019). Additionally, 89% of these vendors employ one or two people. As of March 2022, the number of street vendors rose to 77,073, representing 10.2% of all business establishments and involving 116,313 individuals. This marks an increase of 35,302 street businesses (84%) compared to 2011, according to the Economic Census (EC) 2011 (MoP 2023).



A street vendor is broadly defined as a person who offers goods for sale to the general public without having a permanent built structure from which to sell. Generally, street vendors occupy space on pavements or other public/private areas, or they move from place to place to trade their products.

Rationale

StreetNet International (SNI) is currently involved in a five-year program with Oxfam in Cambodia, Oxfam in Vietnam, and Oxfam in Laos supported by the Belgian Directorate General for Development Cooperation and Humanitarian Aid (DGD). The cluster program called Improved Social Protection and Labor Rights for Women Workers in ASEAN's Agri-Food Sector is currently being implemented in Cambodia, Laos, and Vietnam. The program seeks to empower workers in the agri-food sector to exercise their rights and have access to adequate labor rights and social protection through the promotion of three pillars of Decent Work: Labor Rights at Work, Social Protection, and Social Dialogue for All.

The Agri-food sector represents an important share of the informal economy in the ASEAN region. The food system and agri-food sector are considered responsible for a great share of employment mostly in farming activities, processing, packaging, transporting, storing, distributing, and retailing of food products. Women workers, in particular, work in informal, insecure, dangerous and unprotected jobs. They belong to the poorest sections of the population and are often left behind regarding decent work and social protection.

Street vendors are among these workers in the informal economy whose contribution to national economies often goes unnoticed despite their numbers and the important role they play in ensuring food security for lower income populations in most Asian countries. As part of extending social protection to street vendors and other workers in the informal economy, there is a need to understand the specific livelihood and lifecycle risks and vulnerabilities that affect them. Climate change is one such issue which poses a great threat to the sector and while there is consensus that social protection systems must be gender transformative and climate responsive, there is little conclusive evidence to describe what the impacts of climate change are on street vendors. Lacking this information weakens the capacity of the sector to push for better labor rights and more comprehensive social protection.

Objectives and Questions

- To bridge the knowledge gap regarding the impact of climate change on street vendors' livelihoods and identify effective solutions, this study, facilitated by StreetNet International (SNI), will engage researchers in Cambodia, Laos, and Vietnam to conduct qualitative case studies. These studies will explore:
 - how street vendors experience climate change in their daily lives and work,
 - their coping mechanisms, the specific challenges faced by women vendors, and
 - the relevance of existing labor regulations and social protection policies.
- SNI's role is crucial in ensuring that the voices of street vendors are represented in this research and that findings are used to advocate for their rights.

Methodology | Study area and Scope

In its program countries, StreetNet International (SNI) collaborates with its affiliate, the Independent Democracy of Informal Economy Association (IDEA) in Cambodia. In Laos and Vietnam, SNI partners with the national trade unions: the Laos Federation of Trade Unions and the Vietnam General Confederation of Labor. Aligning with the programs' rights-based, gender-transformative, and change-influencing approach, this research project will utilize participatory action research (PAR) methods. Researchers will work in conjunction with SNI's Asia regional organizer to facilitate this process.

Phnom Penh, the capital of Cambodia, has a significantly larger population (estimated at over 2 million) than other Cambodian cities. Based on agreements among the researchers from Cambodia, Laos, and Vietnam, the regional research coordinator, and budget constraints, Phnom Penh will be selected as the target area, specifically focusing on Sensok and Meanchey districts. Within these two districts, at least two public markets, Chhoukmeas and Boeung Tumpun, will be chosen for street vendor interviews. This research aims to generate knowledge regarding how climate change, particularly temperature fluctuations (e.g., heatwaves) and rainfall variations (e.g., heavy rain leading to flash floods), affects street vendor livelihoods in Phnom Penh, given the city's poor drainage system. These climate hazards pose a potential threat to the lives and businesses of street vendors, with food street vendors and women vendors being particularly vulnerable.

Methodology | Data Collection

The method of study is a qualitative research method. Two participatory research tools will be employed are the Key Individual Interview (KII) and Focus Group Discussion (FGD). The KII will deal with, local and municipality authorities of Phnom Penh, concerned government agencies (Ministry of Labour and Vocational Training, and MoLVT's line department) and common council and the market authorities including security guard and hygiene agent working with the selected market of the targeted study area will be interviewed.

At least some representatives from the different stakeholder groups were met and interviewed separately. At least 7 government representatives were 02 from MoLVT, 02 from Phnom Penh Municipality, and at least 01 common council of Beoung Tumpun, 02 from market authorities. While 8 individual food street vendors will be called and separately interviewed where 4 fresh food street sellers (such as 1-fresh vegetables, 1-fruits, 1-fresh fish, and 1 fresh meat), 4 cooked food or ready-to-eat food sellers including beverages saler.

The FGD will deal with a specific street vendor group of food street vendors such as fresh-vegetables and fruit seller, processing and frozen food seller, cooked food seller, and so on. At least two FGDs will be conducted with those specific food street vendors, and at least 4 participants will be grouped and discussed straight to the climate hazards affecting their lives and work. While the food vendors are to be categorized as two groups, long last shelf-life food group and short shelf-life food group.

The short last food life group is from the vendors who sell the food in fresh condition such as fresh vegetables, fresh fruit, fresh fish and fresh meat. And the long last food group is from the vendors who sell the food in processing and freezing condition including drinking beverage, and in cocked condition such as cooked food for cake/snack and cooked food for meal.

Adding to the real observation and desk review have been done to collect more data and information to support the preliminary data collected from street vendors and other concerned stakeholders from the government side.



Results and Discussions

Street Business

In Cambodia, businesses are categorized into seven types based on their location: street businesses, home businesses, businesses in apartment buildings, businesses in traditional markets, businesses in modern shopping malls, businesses occupying entire blocks or buildings, and other businesses (such as shops, restaurants, and massage parlors located in hotels, factories, universities, etc., but under separate management) (MoP 2023).

As of March 2022, there were 753,670 business establishments in Cambodia, employing a total of 2,980,569 people. Street businesses, defined as stalls or kiosks operating at fixed locations on sidewalks or roadsides, numbered 77,073, representing 10.2% of all business establishments and employing 116,313 individuals. Approximately 75% of street business owners are women, and 89% employ one or two people. Compared to the 2011 Economic Census (EC), street businesses increased by 35,302, or 84% (MoP 2023).

According to the Ministry of Planning, street businesses encompass stalls or kiosks situated at fixed locations on sidewalks, roadsides, or around but outside markets (MoP 2023). Additionally, some street vendors utilize mobile shopping carts, which are motorized and can be attached to motorbikes, enabling them to move easily among customers on the street and to their homes. Furthermore, some mobile vendors use pick-up trucks, mini-trucks, or cars to store and sell their products, particularly fruits and beverages (e.g., coffee), on the street. Clearly, street vendors, especially street food vendors, can be categorized into two groups based on their position: fixed and mobile. These positions significantly influence their livelihoods and their susceptibility to the effects of climate change.

Livelihood of street food vendors

The study provides an overview of the livelihood of street food vendors in Phnom Penh, focusing particularly on the areas around Chhouk Meas Market in Sensok District and Boeung Tumpun Market in Meanchey District. It describes various aspects of street food operations, including the types of street food offered, vending locations, and income generation.



Types of street food

Street vendors in Phnom Penh offer a diverse array of food products. Specifically, street food vendors in the Sensok district, near Chhouk Meas Market, and in the Meanchey district, around Boeung Tumpun Market and Sansom Kosal Pagoda, sell a wide range of fresh, processed, and cooked foods, as well as beverages like coffee. Fresh food vendors offer vegetables (including root vegetables), fruits, meats (chicken, pork, and beef), and seafood.

Processed or semi-processed food items sold include sausages, dried meat (e.g., beef jerky), pork floss, beef meatballs, and dried fish.

Ready-to-eat cooked foods include cooked rice, bread and sandwiches, boiled and fried eggs, roasted meats (such as chicken wings and pork ribs), roasted fish, roasted bananas and cassava cake, Khmer traditional soups, Khmer noodles, fried rice, fried Chinese noodles, hot soup noodles, and papaya salad, among others.

Vendors commonly sell fresh meats like pork and beef, and also offer semi-processed products such as pork sausage, beef sausage, beef jerky, pork floss, and beef meatballs. These processed items are made from leftover fresh meat that is no longer suitable for sale as fresh due to quality concerns.

Similarly, fresh fish vendors process their remaining fish that cannot be sold fresh, transforming it into dried or salted fish to avoid losses and sell in a semi-processed form.

Vending position and expense

The position of street food vendors, whether fixed or mobile, significantly impacts their livelihoods. Fixed vendors are required to rent space from private owners, such as homeowners or landowners, for sidewalk areas in front of their properties or for roadside locations surrounding markets. Rental costs fluctuate based on location, space size, and the agreement between the owner and the vendor. Conversely, mobile vendors do not incur fixed space rental fees, as they operate along public street roadsides. However, mobile vendors encounter challenges, including forced relocation, which disrupts their trading hours.

Rental costs for vending spaces range from US\$50 to US\$300 per month, depending on factors such as space size, location (e.g., proximity to crowded or populated areas), and negotiation outcomes. In the Chhouk Meas Market area, rental costs vary from US\$200 to US\$300 per month, while in the Boeung Tumpun Market area, including Wat Sansom Kosal Pagoda, they range from US\$50 to US\$225 per month. The lower rental rate of US\$50 in the Boeung Tumpun area reflects its less desirable location. One vendor noted that, due to not having a fixed vending location, he pays partial rent to a homeowner for the space in front of their house. Without this payment, he would be unable to set up and sell properly in front of the private residence.

On average, the vendor needs to pay a full rental of US\$237.50 per month for a fixed vending place in Chhouk Meas, while in Boeung Tumpun , the average is US\$202.50 per month.

Both fixed and mobile street vendors need to pay a daily fee to the local authority for selling. Some vendors refer to this fee as “Phasy,” while others call it the hygiene fee. The amount varies from \$0.25 to \$0.50 per day, depending on the location and the space occupied by the vendor. However, some mobile vendors do not pay this fee, as they move around to many places, making it impossible to collect.

Besides the street vendors, particularly those at fixed locations, they spend on umbrella rental, security, electricity, and clean water. However, some vendors may include umbrella rental, electricity, and clean water in their rental agreements as part of negotiations. Mobile vendors, on the other hand, seem to be equipped with their own facilities and do not pay for security either.

There is no significant difference in terms of the right to space between fixed-location and mobile street vendors when they use the roadside or sidewalk, which causes traffic problems. They are forced to resettle or stop doing business when authorities take action. Despite all these payments, street vendors’ rights to space are not secure, and there is no guarantee for their long-term business locations (Kokyo K. 2006a).

Street food vendor income generation

Based on a CDRI study in 2021, it was found that the average wage of street food vendors in Phnom Penh is even better than that of some formal workers, with a minimum monthly wage of USD 190 for workers in garment factories according to Prakas No. 389/19 on the Determination of the Minimum Wage for Workers/Employees in the Textile, Garment, and Footwear Industries for 2020, issued by the MoLVT (Sopharath Sr. et al., 2021).

There is no doubt that certain street vendors from Chhouk Meas and Boeung Tumpun have revealed they can profit at least 50,000 riels (or US\$12.50) daily. For example, mobile street food vendors selling ready-to-eat food, such as one offering beverages from Boeung Tumpun and another selling papaya salad, fried meatballs, and roasted bananas from Chhouk Meas, can generate significant profits from their mobile businesses.

The vendor selling beverages from Boeung Tumpun reported a profit of around 50,000 riels, or US\$12.50 daily, while the vendor offering roasted bananas and cassava cake from Chhouk Meas can also make a profit of 50,000 riels. Additionally, the vendor selling papaya salad and fried meatballs from Chhouk Meas can earn a profit ranging from 70,000 to 80,000 riels, or approximately US\$17.50 to US\$20.00 daily.

According to the daily profit generation of 16 street food vendors from Chhouk Meas and Boeung Tumpun , the vendors were grouped into four categories: (1) 50,000 riels (US\$12.50) to 80,000 riels (US\$20.00); (2) 80,000 riels (US\$20.00) to 100,000 riels (US\$25.00); (3) 100,000 riels (US\$25.00) to 200,000 riels (US\$50.00); and (4) more than 200,000 riels (US\$50.00).

These are:



- The vendors who can profit more than US\$50 a day are vendors selling fresh seafood from Chhouk Meas, and vendors offering the fresh beef meat and beef sausage from Boeung Tumpun .



- The vendors who can profit in the range of US\$25 to US\$50 are those offering fresh pork and pork products, mixed fresh meats (pork and chicken) with fresh vegetables, and ready-to-eat foods such as BBQ beef sticks, beef sausage, papaya salad, roasted fish, and pork ribs.



- The vendors who can profit in the range of US\$20.00 to US\$25.00 are those offering mixed fresh vegetables, fresh chicken, fresh fish, and ready-to-eat foods such as various cooked dishes (roasted fish, fried fish, fried and boiled eggs, omelets, fresh spring rolls, and traditional Khmer soups), as well as fried rice, fried Chinese noodles, and hot soup noodles.



- The group of vendors who can profit in the range of US\$12.50 to US\$20.00 includes those offering mixed fresh fruits and ready-to-eat foods such as beverages, roasted bananas, cassava cake, and fried meatballs with papaya salad.

A participatory rapid assessment of the profits of these 16 street food vendors from the Chhouk Meas and Boeung Tumpun areas reveals that 2 vendors (12.5%) reported daily profits of more than 200,000 riels (US\$50), while 5 vendors (31.25%) stated their profits range from 50,000 riels (US\$12.50) to 80,000 riels (US\$20.00). Additionally, 5 vendors (31.25%) indicated their profits fall between 80,000 riels (US\$20.00) and 100,000 riels (US\$25.00), and 4 vendors (25%) reported profits varying from 100,000 riels (US\$25.00) to 200,000 riels (US\$50.00). The income and profit generation of these street food vendors vary depending on the types of food they offer and their capital investment.

As mentioned earlier, the population of street vendors is increasing. Street food vending is an easy business to set up and fast to generate income and food to support the family. Kyoko K. (2006b) noted that street vending is an important occupation for the urban poor. In a recent study of these two areas of Phnom Penh, we found that not only do people living in Phnom Penh engage in this business, but families from the provinces also come to establish their street businesses in the capital city. In particular the people are from Prey Veng province. Most of these families set up their street food businesses in the form of mobile vending. A CDRI study in 2021 found that a majority of street vendors are satisfied with their lives because it means they are independent. As a result, street vending has become their primary job (Bopharath Sr. et al., 2021).

Climate change feature

Cambodia is highly vulnerable to the effects of climate change. Extreme weather phenomena are expected to occur more frequently, including floods that currently affect 90,000 residents annually, as well as heatwaves, with Cambodia experiencing some of the highest temperatures in the world. Since the 1960s, the average temperature has increased by 0.18 °C per decade (World Bank and ADB, 2021). Additionally, climate change is leading to increased drought in Cambodia, significantly impacting the Tonle Sap and Mekong deltas. These water systems are crucial for water supply, agriculture, and fisheries in the country.

Climate change could cut GDP by 2.5 per cent by 2030, and up to 9.8 per cent by 2050. Even if global warming is kept below 2 degrees Celsius, Cambodia remains vulnerable to floods, droughts and typhoons (The Phnom Penh Post 2023b), and Cambodia's population is highly vulnerable due to its high rate of poverty. For example, in September 2024, 14,550 families and 5,450 homes were affected by floods, with 340 families evacuated. Approximately 9,430 hectares of rice paddies were impacted, 400 hectares of which were completely destroyed. Of the nine provinces affected, Kratie was hit the hardest (The Khmer Times, 2024a).

Phnom Penh, the capital city of Cambodia, is located on the alluvial plain of the Mekong River at the confluence of the Mekong and Tonle Sap Rivers in the lower Mekong Basin. This geographical setting makes the city highly vulnerable to flooding. Flood drainage is complicated due to the relatively flat landscape of Phnom Penh. During the rainy season, water levels can sometimes rise by more than 10 meters, leading to inundation in many areas of the city.

According to a 2015 survey conducted by JICA as part of the “Drainage and Sewerage Improvement Project in the Phnom Penh Metropolitan Area,” 30% of the capital is situated below 8 meters, 45% below 9 meters, and 60% below 10 meters in river elevation. Flooding can result from heavy, prolonged seasonal monsoon rains, recurring extreme storm events, seasonal high water levels in the Tonle Sap and Mekong rivers, or a combination of these factors (GGGI 2019).

Recently, **flash floods have become increasingly prevalent in Phnom Penh City, resulting in casualties and damages strongly associated with precipitation** (W. Huang et al. 2024). On the evening of July 3rd, 2023, rainwater reached 153 cm, an unprecedented level in three years. The downpour flooded areas in five districts, including Sen Sok, Meanchey, Chroy Changvar, Tuol Kork, and Por Sen Chey," the social media post read (The Phnom Penh Post 2023a). This incident exemplifies the flash floods caused by unpredictable rainfall in Phnom Penh City.

The destructive impacts of flooding are further exacerbated by uncontrolled property development, inadequate drainage, and wastewater treatment infrastructure (GGGI 2019). Heavy rainfall, aging infrastructure, and rapid urbanization are the main causes of Phnom Penh's ongoing flooding problems. Floods in the capital typically occur during the rainy season from May to October. The city's low-lying topography, particularly in areas near rivers and lakes, makes flooding more frequent (The Khmer Times 2024b).

Phnom Penh, Cambodia is experiencing high temperatures and drought. Urban areas face amplified high temperatures due to the built environment (World Bank, 2023). Temperatures in Phnom Penh are expected to rise by up to 4°C above rural areas due to the urban heat island effect. By 2090, average temperatures in Cambodia are projected to increase by 3.1°C. Heat waves are expected to occur more often and last longer. Depending on emissions rates, up to 300 days per year could exceed 35°C, which is the threshold where heat becomes a significant concern for human health (Eric Koons 2024). Variability in rainfall causes frequent droughts in Cambodia, with more than 30 percent of cropland experiencing drought stress every five to six years in the most exposed provinces including Phnom Penh (World Bank, 2023).

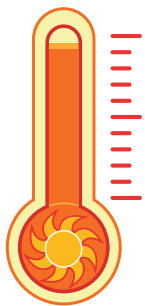
Vulnerabilities and risks of street food vendors

While Phnom Penh functions as Cambodia's primary commercial center rather than a major agricultural region, climate change impacts are keenly felt by its vendors. They primarily contend with the dry season's intense heat and the wet season's heavy, prolonged rainfall, which can trigger flash floods. Though dry season droughts are less of a concern, rising temperatures and heatwaves are significant, whereas flash flooding during the wet season poses a more immediate threat to street food vendors' livelihoods.

Street food vendors, operating in Phnom Penh's informal sector as outdoor traders, are directly vulnerable to climate change's fluctuating temperatures and rainfall. However, heavy rainfall leading to flash floods poses a greater threat to their livelihoods than increasing heat. This concern is particularly prevalent among vendors in Chhouk Meas (Sensok district) and Boeung Tumpun (Meanchey district).

In the sub-sections below, we will discuss how they are affected by these climate hazards and how they handle or adapt to the changes.

Increases of temperature and heat wave frequency



Rising temperatures and more frequent heat waves will generally put at-risk populations, like children, older people and outdoor labourers, at risk of heat-related illnesses and will impact food security. Currently, 37.1% of the country's children are exposed to extreme heat events. Meanwhile, the country is facing economic losses of USD 1.12 billion from heat stress, which will increase in the coming decades (Eric Koons 2024). The urban poor is especially vulnerable to heat stress and associated health and productivity (World Bank, 2023).

The rise in ambient temperature due to climate change exposes vendors to heat stress and income generation loss. It impacts the street food vendors in various ways, in terms of type of food they sell, vending place and time of business operation.

Street vendors selling fresh vegetables and fruits have observed that during heatwaves and rising temperatures in the dry season, their products can dry out, wither, and become damaged. Leafy vegetables and soft-skinned fruits, such as apples and bananas, are particularly susceptible to wilting and rotting. This deterioration is more evident during the dry season compared to the wet season when vegetables and fruits are less affected by rainfall changes. A vendor selling fresh vegetables noted that leafy greens cannot be kept for long and are prone to perishing or damage when exposed to high temperatures. As a result, her income generation was estimated to decline by about 30% to 40% during significant climate fluctuations.

While heatwaves don't completely halt sales, they do reduce customer traffic for vegetables and fruits. Shoppers typically opt for cooler shopping times, in the mornings and late afternoons, and fruit sales rise significantly on Buddhist holidays due to religious demand.

While vendors selling fresh vegetables and fruits reported that their products are affected by rising temperatures and heatwaves, those selling fresh meats—such as pork, beef, and chicken—indicated that temperature increases do not significantly impact their sales, even in April when temperatures are higher than in other months.

One vendor selling mixed meats (pork, chicken, and vegetables), and fresh fish from Beoung Tumpun in Meanchey mentioned that hot weather and heat waves generally do not pose an issue for his business, as it was typically operated in the morning and late afternoon when temperatures are cooler. Most vendors selling fresh meats echoed this sentiment, noting that rain poses more of a challenge than heat for their sales.

However, vendors selling fresh seafood reported that hot weather, particularly in April during the dry season, poses a significant challenge for their sales compared to cooler weather. They need to spend more on ice to keep their seafood properly chilled, which increases their operating costs.

Vendors selling cooked or ready-to-eat foods, including roasted fish, roasted pork ribs, BBQ beef sausage, bread, papaya salad, fried meatballs, fried rice, and Chinese noodles, generally do not face significant problems with heat waves or increased temperatures, even during the dry season. Most of these vendors typically start their operations in the late afternoon and evening, when temperatures are cooler and conditions are more favorable.

Additionally, a mobile vendor selling beverages and other items (such as coffee, Chinese canned noodles, and ice) mentioned that hot days are advantageous for her business, as she can generate more income by offering a wider range of beverages to customers around factories, construction sites, and volleyball courts.



A vendor selling a variety of cooked foods—such as roasted fish, fried fish, fried and boiled eggs, omelets, fresh spring rolls, and traditional Khmer soups—responded, *“The increase in heat waves during the dry season makes it somewhat difficult for street vendors like me to operate under the sun. However, it is not a serious issue for my business, and it doesn’t pose a significant health risk, especially since we have umbrellas and fans to help reduce the heat. The temperatures are not so high that we can’t adapt.”* This reflects a slight awareness of the impact of heatwaves or increased temperatures on health, though there appears to be no detailed observation or assessment of the extent of this impact.

It can be concluded that the increase in temperature and unpredictable heat wave frequency can generally lead to challenges for street vendors, affecting their business operations and overall well-being. Even they aren't aware of such kinds of the impacts of changes in temperature and heat wave frequency.

Raining and flash floods vents

Despite extensive upgrades and rehabilitation of the drainage system in Phnom Penh, certain areas of the city still experienced flooding after heavy rains during the 2024 rainy season. The Boeung Tumpun market, located in a low-lying and densely populated area, continues to flood for about half an hour to one and a half hours after rainfall. In contrast, the Chhouk Meas market area sees rainwater flow out quickly and drain effectively shortly after the rain ends.

Heavy rainfall leads to flash floods that disrupt daily life and business, causing traffic problems, property damage, and health concerns due to water contamination. Street food vendors are directly exposed to these conditions while conducting their outdoor businesses. The impact of floods on street food vendors varies depending on the types of food they sell, the timing of their operations, their business locations, and their daily investment capital.

Most street vendors argue that heavy rain causes flash flooding in certain areas, particularly in the Boeung Tumpun market. As a result, the number of customers declines during rainy and flood periods due to poor drainage systems, which reduces foot traffic. Customers find it difficult and are often reluctant to shop in these conditions, opting instead to order ready-to-eat foods online. Additionally, some customers switch to buying fresh meats (such as pork, beef, and chicken) from mobile shopping cart sellers or prepare preserved foods at home.

Consequently, the remaining fresh and cooked foods that cannot be sold that day may become spoiled or lose quality. This reduction in customer numbers directly leads to a decrease in vendors’ income on those days. **Most vendors reported that their income loss varies from 20% to 50% of their daily earnings due to the remaining food unsold during heavy rains and flash flooding. Additionally, a few vendors operating mobile shop carts noted that there are generally fewer customers during unpredictable rain in the areas where they do business.** While this results in a decline in sales, it does not lead to complete loss; rather, it means they operate at a profit loss. If necessary, we can relocate to areas that are not affected by rain or flooding.

Besides the decline in sales and profit losses caused by rain and flash floods, several female vendors have revealed that these conditions make it difficult for them to purchase goods, such as fruits, at wholesale markets like Neak Meas and Deoum Kor. Additionally, unpredictable rainfall during business hours complicates the management of their goods, as they lack the manpower to protect their inventory from the rain and flooding.

Adapting to Climate Change: Practical Solutions

In their daily operations in an outdoor environment, street food vendors have no alternative but to accept and adapt to climate change, particularly the shifting rainfall patterns during the wet season. They are aware that unpredictable rainfall can lead to flooding, which results in a decline in customers. Consequently, their sales decrease, leading to profit losses and potential loss of investment capital.

To mitigate significant losses and adapt to changing rainfall patterns during the wet season, street food vendors commonly continue to order and purchase goods—fresh foods such as meats, fish, seafood, vegetables, and other ingredients—in quantities that meet market demand- avoid surplus. **Their ordering and buying decisions are based on sales experience and weather predictions, ensuring that the goods can be sold in a timely manner while maintaining quality and satisfying consumer demand, all while navigating the challenges posed by changing weather conditions.**

Additionally, the vendors selling cooked and ready-to-eat foods order fresh ingredients—such as meats, fish, and vegetables—and prepare dishes like roasted meats, roasted fish, rice, and soup in quantities that can serve the expected number of customers, taking into account the weather conditions.

Having faced unpredictable rainfall that leads to flash floods in the area, food vendors do their best to sell their products, whether fresh or processed. **When some fresh meats or vegetables cannot be stored in a cooling box for the next day's sale, they must be offered at a lower price.** For certain meats that appear to be of poor quality and cannot be sold the following day, vendors may process them into semi-processed foods (such as sausages and beef meatballs) or ready-to-eat products (like beef and pork floss, or a traditional fermented fish product known as 'Bok Kantoy Hes'). **This strategy helps them avoid complete loss of profit and protect their daily investment capital.**

Additionally, **certain vendors reach out to their existing customers through phone calls to facilitate food orders and home deliveries during rainfall in the wet season.** This strategy helps them maintain sales even when the weather discourages customers from visiting street stalls. There are no significant adaptive measures among street vendors to minimize the impact of climate change on their businesses and health concerns. Vendors utilize various facilities, such as plastic tents, umbrellas, fans, containers—including cooling boxes—and other plastic covers and ice, to protect their products from changing weather conditions, including rainfall and heatwaves.

Umbrellas and tents are typically used to provide shade and shield against sun rays and raindrops, while electric or solar fans help circulate air to cool both products and vendors. During heavy rain, vendors use plastic tents to cover their goods, as rainwater can spoil items like meat, vegetables, and fruits, making them prone to damage. They ensure that products are covered and packaged to prevent getting wet.

In addition, vendors selling vegetables and fruits spray clean water on their produce to reduce heat and minimize wilting, especially for leafy greens and soft-skinned items. For example, a vendor selling mixed vegetables may spray clean water (or tap water) on her produce at least four to five times during hot days to keep them fresh. Seafood vendors, on the other hand, need to add more ice and air to their chilling containers to reduce heat and maintain a cool temperature for their seafood.

Vendors commonly address health concerns related to rising temperatures and heatwaves by increasing water consumption to cool down, relieve throat inflammation, and avoid heat stress. One vendor cited drinking 1.5 liters of water on hot days, while another emphasized the benefits for throat pain and heat stress prevention. They also seek shade and wear protective clothing.

To protect their health from rainfall, street vendors wear raincoats to keep their bodies warm and dry, helping to avoid getting cold or developing a fever.

• Overview of Current Government Policy and Programs

While the government lacks a dedicated policy or program specifically for street vendors, existing initiatives indirectly support them as informal economic entrepreneurs. These include the National Social Security Fund (NSSF) and vocational training programs, originally designed for vulnerable families but now extended to both formal and informal sector workers

Since 2019, the Royal Government of Cambodia (RGC) has issued the 2019 Law on Social Security Schemes, which regulates the National Social Security Fund's (NSSF) mandatory health insurance regimes for the public and private sectors. Recently, the NSSF has implemented programs to extend social security coverage to informal economy workers and the self-employed. In June 2019, the NSSF offered healthcare through the Health Equity Fund system to informal economy workers in the entertainment and tourism sectors. This includes workers in bars, discos, karaoke lounges, beer gardens, massage parlors, and spas (The Khmer Times, 2023c).

In late 2023, the NSSF and the RGC launched a voluntary scheme to extend social security access to the self-employed, including small-scale entrepreneurs and street vendors. They can become members of the NSSF and access healthcare for themselves and their families. To register as a member of the NSSF, they need to pay a contribution of 15,600 riel (about \$3.80) per month. This allows them to access free treatment at state hospitals and many private facilities that have entered into an agreement with the NSSF (The Phnom Penh Post, 2023c).

By January 2024, about 100,000 self-employed individuals and their dependents had enrolled in the NSSF scheme since coverage was expanded on November 14, 2023 (Phnom Penh Post, 2024a).

Regarding the vocational and technical skill training program the RGC in November 12th 2023 issued a Sub-decree no. 329 on Implementation of the National Social Assistance Program for Vocational and Technical Skills Training for Youth from Poor and Vulnerable Families. It is the Cambodia government willing to provide free vocational and technical training to some 1.5 million young people from poor and vulnerable households across the country. This program aimed at equipping them with technical skills to enable the young people to get jobs and better income in the future. The Khmer Times in November 16th 2023 wrote based on the Prime Minister statement "poor and vulnerable youths will not only get training free of charge but also receive a monthly allowance of 280,000 riel (\$70)," (Khmer Times 2023b).

The vocational and technical skill training program has recently been extended to Cambodian people, including street food vendors. They can register and receive free training. Additionally, they can receive a monthly allowance unless they come from poor and vulnerable families.

About 38 majors will be offered to enhance vocational and technical skills in 10 priority areas, namely: construction; electricity and energy; electronics; air conditioning and heating; manufacturing; general mechanics and automobile mechanics; tourism; services; agriculture and agro-industry; and business and information technology. The program will contribute to reducing the kingdom's poverty to below 10 percent," Prime Minister said (Khmer Times 2023b). The program has included salon, food, baking, and café management.

In addition to the Cambodian government's issuance of Sub-decree No. 289 on "Informal Economy Registration" on December 14, 2024, this sub-decree defines the form and procedure for registering informal economy workers to establish their identity, type of work, occupation, business, and relevant information. Its aim is to contribute to the development of the informal economy, enabling it to grow and fully participate in a sustainable, inclusive, and resilient manner. This policy benefits both the government and street vendors. As WIEGO (2021), quoted by Bopharath Sr. et al. (2021), notes, if street vendors are registered, they would be protected and could avoid paying unofficial fees. Supporting street food vendors in becoming part of the urban formal economy could lead not only to the healthy development of Phnom Penh and increased safety for its citizens but also generate revenue for the city through tax collection, licenses, and fines.

In contrast to potential supportive policies, restrictive government regulations negatively impact street vendors' livelihoods and business operations, particularly mobile vendors who lack designated trading spaces. The government's prohibition on street vending that obstructs public traffic, as outlined in Article 80 of the 2014 Traffic Law (amended January 26, 2017), results in penalties of one month to one year imprisonment and fines ranging from 800,000 to 8,000,000 Riels.

In late 2017, Phnom Penh City Hall recalled the enforcement of the ban on street vendors, who occupy public streets and parks. While such enforcement was in place, alternatives for street vendors were not available (Bopharath Sr. et al., 2021). In December 2021, police cracked down on vendors who were obstructing sidewalks on Street 271 in Phnom Penh's Meanchey district while the authorities instructed them to stop selling food which would cause traffic congestion at a point where it is busy in front of the Khmer-Soviet Friendship Hospital (Khmer Times 2021).

In an ongoing enforcement effort, Phnom Penh authorities removed approximately 60 illegal stalls from a public road in Ang Keo village, Sangkat Choam Chao III, Khan Por Senchey on March 15, 2024 (The Khmer Times 2024c).

Street vendors from Chhouk Meas Market in Sensok District and Boeung Tumpun Market in Mean Chey District, particularly mobile vendors and fixed stall vendors operating without authorization, have complained that they are being forced to relocate or cease operations. They have experienced a loss of income and budget due to these relocations and business interruptions. Authorities, especially the district or municipal security forces, frequently pressure them to move or stop their businesses on the streets, even in areas surrounding markets that often experience heavy public traffic, such as the vicinity of Sansom Kosal Pagoda and Market. Authorities assert that the stalls and carts contribute to traffic jams, pollution, and detract from the area's aesthetic appeal.

To avoid losses in income and budget due to relocations and business interruptions, street vendors have suggested that the government consider implementing a system to provide safe and designated vending spaces for street vendors. Alternatively, they request that authorities refrain from interrupting their business operations while they are running.

Immediate Actions and Interventions

Phnom Penh City frequently experiences flash flooding during the wet season because it is situated at the confluence of the Tonle Sap River and the Mekong River floodplain. A robust flood control and drainage system, and system maintenance is essential to prevent flash floods and to safeguard the livelihoods and well-being of residents, properties, and businesses in Phnom Penh. However, outdated infrastructure and rapid urbanization in Phnom Penh have resulted in certain areas lacking properly installed drainage systems. Consequently, heavy rainfall exacerbates the city's ongoing flooding issues. The government has intervened by rehabilitating and upgrading the old drainage systems before the onset of the wet season. Additionally, the government sometimes calls for public participation during flash floods.

Following unprecedented rainfall on July 3rd, 2023, Phnom Penh recorded water levels of 153 cm, the highest in three years, leading to flooding in five districts. The torrential rains rendered the drainage systems "unbearable." In response, the Phnom Penh municipal administration urged residents to clear debris clogging the drainage systems near their homes. On July 4th, 2023, the Phnom Penh municipal governor personally led a clean-up operation on the main streets of the city (The Phnom Penh Post 2023a).

Street vendors from the area around Chhouk Meas Market in Sensok District reported that after the drainage system maintenance last year and at the beginning of the wet season in 2024, there has been no prolonged flash flooding. The area remains clear, and water flows off quickly after rainfall stops, allowing them to resume their businesses as usual.

In contrast, street vendors from the area around Boeung Tumpun Market and Sansom Kosal Pagoda noted that while flooding appears smaller than in previous years, it has not lasted as long—typically just one and a half hours during heavy rain in 2023 and 2024, rather than the extended periods experienced before the drainage system was upgraded in 2024. However, the new drainage system is not yet complete. The chief of Boeng Tumpun II commune in Mean Chey district confirmed that the areas already upgraded will no longer flood. He anticipates that once all the new drainage pipes are installed, there will be no more flooding in his commune.

Even after extensive upgrades to the drainage system in Phnom Penh, the municipal authority still faces challenges, as certain city streets become flooded—especially in densely populated areas—after heavy rains during the rainy season in 2024 (The Khmer Times 2024b). A civil society group complains that a major cause of flooding is the filling of lakes around the city. Strongly focused over the flash flood in Phnom Penh city caused by heavy rain that disrupt daily life, causing traffic problems, property damage, and public health concerns due to water contamination, the Cambodia government has approved a \$300 million water diversion project in Phnom Penh and several urban areas, reported by CamboJA reported on April 12, 2024. The project focuses on two main objectives: preventing water from flooding Phnom Penh and improving the existing water release system by restoring canals, including three large canals and ten small rivers for water drainage, rehabilitating the sewer system, and setting up four new pumping stations to manage water flow into Phnom Penh (CamboJA 2024).

Conclusion and recommendation

Phnom Penh, the capital city of Cambodia, is situated on the alluvial plain of the Mekong and Tonle Sap Rivers. The city is highly vulnerable to flooding due to complicated and inadequate drainage systems. During the rainy season, water levels can sometimes rise by more than 10 meters, leading to inundation in many areas. Recently, flash floods have become increasingly common in Phnom Penh. On the evening of July 3rd, 2023, rainwater reached 153 cm, an unprecedented level in three years, flooding areas in five districts. Despite extensive upgrades to the drainage system, flash floods caused by unpredictable rainfall still occurred in the Phnom Penh area, including the Beoung Tumpun area, during the 2024 wet season. Additionally, Phnom Penh is experiencing rising temperatures, with urban areas facing amplified heat due to the built environment and ongoing construction. Temperatures in Phnom Penh are expected to rise by up to 4°C above those in rural areas. By 2090, average temperatures in Cambodia are projected to increase by 3.1°C. Heatwaves are anticipated to occur more frequently and last longer, depending on emissions rates, often exceeding 35°C, which is the threshold where heat becomes a significant concern for human health.

Street businesses, particularly food vending, are easy to set up and provide quick returns on income and food generation. This presents a good opportunity for people, especially urban poor families and those coming from rural areas, to seek jobs in the city. The population of street vendors in Phnom Penh, the commercial capital of Cambodia, has increased considerably, and their earnings are often higher than the minimum monthly wage of US\$190 for garment factory workers, who are part of the formal economy.

Currently, the livelihoods of street vendors are threatened by climate change, particularly due to flooding and increased heat waves. Flash floods can lead to a decline in business of about 20% to 50% on days of extreme rainfall, depending on their location and the type of food sold. Meanwhile, rising temperatures result in increased expenses for ice to maintain product quality, as well as higher costs for drinking water and electricity to ensure health and prevent illness or heat stress. For instance, a vendor selling mixed fresh vegetables in Chhouk Meas loses about 30% to 40% of her income on extremely hot days, as leafy vegetables exposed to high temperatures cannot be kept for long and are prone to perishing or damage.

In their daily operations in an outdoor environment, street food vendors have no alternative but to accept and adapt to climate change, particularly the shifting rainfall patterns during the wet season. To mitigate significant losses of profit and investment capital daily and adapt to climate change, in particular to changing rainfall patterns and leading to flash food the street vendors were commonly practicing:

- Vendors commonly continue to order and purchase fresh foods and other ingredients in quantities that align with market demand, avoiding surplus. Their decisions are based on sales experience and weather predictions, ensuring that the goods can be sold in a timely manner.
- Vendors selling cooked and ready-to-eat foods order fresh ingredients—such as meats, fish, and vegetables—and prepare food dishes like roasted meats, roasted fish, rice, and soup in quantities that can serve the expected number of customers,
- Faced with unpredictable rainfall that leads to flash floods, some fresh meats and vegetables cannot be stored for the next day's sale and must be offered at a lower price. Additionally, certain fresh meats that appear to be of poor quality and cannot be sold the following day may be processed into semi-processed foods or ready-to-eat products, such as beef and pork floss while a roasted fish were processed to 'Bok Kantoy Hes.
- Additionally, certain vendors reach out to their existing customers through phone calls to facilitate food orders and home deliveries to maintain sales even when the weather discourages customers from visiting street stalls.
- To minimize the impact of climate change, various facilities, such as plastic tents, umbrellas, fans, containers—including cooling boxes—and other plastic covers and ice, were used to protect their products and health from changing weather conditions, including rainfall and heatwaves.
- In addition, clean water is sprayed on fresh vegetables and fruits to reduce heat and minimize wilting, especially for leafy greens and soft-skinned items. According to an experienced vendor selling mixed vegetables, clean water is sprayed at least four to five times during hot days to keep the produce fresh. Additionally, ice and air are added to seafood chilling containers to lower temperatures and maintain freshness.
- Vendors commonly drink water more frequently and in greater quantities than usual in hot weather to reduce body temperature, alleviate throat inflammation, and prevent heat stress. They also stay in shade. In the rainy period, vendors use raincoats to keep their bodies warm and dry, helping to avoid getting cold or developing a fever.

Although there is no specific policy or program focusing solely on street vendors, there are government policies and programs that assist the people of Cambodia, including street vendors who are part of the informal economy. These include the National Social Security Fund (NSSF) program and vocational and technical skills training programs. Additionally, the flood control and drainage system benefits not only urban households but also street vendors. The government has intervened by rehabilitating and upgrading old drainage systems before the onset of the wet season. Furthermore, the government has sometimes acted urgently and called for public participation to maintain the drainage system by removing debris and garbage that obstruct the gates of the drainage system during flash floods.

However, there is a policy that regulates and bans vendors from doing business on the roadside or sidewalk, which causes traffic problems. This disrupts the livelihood and business operations of street vendors, particularly mobile street vendors, who do not have an appropriate and fixed place to conduct their business. Fixed-location street vendors who rent space from private homeowners or landowners also face challenges. They pay all necessary fees, including taxes, security, and hygiene collections. However, the rights of street vendors to these spaces are not secure, and there is no guarantee for their long-term business locations (Kokyo K. 2006a).

The impact of climate change on street food vendors' livelihoods and health necessitates strong policy and program support to prevent future threats from escalating:

- Phnom Penh needs green spaces and tree lines to combat urban heat, which particularly affects street food vendors.
- The flood control and drainage system, including the pumping engines and stations, should be upgraded and designed with a climate resilience approach. System maintenance should be conducted frequently, ensuring readiness to adapt to climate change, particularly regarding changing rainfall patterns. Additionally, the pavement and sidewalks should be elevated sufficiently to prevent flash flooding and enhance resilience against floods.
- The government, particularly the Phnom Penh municipality and sub-national authorities, should consider implementing a system to provide safe and designated vending spaces for street vendors. These designated spots should ensure access to clean water and proper sanitation facilities, while being situated away from traffic pollution to safeguard food safety and protect public health.
- Road lighting is important at night for everyone, including street food vendors and their customers. The government, particularly the Phnom Penh municipality and sub-national authorities, should consider installing street lights throughout Phnom Penh to enhance traffic safety, reduce vendors' electricity costs, and attract more food customers.
- The government can help maintain stability for businesses by not forcing vendors to relocate their spots or making it difficult for them to continue operating at their current locations. Authorities should refrain from interrupting business operations while vendors are active, allowing them to serve their customers without disruption.
- The government should implement measures to prevent significant increases in the prices of goods. For instance, the costs of meats and other essentials, including gasoline, need to be controlled to ensure they remain stable over an extended period without substantial increases. This stability is beneficial for retail vendors like us. Additionally, the government should consider reducing the prices of goods and introducing allowances for the poor and vulnerable families. A government subsidy for street vendors should be considered.
- Cambodia's Sub-decree No. 289, issued on December 14, 2024, seeks to formalize street vending by providing registration, protection, and support, recognizing its vital role in the urban economy. To ensure fairness and minimize disruption, standardized, movable carts, stalls, or kiosks are proposed. Developing a balanced street vending system will necessitate further research and a collaborative, context-specific approach that prioritizes the perspectives of street vendors.

References

- Cambodian Journalists Alliance Association, 2024. Government Approves \$300m Flood Mitigation Project in Phnom Penh. 12 April 2024. <https://cambojanews.com/government-approves-300m-flood-mitigation-project-in-phnom-penh/>
- Eric Koons, 2024. Climate Change in Cambodia: A Growing Concern. 06 March 2024. <https://energytracker.asia/climate-change-in-cambodia/>
- GGGI, 2019. Phnom Penh Sustainable City Plan 2018-2030. Global Green Growth Institute, 2019.
- Kyoko Kusakabe, 2006a. On the Borders of Legality: A Review of Studies on Street Vending in Phnom Penh, Cambodia. Bangkok, International Labour Office, 2006
- Kyoko Kusakabe, 2006b. Policy Issues on Street Vending: A Review of Studies in Thailand, Cambodia and Mongolia. Bangkok, International Labour Office, 2006.
- MoP, 2023. Economic Census of Cambodia 2022: National Report on Final Census Results. National Institute of Statistics, Ministry of Planning, Phnom Penh Cambodia. August 2023.
- Oxfam 2019. Street Vendor Groups: Social Protection For The Informal Workers. Oxfam, 14th February 2019. <https://cambodia.oxfam.org/latest/publications/street-vendor-groups>
- Sry Bopharath, Hiev Hokkheang and Benghong Siela Bossba, 2021. Vending in the City: Unprotected Yet Better Off . CDRI Working Paper Series No. 129. Phnom Penh: CDRI.
- The Phnom Penh Post 2024a. Over 100K self-employed join NSSF. 03 January 2024. <https://www.phnompenhpost.com/national/over-100k-self-employed-join-nssf>
- The Phnom Penh Post, 2023a. 'Record-breaking' rains inundates capital. 04 July 2023. <https://www.phnompenhpost.com/national/record-breaking-rains-inundates-capital>. [Downloaded 26th December 2024]
- The Phnom Penh Post, 2023b. Climate change a threat to development: NCDM. 07 September 2023. <https://www.phnompenhpost.com/national/climate-change-threat-development-ncdm>. [Downloaded 26th December 2024]
- The Phnom Penh Post, 2023c. Street Vendors Day calls for support. November 17th 2023. <https://www.phnompenhpost.com/national/street-vendors-day-calls-for-support>.
- The Khmer Times, 2024a. Floods in Cambodia could worsen as Mekong water level rises sharply (VIDEO). September 26, 2024. <https://www.khmertimeskh.com/501566008/floods-in-cambodia-could-worsen-as-mekong-water-level-rises-sharply/>
- The Khmer Times 2024b. Phnom Penh remains vulnerable to floods. October 7, 2024. <https://www.khmertimeskh.com/501569779/phnom-penh-remains-vulnerable-to-floods/>
- The Khmer Times 2024c. Stalls cleared from Phnom Penh street, despite protests. March 18th 2024. <https://www.khmertimeskh.com/501456981/stalls-cleared-from-phnom-penh-street-despite-protests/>
- The Khmer Times, 2023a. Cambodia's poverty rate falls to 16.6 pct: UNDP. July 14, 2023. <https://www.khmertimeskh.com/501324117/cambodias-poverty-rate-falls-to-16-6-pct-undp/> [Downloaded 26th December 2024]
- The Khmer Times 2023b. Cambodia to provide free vocational training for youths from vulnerable households. November 16th 2023. <https://www.khmertimeskh.com/501393102/cambodia-to-provide-free-vocational-training-for-youths-from-vulnerable-households/>
- The Khmer Times 2023c. NSSF provides health cover to entertainment workers. July 4, 2023. <https://www.khmertimeskh.com/501318304/nssf-provides-health-cover-to-entertainment-workers/>
- The Khmer Times 2021. Street 271 crackdown on sidewalk vendors and traffic violators. December 10th 2021. <https://www.khmertimeskh.com/50986383/street-271-crackdown-on-sidewalk-vendors-and-traffic-violators/>
- Wanxin Huang, Edward Park, Jingyu Wang, and Try Sophal, 2024. The changing rainfall patterns drive the growing flood occurrence in Phnom Penh, Cambodia. *Journal of Hydrology: Regional Studies* Volume 55, October 2024, 101945
- World Bank Group and Asian Development Bank, 2021. Climate Risk Profile: Cambodia (2021): The World Bank Group and Asian Development Bank. World Bank Group, 2021.
- "World Bank Group . 2023. Cambodia Country Climate and Development Report. CCDR Series. © Washington, DC: World Bank. <http://hdl.handle.net/10986/40467> License: [CC BY-NC-ND 3.0 IGO](https://creativecommons.org/licenses/by-nc-nd/3.0/)."



By Pham Tien Thanh

VIETNAM

Executive Summary

Purpose: Climate change and extreme weather events pose global challenges, affecting individuals in various ways. Due to their outdoor working conditions and high mobility, street food vendors are among the most vulnerable groups. However, limited evidence exists on this issue in Southeast Asia. This research addresses the gap by examining the case of Vietnam.

Sample: Key informant interviews are conducted with 48 street food vendors and other stakeholders. Additionally, four focus group discussions are conducted, involving 12 vendors and other stakeholders.

Findings

- **Impacts:** Extreme weather events affect vendors in two main aspects, including business and health. Regarding business, all vendors have been adversely affected by at least one extreme weather event. Around 77 percent state that these events have negatively affected both their business and health. In terms of business, typhoons and heavy rain have more severe impacts than flooding or tidal surges, which, in turn, are more disruptive than heatwaves. For health, heatwaves have the most severe effects, followed by typhoons and heavy rain, with flooding and tidal surges having the least impact. Some vendors experience greater adverse effects, including the elderly, women, those with preexisting health conditions, non-union members, and those vending in tidal surge areas.
- **Coping or mitigation strategies:** To manage the business and health effects of extreme weather, vendors employ various coping strategies. Some continue working despite harsh conditions, using umbrellas or modifying their product offerings. To compensate for income loss, they rely on savings, cutting non-essential costs, or borrowings.
- **Supports:** Vendors receive no weather-specific aid or even vendor-specific assistance from the public and private sectors. Some receive support during public health crises or due to poverty or disability, but access is limited by complicated procedures and strict eligibility criteria. Minimal assistance comes from friends, landlords, unions, or fellow vendors, but it remains inadequate.

Actionable recommendations:

- Cities should create designated vending areas with essential facilities and security to support street vendors in both normal and extreme weather conditions.
- Legalizing or formalizing street vending would grant vendors access to social protection and formal services. Accordingly, regulations should be clear, and registration processes should be simplified.
- Encouraging vendor unions can strengthen their collective voice and provide them with necessary financial and non-financial assistance.
- Various training programs can help vendors upgrade their businesses (thus, benefiting them in both normal and extreme weather) and access alternative livelihoods.
- Financial assistance can help vendors cope with the impacts of severe weather.

Introduction

Climate change and extreme weather events—including rising temperatures, increased rainfall, flooding, storms, and tidal surges—are affecting individuals and economies worldwide. These changes disrupt livelihoods, particularly in sectors reliant on outdoor labor and informal employment. Among the most vulnerable groups are street food vendors, whose income and well-being depend on their ability to operate in public spaces and open-air environment, often with little to no protection from climate issues.

Despite the large presence of street vendors in the Global South, research on how climate change affects them remains scarce, except some evidence (Blekking et al., 2022; Khamrang et al., 2022; Barthwal et al., 2022). Most climate vulnerability studies focus on livelihoods of farmers and human health rather than the informal urban economy. While reports highlight the broad economic and health consequences of extreme weather, there is limited empirical evidence on income loss and health problems of vendors during climate events, their specific coping or mitigating strategies, and the social and policy responses to support this group. This research fills these gaps by focusing on street food vendors in Vietnam – a developing economy in Southeast Asia. To gain a deeper understanding, this research examines the following research objectives (RO):

- RO1: How climate change or extreme weather affected the street food vendors.
- RO2: How vendors mitigated or what strategies they adopted.
- RO3: Which support they received, particularly from local governments.
- RO4: Whether vendors of different background face disproportionate effects.
- RO5: What kind of support they expect to receive.

Data | Sampling procedure

This study gathered data through interviews with street food vendors and other stakeholders in Ho Chi Minh City, Vietnam. As the largest city and business center in Vietnam, Ho Chi Minh City demonstrates the crucial role of street vending in urban life within a developing Southeast Asian context.

During the November-December 2024 interviews in Ho Chi Minh City, participants provided firsthand accounts of the severe weather conditions, including heavy rains, typhoons, and unprecedented tidal flooding. They also shared their experiences with heatwaves during the dry season.

Ethical considerations were prioritized by obtaining informed consent from all participants before and after interviews, ensuring voluntary participation and the right to withdraw. Participants were also assured of complete confidentiality and anonymity throughout the process

Participants were recruited voluntarily using convenience and purposive sampling, combined with a 'maximum variation method' (Williams & Gurtoo, 2012). This ensured a diverse sample by selecting vendors based on factors influencing their vulnerability to climate change, such as vending location, commodities, age, and gender.

Data | Sample

For in-depth interviews, key informant interviews (KIIs) were conducted with street food vendors and other stakeholders (i.e., social policy expert, staff of CEP [a microfinance institution], street food union leader, local authority representative, and donor involved in charity events).

For focus group discussions (FGDs), four sessions were conducted, involving various stakeholders, including vendors, social policy expert, household business owner (who provides space for vendors to rent), street food customers, and donor involved in charity events.

The sample profile is reported in Table 1.

Data | Interview instruments

Semi-structured questionnaires were employed during interviews.

- The structured portion of the questionnaire gathered general demographic and vending characteristic information. Additionally, it collected brief details about the impact of climate change or extreme weather on vendors' businesses and health, as well as the support they received during such events.
- The unstructured portion of the questionnaire explored five thematic areas, addressing the corresponding research objectives: (i) the presence and nature of impacts from climate change or extreme weather events; (ii) the coping mechanisms and strategies used by vendors in response to these events; (iii) the type and availability of support, particularly from local government, during these events; (iv) the potential for disproportionate effects of these events on vendors of different backgrounds, such as women versus men and older versus younger individuals; and (v) the vendors' expectations regarding government support.

Method	Sample size
KIIs using semi-structured questionnaire	KIIs with 48 street food vendors <ul style="list-style-type: none"> • 18 males, 30 females • 16 young (aged 18-35), 25 middle-aged (aged 36-55), and 7 adults (aged 56 and above) • 6 single, 35 married and 7 refused to provide details • 2 never been to school, 6 elementary, 18 lower-secondary, 12 upper-secondary, 4 college/university, and 6 refused to provide details
KIIs using unstructured questionnaire	KIIs with stakeholders <ul style="list-style-type: none"> • 1 social policy expert (female) • 1 CEP staff (male) • 1 street food union leader (female) • 1 local authority representative (male) • 1 donor involved in charity events (female)
FGDs using semi-structured questionnaire	4 FGDs. Participants include <ul style="list-style-type: none"> • 13 vendors (1 male and 12 females; 1 organized group (street food union) and 3 unorganized groups) • 1 social policy expert (female) • 1 household business owner (female) • 1 donor involved in charity events • 2 street food customers (1 male, 1 female)

Findings | Theme 1 (RO1): Whether and how street food vendors are affected by climate change or extreme weather

The results from KIIs with 48 vendors indicate that all vendors have been adversely affected by at least one extreme weather event in relation to their business. Approximately 23 percent report that such events have impacted their health, while around 77 percent state that these events have negatively influenced both their business and health. The findings are similar among vendors in 4 FGDs.

Following this, qualitative analyses provide an in-depth examination of the impacts of specific extreme weather events and the processes through which these effects manifest.

1. Typhoons or heavy rain

(i) Impact on business. Vendors suffer from business loss due to:

- Reduced customers: Heavy rains deter customers from going out to purchase, or stopping to buy due to fears of getting wet or dirty.
- Disrupted operations: Vendors pause or delay their sales until the rain stops, reducing their working hours and income. Interestingly, for those engaging in online sales, businesses are also disrupted because shippers refuse to take order.

- Damaged goods or equipment: Sudden rains decrease product quality or demolish goods. Heavy rains, together with strong winds, damage their equipment or goods.
- Increased costs: Vendors purchase additional protective materials like raincoats, large umbrellas, or tarpaulins to shield their goods, raising operational expenses.
- Health problems: Vendors experience labor loss due to sicknesses (e.g., flu, coughing, runny nose) caused by rainy weather. losses. These illnesses also create inconvenience for business operations as they may compromise sanitary conditions.

(ii) Impact on health

- Wet and cold conditions caused by storms increase the risk of respiratory illnesses such as colds or flu.

2. Heatwaves

(i) Impact on business. Vendors suffer from business loss due to:

- Reduced customers: Hot weather reduces customer interest in purchasing hot or oily foods. This particularly affects vendors selling items like fried fish balls, or rice paper dishes.

However:

- For vendors selling beverages or fruits, their sales are better because people have higher demands for refreshing products during extreme-hot days.
- Vendors selling essential meals to low-income customers, like factory and informal workers, experience minimal sales impact from extreme weather, as these customers must eat and have limited affordable alternatives. Damaged goods: Extreme heat also decreases product quality of perishable foods.
- Adapting business hours: Vendors are operating for fewer hours due to heat-induced shifts in their business schedule, starting later in the day.
- Health problems: Vendors experience heat-related illnesses or fatigue, requiring rest breaks and thus reducing vendor hours.
- Increased input cost: Hot weather reduces agricultural yields in rural areas, driving up prices for some fruits and vegetables. Vendors struggle to keep prices low to maintain customers.

(ii) Impact on health

- Prolonged exposure to high temperatures can cause heatstroke, dehydration, and fatigue.
- One vendor exerts great effort to prepare fruit smoothies using her bare hands due to the lack of electricity at the vending site. During heatwaves, excessive sweating and dehydration cause fatigue.
- Due to the lack of clean water at the vending site, vendors, especially those demanding much water to do business (e.g., they need to wash dishes frequently) must transport water from other locations, which can be physically exhausting. Performing this task in hot weather contributes to greater fatigue.
- Street vendors moving constantly under direct sunlight are more likely to experience headaches, overheating, and stress.
- Older individuals or those with preexisting conditions (i.e., chronic diseases) are more prone to heat-related illnesses.

3. Tidal surges or flooding

(i) Impact on Business. Vendors suffer from business loss due to:

- *Reduced customers:* Flooding discourages customers from stopping at affected areas due to concerns about dirt or getting stuck.
- *Disrupted operation:* Vendors need to pause operations for hours or even an entire day during peak tidal surges. They need to wait for water to recede.
- *Mobility challenges:* For high-mobility vendors, floodwaters make it difficult to move carts.
- *Equipment damage:* Pushcarts or vending tools can suffer damage after prolonged exposure to water, increasing maintenance costs.
- *Hygiene concern:* Floodwaters often contain pollutants and sewage, affecting product quality and thus reducing demand.

(ii) Impact on health

- Contaminated floodwaters lead to skin infections or other illnesses.
- Flooded areas or areas with tidal surges conceal obstacles, raising the likelihood of slips or falls, especially among older vendors.
- Prolonged exposure to damp air can cause respiratory issues.
- Flooding or tidal surges can lead to more fatigue when moving their pushcarts or equipment (though this is less of an issue during heavy rain, as vendors often suspend their business).
- Moving their pushcarts or vending tools in flooding areas cause fatigue.
- Similar to the effects of heatwaves mentioned above, the lack of clean water at the vending site forces some vendors to transport water, which can be physically exhausting, especially in flood-prone areas.

The effects of flooding are exacerbated by tidal surges, and vice versa. Consequently, vendors operating in areas affected by both events experience more severe impacts.

The summary of the adverse effects is reported in **Table 1**. The qualitative analysis also suggests that:

- **Regarding business,** typhoons or heavy rain cause more serious consequences than flooding or tidal surges, while tidal surges or flooding have more devastating effects than heatwaves.
- **Regarding health,** heatwaves cause more serious consequences than typhoons or heavy rain, while typhoons or heavy rain have more devastating effects than flooding or tidal surges.

Table 1. Effects of climate change or extreme weather events on street food vendors

	1. Typhoons/ heavy rain	2. Heatwaves	3. Tidal surges/ flooding
Business loss	<ul style="list-style-type: none"> • Reduced customer • Disrupted operations • Damaged goods • Damaged equipment • Increased Costs • Health problems, leading to vending suspension 	<ul style="list-style-type: none"> • Damaged goods • Shifted business hours • Reduced customer: Low demand hot or oily foods. • Health problems, leading to vending suspension • Increased input cost <p>However:</p> <ul style="list-style-type: none"> ✓ For those selling beverages or fruits, sales are better. ✓ For those selling main food for low-income customers, sales are unaffected. 	<ul style="list-style-type: none"> • Reduced customer • Disrupted operations • Mobility challenge • Pushcart and equipment damage
Health	<ul style="list-style-type: none"> • Wet and cold conditions → colds or flu. 	<ul style="list-style-type: none"> • Heatstroke, dehydration, and fatigue. • Headaches, overheating, and stress. 	<ul style="list-style-type: none"> • Skin disease. • Injury due to slips or falls.

Findings | Theme 2 (RO2): Coping Mechanisms Employed by Street Food Vendors

In response to adverse effects of climate change and extreme weather, street food vendors employ one or more of the following strategies.

(i) Regarding business and health

- Street vendors demonstrate resilience by continuing to operate under adverse conditions. They utilize umbrellas during light rain and persist in flooded areas when water levels allow. Furthermore, their prolonged exposure to extreme heat cultivates a high tolerance for such weather events.
- For example, one vendor stated: “You are a teacher working in air-conditioned office, so your stamina is not good. We, even the women, have better stamina than you. Therefore, the weather is hot but we can tolerate it”. Another vendor expressed a similar sentiment: “We have greater stamina than office staff, so we can withstand such extreme weather.”
- Adjusting sales commodities: Vendors adapt by selling items that are more suitable for certain weather conditions. For example, some observed that in light rain or colder weather, customers prefer hot items like soup, and they capitalize on this demand.

(iii) Regarding expenses

Street food vendors employ various strategies to manage their expenses in response to reduced income:

- Utilizing savings: Vendors utilize savings accumulated from profitable days to offset losses incurred during adverse weather conditions. However, the limited size of these savings often renders them insufficient for effective coping or mitigation
- Cutting expenses: Vendors reduce their less-essential living expenses, focusing only on more essential needs such as rent, utilities, and food. They may also do so by:
 - Vendors consume their own products.
 - Vendors consume each other's products.

Although these strategies help vendors meet their basic needs during income shortages, they come at the cost of reduced well-being. Consuming only their own or each other's products limits dietary diversity and nutrition, while cutting non-essential expenses may restrict access to entertainment or other aspects of a better quality of life.

- Borrowing: Some resort to small informal loans from friends, relatives or moneylenders. Some joining street food union can access loan from formal loan provided by CEP fund (A microfinance institution). However, borrowing is limited due to fears of being unable to repay or worsening financial burdens.

Most interviewed vendors lack additional income sources and rely solely on street vending, making them more vulnerable to income disruptions caused by extreme weather. While vendors manage to cover expenses, their coping strategies are often informal and lead to welfare losses, with borrowing potentially resulting in debt accumulation.

Findings | Theme 3 (RO3): Examination of the Existence and Nature of Support Received by Street Food Vendors

Vendors report a lack of support from any source, including local government, charities, and both private and public sector organizations, specifically in the following areas:

- Weather-specific assistance: meaning targeted aid for climate change or extreme weather challenges.
- No vendor-specific supports. They do not receive vendor-specific supports.

□ These findings are consistent with information obtained from interviews with a social policy expert and a charity donor.

- **Vendors report receiving support in specific contexts**, namely during public health crises and based on poverty or disability status. However, pandemic assistance was generally limited to poor individuals with official residence registration, and aid based on poverty or disability was not vendor-specific.

However, they face barriers to accessing support due to

- Information gaps: Vendors are unaware of available programs or how to apply for assistance.
- Complicated procedure: Vendors, particularly those with low education, find it difficult or time-consuming in completing the application.
- Eligibility restrictions: Vendors are excluded from formal aid programs because they lack legal recognition (e.g., no official business registration or local residency status).

Vendors may receive one or more of following kinds of support but such supports are often limited and/or insufficient:

- Support from Friends or Relatives:
 - Vendors receive assistance from friends or relatives.
 - Due to shared socioeconomic backgrounds, this support is often limited in scope.
- Support from Landlords (Reduced Rental):
 - Some vendors receive reduced rental fees from landlords.
 - This form of support is infrequent, as landlords often do not recognize the impact of adverse weather on vendor businesses.
- Support from Street Food Union Leaders:
 - Union leaders facilitate access to microfinance or small in-cash or in-kind support.
 - This support is exclusive to union members, and union membership is limited.
- Support from Vendors Themselves:
 - Vendors engage in mutual support by purchasing products from each other. This is a form of self support.

The findings indicate that available support is unrelated to weather-related distress and is not specifically targeted at street vendors or the poor. Vendors note that their business model operates outside the scope of government support systems, making the absence of targeted programs for vendors somewhat understandable. Additionally, the findings suggest that even if weather-related assistance were available, some vendors might face challenges in accessing it.

Findings | Theme 4 (RO4): Examination of Disproportionate Impacts on Street Food Vendors from Diverse Backgrounds

Some vendors from different backgrounds experience the disproportionate effects of climate change or extreme weather:

- Elderly and female vendors face greater challenges in relocating or moving their goods quickly to avoid damage during sudden rains or strong winds.
- Among high-mobility vendors, women and elderly individuals experience more difficulties in moving their carts through floodwaters.
- Women vendors often struggle more than men due to additional responsibilities, such as taking care of children while vending on the streets.
- Older vendors or those with preexisting conditions (e.g., chronic diseases) find it harder to endure high temperatures while working long hours.
- Vendors who are not union members lack access to certain forms of support, such as microfinance opportunities and mutual assistance from fellow members.
- Vendors in tidal surge areas are more affected, especially during the rainy season.

However, these effects are not common, as most vendors report being familiar with such incidents.

Findings | Theme 5 (RO5): Analysis of Support Expectations Among Street Food Vendors

Street food vendors expressed several expectations for support, but their responses varied based on individual circumstances. Among the types of support they mentioned, most were related to general business support rather than coping specifically with extreme weather conditions.

- **Financial support (Common Expectation):** Many vendors identify financial assistance as their main expectation, either in the form of direct cash support or low-interest loans. Some vendors have already taken loans to sustain their businesses during difficult times.
- **Housing and shelter support (Occasionally Mentioned):** A few vendors mention the need for assistance with rent or access to social housing programs. While not directly linked to extreme weather, such support can help reduce their overall economic burden, making them more resilient to financial shocks caused by adverse weather conditions.
- **Emergency support during extreme weather (Occasionally Mentioned):** Some vendors express a need for temporary financial relief during periods of extreme weather when they cannot sell.
- **Business Stability Support (Occasionally Mentioned):** Vendors asked for business-related support, such as better vending locations or legal recognition. However, their detailed perspectives regarding this point vary, for instance:
- Some only accept designated locations as long as they can maintain customers. Some even require low or free cost while others are willing to pay higher fee.

Findings | Theme 4 (RO4): Whether street food vendors of different background face disproportionate effects

Some vendors from different backgrounds experience disproportionate effects of climate change or extreme weather:

- Elderly and female vendors face greater challenges in relocating or moving their goods quickly to avoid damage during sudden rains or strong winds.
- Among high-mobility vendors, women and elderly individuals experience more difficulties in moving their carts through floodwaters.
- Women vendors often struggle more than men due to additional responsibilities, such as taking care of children while vending on the streets.
- Older vendors or those with preexisting conditions (e.g., chronic diseases) find it harder to endure high temperatures while working long hours.
- Vendors who are not union members lack access to certain forms of support, such as microfinance opportunities and mutual assistance from fellow members.
- Vendors in tidal surge areas are more affected, especially during the rainy season.

However, these effects are not common, as most vendors report being familiar with such events.

Findings | Theme 5 (RO5): What kind of support street food vendors expect to receive

Street food vendors expressed several expectations for support, but their responses varied based on individual circumstances. Among the types of support they mentioned, most were related to general business support rather than coping specifically with extreme weather conditions.

- **Financial support (Common Expectation):** Many vendors identify financial assistance as their main expectation, either in the form of direct cash support or low-interest loans. Some vendors have already taken loans to sustain their businesses during difficult times.
- **Housing and shelter support (Occasionally Mentioned):** A few vendors mention the need for assistance with rent or access to social housing programs. While not directly linked to extreme weather, such support can help reduce their overall economic burden, making them more resilient to financial shocks caused by adverse weather conditions.
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- **Business Stability Support (Occasionally Mentioned).** Vendors asked for business-related support, such as better vending locations or legal recognition. However, their detailed perspectives regarding this point vary, for instance:
 - Some only accept designated locations as long as they can maintain customers. Some even require low or free cost while others are willing to pay higher fee.
 - Some are willing to relocate to designated places without conditions as long as the local governments allow them do their businesses.



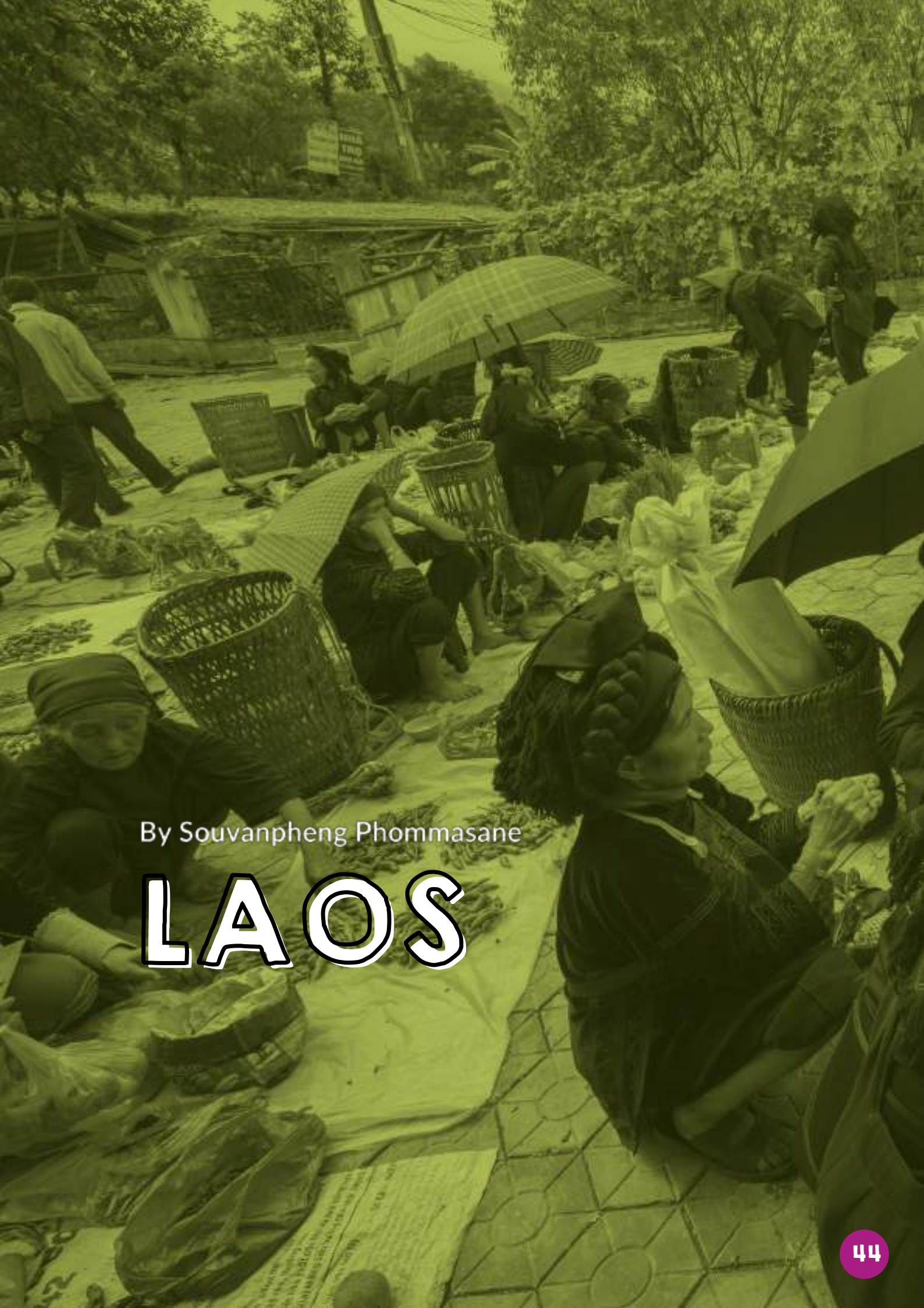
Actionable Recommendations

Based on the vending situation in Vietnam in general and the experiences of street food vendors during extreme weather events, as discussed above, some viable initiatives to support street food vendors in response to such events include:

- **Cities should establish more designated vending areas equipped with essential facilities and security services** (e.g., the hawker center model in Singapore and the yatai model in Fukuoka, Japan). These areas should provide:
- **Clean water:** Reducing the need for vendors to transport water from home, thereby mitigating the health impacts of climate change.
- **Electricity:** Allowing vendors to use machines for food preparation (e.g., replacing the current practice of making fruit smoothies by hand). Additionally, access to electricity enables vendors to use fans to alleviate the effects of heatwaves and enhance customer comfort.
- **Security services:** Vendors have reported thefts when leaving their equipment at vending sites. Security services can help protect their equipment, reducing the burden of transporting pushcarts and supplies from home to vending locations.
- **Formalizing and legalizing street food vending would enable vendors to access social protection and formal services.** To achieve this, regulations should be transparent and well-structured, making them accessible to vendors, many of whom have low levels of education. Additionally, the registration process should be clear and simplified.
- **Encouraging the formation of vendor unions and promoting union-related activities** can help vendors gain access to formal support systems and strengthen their collective voice in discussions with other stakeholders.
- **Financial assistance, such as cash grants or microfinance,** should be provided to vendors to help them cope with severe events.
- **Various training programs should be provided to assist vendors in formalizing their businesses, ensuring food hygiene, and meeting the demands of various stakeholders.** These programs benefit vendors in both normal and extreme weather. For example, business upgrades can ensure stable income, allowing them to save more and manage financial losses during climate-related disruptions. Additionally, vocational training for alternative skills can provide opportunities for vendors to transition to other occupations if needed.

References

- Barthwal, V., Jain, S., Babuta, A., Jamir, C., Sharma, A. K., & Mohan, A. (2022). Health impact assessment of Delhi's outdoor workers exposed to air pollution and extreme weather events: an integrated epidemiology approach. *Environmental Science and Pollution Research*, 29(29), 44746-44758.
- Blekking, J., Giroux, S., Waldman, K., Battersby, J., Tuholske, C., Robeson, S. M., & Siame, G. (2022). The impacts of climate change and urbanization on food retailers in urban sub-Saharan Africa. *Current Opinion in Environmental Sustainability*, 55, 101169.
- Khamrang, L., Datey, A., Kim, S., Dema, T., & Rai, B. (2022). Silent Struggle of the Informal Workers: Everyday Lived Experiences, Challenges and Negotiation of the Women Street Vendors in Thimphu City, Bhutan. In *Social Morphology, Human Welfare, and Sustainability* (pp. 407-430). Cham: Springer International Publishing.
- Williams, C. C., & Gurtoo, A. (2012). Evaluating competing theories of street entrepreneurship: Some lessons from a study of street vendors in Bangalore, India. *International Entrepreneurship and Management Journal*, 8, 391-409.



By Souvanpheng Phommasane

LAOS

Executive Summary

This study aimed to determine the most appropriate actions and analyze the possibility of promoting street vending in Laos, specifically in Vientiane prefecture, Laos. Street Net International (SNI) currently works with Oxfam in Vietnam, Cambodia, and Laos on a five-year program funded by the Belgian Directorate General for Development Cooperation and Humanitarian Aid (DGD).

The study was implemented by a small task force of agroforestry development consultant (AFDC) advisers working closely with the Lao Federation of Trade Union Development Institute (LTUDI), and an Oxfam Laos officer. The street vending rapid assessment study was implemented from September 26 to October 3, 2024. The focused locations were two markets (Talad Nonkore, Talad Khamsavath) in Sisatanak, two markets (Talad Insee, Talad Kouadin) in Saysettha, and two markets (Morning Market, Night Market) in Chanethabuly districts. The researchers randomly picked 39 respondents and 35 females, or 89.74%, who are street vending in front of the markets and along the sides of the roads. The 4 men conducted interviews while they sold fresh fruits by cart (Lor Ka Ling).

The research team conducted a descriptive study using easy sampling, and the following parties took part: (1) committee boards of the weekly organic market at the Lao Itch Center; (2) The Gender Development Association (GDA); (3) Women market vendors in specific fresh markets, and along the roadsides in Vientiane; (4) the Informal Worker Advancement Association (IWAA); (5) The Lao Farmer Network (LFN); (6) the Federation of Lao Trade Union, the Department of Social Protection; (7) the Market Managing Committee (MMC); and (8) The last meaningful participant is the District Lao Women's Unions of the three districts where field interviews for street vending were conducted.

The key finding of the study indicates that there are numerous issues they deal with at the marketplaces, the general public, law enforcement, and local governments have ad hoc systems of taxation collection, and so on. Street sellers have to deal with the negative effects of climate change on their day-to-day operations, which include heat waves and rapid floods during the rainy season. Due to the rapidly changing weather, they have occasionally lost benefits. As a result, this study evaluated their problems and potential solutions in the Vientiane Municipality's Saysettha, Chanthabuly, and Sisattanak districts. If compared to other locations, these districts experience the worst effects of climate change, such as heat waves and flooding. Additionally, nearly all the population lives on low terrain, which puts them in greater danger of flooding than areas with higher elevations.

In addition to bringing vitality to urban life, street trade is widely regarded as the foundation of a historical and cultural legacy. In this study, the researchers assessed the issues that street sellers experienced at work and the issues that still needed to be resolved. The data was gathered through interviews from this study which aims to ascertain the challenges that street vendors experience with the effects of climate change on their businesses and the opportunities they present for defending their legal rights to operate as street vendors. The study offers geographical suggestions for legislative actions governing these unofficial business owners.

The main objective of the rapid assessment study was to gather information on the street vendors and the current situation relating to climate change in the six marketplaces and three districts in Vientiane's prefecture. The main outcome was to provide recommendations to Net International (SNI), which currently works with Oxfam in Vietnam, Cambodia, and Laos on a five-year program funded by the Belgian Directorate General for Development Cooperation and Humanitarian Aid (DGD), and identify key interventions for market-based solutions relevant to sustaining income for street vendors and improving income generation and employment opportunities among pro-poor people.

The study was based on three pillars listed below that formed the basis for this report.

1. In what ways do street vendors experience climate change in their everyday lives and work? How, if applicable, do they navigate these challenges?
2. Are there specific ways that climate change impacts women street vendors?
3. Are there existing labor regulations, social protection schemes, or other government programs or policies that tackle these challenges?)

As a result of the street vendors' rapid assessment study, six major markets were engaged and provided input, and 39 interviews were conducted with the street vendors and authorities' relatives (D LWU, NPA, and MMC). The interviews resulted in 12 key recommendations (6 policy recommendations and 6 recommendations from the street vendors) to be assessed.

Overview of street vending in Laos

Street vendors provide easy access to a wide range of goods and services in public locations, making them one of the most significant service sectors of Laos' urban economy. Despite being viewed as informal, street vendors play a crucial role in supporting the metropolitan economies of the Lao PDR. Following the transition of the Lao PDR from an old to a new government in 1975, the nation was opened to a new market economy, in which street vendors played a significant role. This allowed the poorest women and children living in suburban, urban, and rural areas to obtain unofficial employment and raise a stable generation of low-income people.

According to the UN Women report, which included the interview results, it was found that a majority of the market traders in Laos are women, representing more than 90 percent of vendors in fresh food and vegetable markets across the country. Their roles often go unrecognized. However, this causes many challenges, even though they manage entire value chains from production to sales.

Project Background

Street Net International (SNI) is currently involved in a five-year program with Oxfam in Cambodia, Oxfam in Vietnam, and Oxfam in Laos supported by the Belgian Directorate General for Development Cooperation and Humanitarian Aid (DGD). The cluster program called Improved Social Protection and Labor Rights for Women Workers in ASEAN's Agri-Food Sector is currently being implemented in Cambodia, Laos, and Vietnam.

The initiative promotes the three pillars of decent employment—labor rights at work, social protection, and social dialogue for all—to enable employees in the fresh food and beverage industry to exercise their rights and obtain proper labor rights and social protection. In the ASEAN area, the fresh food and beverage industry contributes significantly to the unofficial economy. A major component of jobs in the food system and fresh food industry is related to activities involving fresh food, such as processing, packaging, transporting, storing, distributing, and selling food items. Particularly women employees hold employment that is unprotected, hazardous, unstable, and informal.

They belong to the poorest groups of the population and are often left behind in terms of decent work and social protection. Street vendors are among these workers in the informal economy whose contribution to national economies often goes unnoticed despite their numbers and the important role they play in ensuring food security for lower-income populations in most Asian countries.

Understanding the unique livelihood and lifecycle risks and vulnerabilities that impact street vendors and other workers in the informal economy is necessary to extend social protection to them. One such problem that seriously threatens the food service sector is climate change. Although it is widely understood that social assistance programs need to be gender transformational and climate responsive, there isn't much solid data on how street vendors are affected by these changes. Without such understanding, the business community is less able to advocate for improved worker rights and more extensive social protection.

Research Design

As Laos is so flexible with the budget, the study team includes local experts with a variety of skills from the Lao People's Democratic Republic as well as two technical researchers who received technical support from Oxfam's research team. According to my observations, roughly 90% of women in Laos participate in the street market and sell, and that was the key reason I decided to include one female helper in the interviews with street vendors. In light of this, I can say that to obtain accurate data on trading, it would be more beneficial to have a female interviewer rather than a male interviewer. This is because women often feel extremely embarrassed to answer a male interviewer. Therefore, to ensure accurate trade data collection, employing a female interviewer would be more advantageous, as female respondents may feel more comfortable and provide more candid information. The team members demonstrated proficiency in both qualitative and quantitative methods of monitoring and evaluating work, policy analysis, market access, value chain development, and gender-related climate change adaptation.

This study used a mixed-methods design, involving interviews with important players from the Lao CSO, the concerned government, and female market merchants, as well as the addition of a desk review. A development meeting with important players gathered support and solicited suggestions for interview subjects. The actors included representatives from both governmental and non-governmental organizations, such as the Gender Development Association (GDA), the Informal Worker Advancement Association (IWAA), the Lao Farmer Network (LFN), the Federation of Lao Trade Union, the Department of Social Protection, the Market Managing Committee (MMC), and the District Lao Women's Union (DLWU) in the three districts were randomly selected for conduct interviews.

These methods were most relevant given the project timeframe, contextual limitations, and budget allocation. Insights were identified through the triangulation of multiple data sources to construct findings, conclusions, and recommendations.

Study Areas in Laos

As per the agreed arrangements from the consultation meeting with the Oxfam Lao partner on September 29, 2024, held at the Laotel Hotel, we selected the Vientiane municipality as our main study target because other CLV countries had also chosen the capital city as a target area for interviewing street vendors to obtain information on how they might be affected by climate change because of events like heat waves and heavy rains, and because they would lose out if conditions worsened for their businesses.

For the scheduled street vendor interviews, Lao had chosen the Saysettha, Chanthabuly, and Sisattanak districts in the Vientiane municipality; moreover, interviews in public areas were conducted by local nonprofit organizations. These three districts have remarkably similar weather because the municipality is a lowland area with a town at its center and Chanthabuly and Sisattanak are in the west, sharing borders with the Mekong Riverside.

Vientiane's capital is located on the Mekong River's bend, bordering Thailand to the west (NongKai and Leui provinces), Vientiane province to the north and east, and Bolikhamxay province to the south. A total of 3,920 km² (1,510 sq mi) make up the prefecture. Saysethathirath, the King, had Vientiane constructed in the sixteenth century. Parks, museums, monuments, and historic temples can be found in the city's oldest section.

Vientiane is the capital and biggest city of Laos. The prefecture of Ventana is divided into nine districts, five of which are urban. The city is located on the banks of the Mekong River, close to the Thai border. During French rule, Vientiane was the official capital of Laos; since then, it has become the economic center of the country.

The population of the city was 840,000 in the 2023 Census. The biggest national monuments are found in Vientiane, including Pha That Luang, the national symbol and holier-than-thou of Lao Buddhism. The Emerald Buddha's previous residence, Ho Phra Keo, is one of the significant Buddhist temples situated there.

The climate of Vientiane

The climate in Vientiane is tropical, with distinct wet and dry seasons. The dry season in Vientiane runs from November to March. The wet season in Vientiane begins in April and lasts for roughly seven months. All year round, Vientiane is often quite hot and humid, while the dry season brings slightly lower temperatures in the city than the wet one. In January 1955, the lowest recorded temperature was 3.3 °C, or 37.9 °F, while in April 2024, the highest recorded temperature was 42.6 °C, or 108.7 °F.

The following is a list of the key areas where research was conducted in Laos:

1. The first well-known fresh food and organic vegetable sale takes place twice a week on Wednesday and Sunday at Lao Itech Centre, Saysettha district, Vientiane Capital.
2. Houakoua market (NonKhome), Khamsavath village, Xaysettha district, Vientiane prefecture. This market sells fresh foods, fish, seafood, meats, and poultry including cooked foods and beverages.
3. The research team spoke with two local fast-food businesses at Khamsavath market in Saysettha district. The restaurants are located about 10 km south of the town at the Thanalaeng train station, and it is part of the Hadxayfong district, which borders Laos and Thailand.
4. The Khuadin market is a city center market with a wide variety of food and drink items, agricultural products, and building supplies. It is located in the Chanthabuly neighborhood of Ban Kuadin. There are a lot of food and drink booths by the sides of the roadways in this community.
5. This area, which is in the city center, is on a street in the town of Anou. In addition to the high density of food and drink vendors by the sides of the road, there are plenty of people walking and driving by.
6. Night market, located along the Mekong River, and Ban Wat-Chane, Chanthabuly district, Vientiane municipality. This marketplace opens daily from 6 pm to 12 pm.

Interviews were conducted with eight relevant stakeholder organizations in Vientiane's capital to gain insight into environmental and policy-enabling issues related to the impact of climate change on street vendors. The study encompassed five locations across three districts within Vientiane Prefecture

After working with a team-led international research specialist, Mrs. Nash Tysmans, researchers in Laos, Vietnam, and Cambodia concluded that it was crucial to identify the street vendors in the towns that supply food and drinks to the study's primary informants (some are mobile, while others have fixed street vending). **The street vendor segments selected for this study were those dealing in food and drink, due to the high perishability of their products and the significant losses they experience during climate-related events like heatwaves, intense rain, and floods.**

Key informant and stakeholder interviews

Consultants conducted interviews with individual street vendors. Street carts moved the fresh fruits selling along the road, in front of the offices, factories, and markets. A total of 39 key informants and 35 females, or 89.74%, are street sellers selling fresh food and beverages in front of the markets, and along the sides of the roads, 4 men sold fresh fruits by cart (Lor Ka Ling) were interviewed. Of which representatives from three primary stakeholder concerns: (1) Market management committee (MMC), both male and female; (2) government agencies; (3) international organizations; and (4) local non-profit associations (NPAs). For each group, a set of questions was used (see Annexes). The main inquiries for each stakeholder group were:

- 1. Information about the street vendors and local trading along the roadside to the villages*
- 2. Information about the social and economic benefits of local traders and street sellers*
- 3. The effects of climate change on their employment and daily lives*
- 4. Restrictions within the enabling environment*
- 5. An examination of the finances of street vendors and small commerce in Laos*
- 6. The municipal government's enabling or policy support*

Key actor interviews

To gather information for this study, interviews were conducted with the following key stakeholders in Laos: (1) the committee boards of the weekly organic market at the Lao Itech Center; (2) the Gender Development Association (GDA); (3) women market vendors from specific fresh markets in Vientiane; (4) the Informal Worker Advancement Association (IWAA); (5) the Lao Farmer Network (LFN); (6) the Federation of Lao Trade Union; (7) the Department of Social Protection; (8) the Market Managing Committee (MMC); and (9) the District Lao Women's Union (DLWU).

The majority of the eight key actors interviewed were influential individuals directly or indirectly associated with Laotian female duty-bearers. Key informants, comprised of 39 people, were selected from street vendors, with 35 being female, representing 89.74% of the interviewees.

Policy Review

This study utilized desk and policy reviews to examine relevant laws and policies affecting street businesses. Records were obtained through contact with relevant parties and online resources, including the Federation of the Lao Trade Union, the Lao ITEC center's weekly organic market management committees, and the District Lao Women's Unions in three randomly selected districts. These organizations strongly asserted that street vendors lack legal assistance from the Lao PDR government and are informally organized by the community.

The Lao People's Democratic Republic (Lao PDR) lacks clear laws and decrees on street vending related to climate change adaptation and some tracking of the mitigations in the future, which has raised concerns from the organization based on the results of the desk study and interviews. **As a result, this study is a useful tool for encouraging policy advocacy and enabling the Lao government to recognize the long-term advantages of supporting street sellers.** The study's findings show that one of the most important service sectors of Laos' urban economy is the street vendors' easy access to a broad variety of goods and cheap services in public areas.

However, **street sellers are crucial to the Lao PDR's metropolitan economies.** When the Lao PDR changed governments in 1975, a new market economy was allowed to take up residence, with street sellers playing a big part in it. Due to this, the poorest women and children in suburban, urban, and rural areas could raise a stable generation of low-income individuals and find unofficial employment opportunities.

Data Analysis

This study additionally, utilized the multilevel combination approach to ensure proper information triangulation (United States Agency for International Development, 2013). After conducting independent analyses of the informant interview and desk review data, three CLV researchers—including the head of the international team—identified and reached a consensus on the key findings. Second, by contrasting and comparing the most significant findings from every source, each major finding was linked to the evaluation's primary objectives.

A human rights-based approach should be applied to the conceptual framework. It shows a cycle of communication and access between the defenders of rights and those pursuing jobs. This section examines the perspectives of duty-bearers and significant stakeholders regarding laws and regulations regarding street vendor operations, the overall situation of female vendors, and the possibility of more female involvement in decision-making.

By analyzing whether or not pertinent laws and policies acknowledge women market vendors (referred to as the "pull" side), it is possible to determine the degree to which important actors and duty-bearers respect, defend, and advance the rights of women market sellers. Speaking with women in marketplaces allowed for a deeper examination of their awareness and attitudes toward pertinent laws and regulations. As right holders, women market vendors may choose to act on the "push" side by organizing a group of women market vendors or pursuing legal action to assert their rights. The study's findings can be utilized to reinforce important players' resolve to protect the rights of women who work as vendors in the women's market going forward.

Currently, the Lao government still lacks laws and regulations specific to protecting female street vendors. All of the street vendors facing the landowners are increasing the price of renting locations, the street vendors are moving from place to place to make high investment costs.

During the interview process, the research team informed every individual that they lack the funds to pay long-term rent in the marketplace, even though there are excellent facilities and circumstances for their daily operations. Due to their low production revenue, low demand, lack of capital, low investment, and low output—all of which contribute to their ongoing poverty—these vendors are impoverished and trapped in a never-ending cycle of poverty.

The 'vicious circle of poverty' theory posits that poverty perpetuates itself. Individuals living in poverty often accrue debt through loans, which, with added interest, increases their financial burden. This debt can be passed down to subsequent generations, trapping them in a cycle of poverty. Consequently, impoverished individuals and families are likely to remain in poverty, perpetuating the cycle across generations.

Limitations

This study faced limitations due to time and budget constraints, which restricted field interviews with key stakeholders. Additionally, the limited existing research on street vendors in Laos, combined with the novelty of the study themes, presented challenges.

Interviewing women market vendors was particularly difficult, as many were preoccupied with serving customers and frequently interrupted interviews. Despite these obstacles, all questions from the moderator guide were successfully addressed, though it required extended time to gather responses and draw conclusions.

The street vendors experience climate change in their everyday lives and work

This study was also focused on the women's street vendors who sell food and beverages that have been highly affected by climate change and the three answers from the highlight questions used for this study. The impact of climate change on street sellers and villages is clear. Frequent droughts, which include heat waves, hurt their livestock and crop output, as well as the production of fast food, vegetables, and beverages. In 2008, the capital of Vientiane saw a significant flood that affected numerous street sellers and their families. Less is known about how it affects wealthy households.

Rainfall, flooded roadways, and selling locations all have an impact on the street sellers we talked about. Everyone we spoke with said that the town's roadside street sellers, in particular, were impacted by climate change in their daily lives. The street sellers all stated the same thing: they were unable to pay taxes, payment fees for permanent marketplaces, and other expenses like electricity, water supply, etc. Almost all participants, traders, and government staff were asked to answer seven questions on climate change (see Table 3).

N o	Question	Impact Experienced/foreseen	Mitigation options/solutions
1	In your opinion, how is the climate changing? What changes may we assume in the future?	There are more heat waves, virtually annually. If it rains a lot, it gets wet to cook food and beverages for sale.	We do not yet know how to mitigate climate change.
2	What extreme weather conditions have an impact on your day-to-day operations?	Water flooding our stores and locations where we serve prepared meals and beverages impacts us. Fresh foods risk spoiling and eventually losing their nutritional value during the dry season. The merchants all told me that even though they charged the same price, they invested more money during the dry season to acquire ice to keep the food cooler.	Not much can be done.
3	What impact do you observe on your daily selling of your food and beverages?	A lot of rain impacted the street vendor's day-to-day operation of our business, but no big change over a longer period.	Not much can be done.
4	According to your observation, how does this affect the street vendor businesses?	Big annual variations in income and health of the street vendors.	Pay attention to radio and television weather announcements. We were staying at home and closing our street sales locations.
5	What is the impact on women's street vendor businesses?	The women's health care, reduced income, and forfeiture of the benefit of food and goods spoiling due to weather fluctuations.	Cover the food and goods with plastic.
6	Does the impact of climate change differ for (a) men and women, (b) the rich and the poor, and (c) young and old?	Although women represent the majority of street vendors, women are more affected than men.	Not much can be done.

Effects of Climate Change on Women Street Vendors

As summarized in Table 3, the key findings reveal that despite women comprising the majority of street vendors, they experience disproportionately greater impacts from climate change. This is particularly significant given that approximately 90% of food and beverage street vendors in Laos are female.

Comprehensive statistical analysis indicates that women and children suffer both financial losses and adverse health effects due to climate change. Weather fluctuations lead to commodity spoilage, hindering sales. Furthermore, inadequate facilities for preparing ready-to-eat meals and drinks result in lost income.

Fresh goods, for example, have a higher chance of spoiling and eventually losing their nutritional value during the dry season. To keep the food colder during the dry season, the vendors told the research team that even though they charged the same price, they had to spend more money on ice.

Analysis of Existing Labor Regulations and Social Protection for These Challenges

The policy review of existing regulations, laws, and policies concerning social support for women vendors yielded the following key findings.

General policies related to women's economic empowerment include:

- The Lao Women's Union Development Plan 2025-2030
- The Third Five-Year National Development Plan on Gender Equality (2016-2020)
-

There is a strong alignment between the National Development Plan on Gender Equality and the Lao Women's Union Development Plan. Both policy documents provide project plans and guidelines for the comprehensive development of women, with a significant focus on economic empowerment. The Lao Women's Union has explicitly stated that promoting women's employment and businesses is a primary objective in its development plan and its 20-year vision, extending to 2030. The third program of the strategy outlines five key aims:

- Enhance women's knowledge of small and medium business management, including the application of scientific technology in production and services.
- Promote the Lao Women's Union development fund.
- Promote participation in trade fairs for agriculture and handicraft products, and raise awareness about intellectual property rights for handicrafts and other products resulting from Lao women's innovations.
- Expand microfinance institutions for women and families.
- Promote vocational training and skills development for women.

These policies are broadly applicable to women vendors, as they target small and medium enterprises. Microfinance and the Lao Women's Union development fund are identified as potential sources of financing for vendors. The Lao Women's Union development vision up to 2030 and development strategy up to 2025 clearly prioritize the promotion of women's employment and businesses. Programme III of the strategy identifies the same five aims as listed above.

Four action plan policies

- The government has a special policy on intensified efforts to reduce risks faced by women from climate-driven natural disasters through providing relief for those affected by disasters, in poverty, and disadvantaged with rice, dry food, water, household necessities, bedding, clothes, and cash for work.
- Regarding the policy on combating and preventing violence against women, the Lao Women's Union will prioritize a dissemination campaign focused on the findings of the National Survey on Violence Against Women. This campaign will target policymakers, legislation, and the strategies of Committees for the Advancement of Women (CAWs) in each sector. The survey, conducted in 2014, focused on the "health and life experiences of women" in Lao PDR
- Human resource development for the advancement of women Organizational structure: In 2016, to streamline the structure of organizations responsible for gender equality and child rights by government policy, the National Commission for Advancement of Women and the National Commission for Mothers and Children were merged, and the Secretariat was relocated from the Prime Minister's Office to the Lao Women's Union office.
- Enhancing regional and international cooperation: The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) was adopted by the United Nations on 18 December 1979 during its General Assembly 34/180 and came into force on 3 September 1981. This convention aims to protect the rights of women calls for countries to eliminate all forms of discrimination against women in government and private sectors, as well as in personal spheres in terms of political, economic, social, and cultural aspects. After ratification, CEDAW becomes legally binding for member states, with obligations as stipulated in articles of the convention based on three principles: (1) equality, (2) non-discrimination, and (3) the state party's obligations.

The Lao PDR strongly emphasizes gender equality and women's empowerment, as evidenced by constitutional provisions and relevant laws and regulations. These mandate that the state implement policies to advance women and ensure their equality with men in legal rights and economic and social opportunities.

As a result, the government has mainstreamed gender equality and women's empowerment into the eight current socioeconomic development plans (2016–2020) to achieve the goals and to implement international initiatives like the Beijing Declaration and Platform of Action, pertinent SDGs, and targets.

Meanwhile, the National Commission for the Advancement of Women (NCAW) and Mothers and Children, and the Lao Women Union are putting into practice the Vision for Development of Lao Women 2030, the Strategic Development Plan for Lao Women 2025, and the Five-Year Lao Women Development Plan 2020-2025, which seek to safeguard the rights and provide opportunities for women in the course of the national socio-economic development. Domestic laws about gender equality and women's empowerment were also passed.

These include laws about women's rights and development, laws preventing and addressing violence against women and children, laws protecting children's rights and interests, laws governing women's unions, laws governing families, and laws prohibiting human trafficking. Enforcing these rules safeguards women's rights and interests in the home, the economy, politics, and culture. It also helps women grow. Because of this, an increasing number of women can hold significant positions in the legislative, executive, and judicial departments as well as in the business sector.

Policy Recommendations

The following policy recommendations are proposed:

1. Implement a participatory approach to marketplace location selection, involving both consumers and street vendors.
2. Enhance working conditions for vendors and improve urban infrastructure.
3. Provide vocational training opportunities for vendors lacking formal education to develop new skills.
4. Develop and implement regulations for street vending, including designated locations, operating hours, and hygiene standards, to benefit both vendors and consumers

General Information and Experiences of Street Vendors

The majority of female street vendors have extensive experience selling in markets, while others are relatively new to street vending. Many reported previous work experience at home or in other sales locations before transitioning to their current market positions. Most female vendors sell food and drinks along roadsides and in front of markets, including the Mekong River night market. Observations revealed that male vendors primarily utilize carts to sell fresh fruits (Lor Kaling) near schools, factories, and offices in Vientiane.

Prior to becoming market vendors, some individuals worked as farmers or independent contractors. The products sold encompass a variety of items, including meats (chicken, duck, shrimp, small fish, etc.), fruits, vegetables, cooked foods, and snacks. The majority of female vendors concentrate their sales at a single market. A small percentage of women also sell at other markets, explaining that they transport unsold merchandise to these locations.

While some female vendors operated seven days a week, the majority sold their goods on weekdays. Most vendors began selling between 5:00 and 6:00 AM and continued until 7:00 or 8:00 PM. Some women also held weekday jobs as office cleaners or in other occupations, limiting their vending to weekends.

Vendor Challenges: Vendors reported several challenges, including:

- Product shortages and delivery delays.
- Flooding due to weather fluctuations and changes.
- Spoilage of fresh fruits and cooked foods due to heatwaves.
- Loss or damage to goods during transport on motorbikes.

Market Registration and Vendor Management:

For vendors operating within municipal and private markets, the Market Management Committee serves as the central point of contact for stall registration. Information obtained from key actors elucidated the market registration process. The committees facilitate communication with all vendors, while the District of Industry and Commerce (DoIC) provides support in enforcing vendor regulations. These committees also conduct verification of supplier product legitimacy. Suppliers are required to submit documentation, including a signed acknowledgment of market regulations, to the committees, who subsequently forward these materials to the district authorities.

Roadside and Night Market Vending:

Roadside food and drink vendors often establish direct agreements with private property owners, paying placement fees for their vending locations. These daily rental fees approximate 10,000 Lao kip, or 300,000 kip monthly, equivalent to approximately \$15 USD. These rental agreements are typically verbal. Vendors operating within the night market are subject to significantly higher fees, paying 100,000 kip daily and 3 million kip monthly, or approximately \$150 USD.

Case Study: Khouadin Market Entrance Vendors and Enforcement Actions

Vendors operating near the Khouadin market entrance reported establishing their stalls in this location due to an inability to afford official market fees. Despite this, the area was designated as unauthorized for vendor stalls, resulting in frequent police displacement. Subsequently, district tax inspectors confiscated the vendors' stalls, directing the women to retrieve their belongings from the district office.

However, the vendors did not claim their confiscated items, fearing potential fines. One vendor recounted, "The district tax officer arrived after we had set up our stalls, confiscated our belongings and those of other sellers, and instructed us to go to the district tax office. But most of us did not go, fearing penalties. This is more detrimental than having no customers." The vendors expressed feelings of insecurity and distress regarding these enforcement actions, citing the confiscation of their goods and coolers as particularly distressing experiences.

Conclusion

Study Findings and Policy Implications:

Based on the analysis of desk research and interview data, this study highlights concerns regarding the Lao People's Democratic Republic's (Lao PDR) lack of specific regulations and policies addressing climate change adaptation within the street vending sector, as well as the absence of a framework for tracking future mitigation efforts. Consequently, this study serves as a crucial tool for advocating policy changes and demonstrating to the Lao government the long-term benefits of supporting street vendors. The study's findings emphasize the significant contribution of street vendors to Laos' urban economy, providing accessible and affordable goods and services in public spaces.

Economic Significance and Challenges of Women Market Vendors:

The research reveals that women market vendors in Vientiane Capital, Lao PDR, are widely recognized as vital contributors to the city's economy. While precise figures are challenging to obtain, they constitute a substantial portion of the capital's workforce. Key stakeholders acknowledged the challenges faced by these vendors, including limited educational attainment, inadequate financial support, lack of secure stall tenure, insufficient market facilities, and limited bargaining power to manage production costs. However, the absence of gender-sensitive laws, regulations, and policies, coupled with a lack of precise data and research, has hindered the implementation of effective solutions.

Climate Change Vulnerability and Adaptive Capacity:

This study, focusing on three districts, assesses the impact and vulnerability of informal food and beverage street vending to climate change. It demonstrates the precarious nature of these businesses and the absence of regulatory safeguards. The study identifies key components influencing business continuity and livelihood strategies for mitigating climate change risks, including business networks, experience, human and financial capital, livelihood utilities, physical well-being, risk management, physical damages, business losses, and shelter type.

While the informal sector exhibits some adaptive capacity, this does not translate to sustainable livelihoods. High sensitivity and exposure to climate hazards impede the transition from survival-oriented enterprises to growth-oriented businesses. Although the study specifically examines the informal food sector in three districts, its framework can be applied to analyze other market locations and street food sectors across different regions.

Modes of Vending

The field interviews were conducted in 2024 from September 26 to October 3. Interviews were conducted with a total of 39 key informants, which included the street vendors, other actors, 30 participants (four of whom were men), and the movement of carts delivering products along the roads. The five main street vending clusters were the focus of this study, which was conducted in six marketplaces and three districts of the Vientiane prefecture.

Based on the findings and conclusions from the interviews, 37% of the respondents are selling cooked food, 27% are selling drinks, 20% are selling vegetables, 13% are selling fresh fruits from a cart along the road, and 3% are selling beef and pork.

Recommendations and Suggestions

Policy Recommendations:

1. Establish policy measures to ensure labor protection for street vendors.
2. Enact specific legislation to safeguard unpaid labor within the street vending sector.
3. Develop targeted legal frameworks designed to protect the rights and interests of street vendors.
4. Request local authorities to provide designated, organized spaces for street vending activities.
5. Facilitate access to microcredit with low interest rates and simplified application processes for street vendors.
6. Develop and implement a range of policy support initiatives tailored to the specific needs of street vendors.

General Recommendations:

1. Reduce rental costs for vending locations to alleviate financial burdens on street vendors.
2. Assist in the development and provision of proper street vending facilities, including infrastructure and amenities.
3. Request government intervention to stabilize the Lao Kip's exchange rate against foreign currencies, mitigating economic instability for vendors.
4. Capacity Building and Market Access: Implement personalized business management and marketing training programs for street vendors.
5. Establish a platform connecting street vendors with local farmers to facilitate the direct supply of agricultural food products.
6. Climate Change Adaptation and Mitigation: Provide assistance to enhance street vendors' capacity to develop and implement fundamental strategies for climate change mitigation and adaptation.



Abbreviations

ADB - Asian Development Bank
ASEAN - Association of Southeast Asian Nations
CDRI - Cambodia Development Resource Institute
CEDAW - Convention on the Elimination of All Forms of Discrimination Against Women
CLV - Cambodia, Laos, and Vietnam
DGD - Directorate General for Development
DOPT - Department of Propaganda and Training
DSP - Department of Social Protection
GDA - Gender Development Association
GDP - Gross Domestic Products
GGGI - Global Green Growth Institute
IDEA - Independent Democratic Association of the Informal Economy
ILO - International Labour Organization
IWATA - Informal Worker Advancement Association
JICA - Japan International Cooperation Agency
Lao CSO - Lao Civil Society Organization
Lao PDR - Lao People's Democratic Republic
LFN - Lao Farmer Network
LFTU - Lao Federation of Trade Union
LFTUDI - Lao Federation of Trade Union Development Institute
MMC - Market Managing Committee
MoLVT - Ministry of Labour and Vocational Training
MoP - Ministry of Planning
MLSW - Ministry of Labour and Social Welfare
NCAW - National Commission for the Advancement of Women
NIS - National Institute of Statistics
NGOs - Non-Government Organizations
NPA - Non-profit Association
RGC - Royal Government of Cambodia
SDG - Sustainable Development Goals
SEADA - Sustainable Agriculture and Environment Development Association
SNI - StreetNet International
StreetNet International - SNI
UNTAC - United Nations Transitional Authority in Cambodia
WB - World Bank
WBG - World Bank Group



How to join StreetNet

If you are a representative and democratic membership-based organization of informal traders with a clear internal policy and at least 500 members, you can apply to join StreetNet! Contact us to access the affiliation application form and we will initiate the application process. All applications are considered by the StreetNet Executive Committee.

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