

LABOURING THROUGH THE CLIMATE CRISIS

A Qualitative Study of Climate Experiences among Informal Workers in Delhi











LABOURING THROUGH THE CLIMATE CRISIS

A Qualitative Study of Climate Experiences among Informal Workers in Delhi

Ground Report by Greenpeace India and Workers' Collective for Climate Justice South Asia

April 2025

Published by:

Greenpeace India Society

#142, Ground floor, 2nd Main, 2nd Cross, Domlur 2nd Stage, Bangalore- 560038, India.

Lead Researcher:

Shalaka Chauhan

Reviewer:

Dr. Manoranjan Ghosh

Research Coordination:

Amruta S.N.

Research support:

Jitin Sharma and Sabique Hasan

Images Credit:

Vinit Gupta, Sabique Hasan Ahmed and Jitin R. Sharma

Edited and Designed by:



Acknowledgements

We would like to extend our sincere gratitude to Amruta S.N., Avinash Chanchal, and Nischita Verrendra from Greenpeace India for their invaluable contributions to this study. We also thank Dr. Manoranjan Ghosh for taking the time to review this study. Their support and collaboration were instrumental in facilitating our research, and we appreciate the dedication of their interns, Jitin Sharma and Sabique Hasan, who worked diligently to ensure the project's success.

We further thank Sandeep Verma, Vikash Verma, and Mohit Valecha from YODHA; Sheikh Akbar Ali from Basti Suraksha Manch; and Sister Helen and Raju from the National Domestic Workers' Movement for their collaboration and for facilitating the focus group discussions with informal sector workers. Their commitment to improving the working conditions of informal workers is deeply appreciated.

We are also grateful to the many organisations, unions, and networks of activists and field researchers who work tirelessly to address the challenges faced by informal sector workers.

Lastly, we are deeply indebted to the informal sector workers who participated in our research. Their cooperation and trust were indispensable, and we truly appreciate the time they took to share their experiences, which form the core of this study.

Abstract

This qualitative study examines the lived experiences of informal sector workers in Delhi, focusing on street vendors, waste pickers, domestic workers, and rickshaw pullers. It examines how climate change-driven extreme weather events are reshaping their livelihoods, intensifying their vulnerability and altering traditional work patterns. The study highlights how rising temperatures, erratic climate conditions, inadequate regulatory frameworks, social protection,, and infrastructural inadequacies have compounded health risks, deepened financial instability, and exacerbated environmental challenges for these communities. By centering on the voices of workers, the research highlights the urgent need for targeted policy interventions, both at the policy framework and implementation levels, to safeguard the lives and livelihoods of the workers in the informal economy.

Glossary

Adaptation- Refers to adjustments in systems, practices, or infrastructure to reduce the vulnerability of communities to the adverse effects of climate change and extreme weather events.

Climate Change- A long-term alteration in global or regional climate patterns, largely driven by human activities such as fossil fuel consumption and deforestation.

Climate Crisis- A severe or sudden climaterelated event, such as floods, cyclones, or droughts, that causes widespread disruption, particularly for vulnerable communities.

Climate Resilience- The capacity of communities, systems, or workers to anticipate, absorb, adapt to, and recover from climate shocks and stresses.

Climate Risk- The likelihood of harmful consequences resulting from the interaction of climate hazards (like heatwaves or floods) with vulnerability and exposure.

Climate Sensitive Infrastructure- Public infrastructure designed with an understanding of climate risks, such as heat-resistant shelters, flood-proof roads, or water-harvesting systems to reduce vulnerability.

Coping Mechanism- Short-term strategies that individuals or communities use to survive, respond to, or manage stress and shocks caused by disasters or climate-related challenges.

Dhalaos- Community waste collection points in urban India, often used by informal waste pickers as a node in the waste management system.

Domestic Workers- Individuals, primarily women, who are employed in households to perform cleaning, cooking, caregiving, and other paid domestic tasks, often with little legal protection.

EWE (Extreme Weather Events)- Intense, unusual weather conditions such as heatwaves, heavy rainfall, floods, or storms, which are increasingly becoming frequent due to climate change.

Extended Producers' Responsibility (EPR)-An environmental policy approach where producers are made responsible for the entire lifecycle of their products, especially for the take-back, recycling, and final disposal of waste.

Heat Action Plan- A strategic framework developed by governments or cities to reduce heat-related risks, particularly for vulnerable populations, through early warning systems, public awareness, and infrastructure upgrades.

Heat or Climate Stress- Physical, mental, and social strain caused by sustained high temperatures or weather variability, often impacting the productivity and health of outdoor and informal workers.

Historical Markets- Traditional market areas that have been in operation for more than 50 years and often support livelihoods in informal or semi-formal ways.

Informal Sector Workers- Workers who operate outside formal labour protections or regulatory frameworks, including street vendors, waste pickers, domestic workers, and rickshaw pullers, among others.

Informal Settlements- Densely populated, often unauthorised and unplanned residential areas with inadequate access to infrastructure and services.

Informal Support Systems- Community-driven networks such as kinship ties, neighborhood collectives, or informal credit systems that help people cope with daily challenges or crises.

Loss and Damage- The irreversible impacts of climate change, such as displacement, loss of livelihood, or cultural heritage that cannot be avoided through mitigation or adaptation.

Rickshaw Pullers- Workers who operate cycle rickshaws, providing last-mile transportation services in urban and semi-urban areas, often without formal recognition or support.

Street Vendors- Self-employed individuals who sell goods or services in public spaces, such as streets, footpaths, or markets, often face legal, spatial, and climate vulnerabilities.

Town Vending Committees (TVCs)-Statutory bodies mandated by the Street Vendors Act (2014) to regulate, plan, and protect vending rights, including through issuing licenses and declaring vending zones.

Vending Zones- Designated public spaces identified by TVCs where street vending is permitted, aimed at balancing the rights of vendors with urban planning needs.

Waste Pickers- Informal workers who collect, sort, and sell recyclable waste materials, playing a critical role in urban waste management without formal employment status.

CONTENT

1. Key Findings	1
2. Introduction	6
3. Methodology	9
4. Narratives	12
4.1 Livelihood Precarity	12
4.2 Health Risks	16
4.3 Gendered Burden	21
4.4 Coping Mechanism	25
4.5 Support Groups / Solidarity	28
Group for Collective Climate Resilience	
Conclusion	31
Recommendations	33
Annexure	36
References	40

1. Key Findings

1.

Climate Crisis is Restructuring Informal Labour Economies

2.

Informal Incomes are Becoming Climate-Volatile

3.

Unequal
Access to Urban
Infrastructure
Exposes Informal
Workers in
Climate Crises

- Informal workers across the studied sectors are reshaping their workdays to survive climate extremes, but this adaptation comes at a human cost.
- Street vendors and rickshaw pullers shift to pre-dawn or late-night hours to avoid peak heat, leading to sleep deprivation and exhaustion.
- Women vendors and waste pickers lose family time and rest due to extended hours and a lack of storage.
- While informal workers have long navigated daily bribes and under-the-table fees, the climate crisis is making these costs unmanageable.
- Street vendors still pay ₹100/day in bribes, ₹400 for transport, and ₹6000+/month in fees, but now earn as little as ₹300/day due to heatwaves, compared to ₹1200 on normal days.
- Rickshaw pullers spend ₹60/day just on water in the summer, as breaks become necessary for survival.

Cities are not designed for equitable access to infrastructure, especially during climate crises.

- Street vendors are squeezed into sidewalks, busy intersections, or flood-prone streets, where they face harsher conditions and rising eviction risks. Makeshift shade structures, such as tarpaulins, which were once a basic coping mechanism, are now confiscated as "encroachments."
- Rickshaw pullers are pushed into more exposed areas with no shade and constant surveillance, making rest near impossible. Without public shelters or cooling zones, they continue cycling through exhaustion and even heatstroke.
- Waste pickers, especially women, are now forced to segregate waste in the open, sun-scorched corners or in cramped homes, after local segregation sorting centers (dhalaos) are shut down due to "cleanliness concerns."

- Domestic workers often spend hours in sweltering kitchens, cooking over gas stoves that make the heat unbearable—especially during power cuts when fans are off. They're rarely allowed rest or access to cooling, and breaks are often denied, even when they feel dizzy or dehydrated.
- Many of these workers reside in flood-prone settlements, often situated along drains or in low-lying areas, due to a lack of affordable housing options. These areas are highly vulnerable during heavy rains as rising waters submerge both homes and livelihoods, forcing them to rebuild from scratch with no support or compensation.

Climate exposure is driving a silent public health emergency:

- Vendors and waste pickers report fainting, infections, breathing issues and chronic fatigue.
- Domestic workers suffer from dehydration, dizziness, and rashes in poorly ventilated kitchens.
- Heatstroke, joint pain and fatigue among rickshaw pullers go unrecorded.
- Lack of access to healthcare, hydration, toilets, or rest compounds health risks – especially for women.

4.

Health Impacts are Escalating

5.

Intensifying Gendered Impact of Climate Disasters

For women in informal work, the climate crisis doesn't just add another burden, it amplifies every existing one - stretching their bodies, time, and income across breaking points. Whether vending on picking pavements, waste. pulling double kitchen shifts, or walking long distances for domestic jobs, their doesn't end with paid labour. It extends into cooking, caregiving, water collection. and cleaning roles that add more stress, especially during a climate shock event



- Women, including street vendors and waste pickers, carry goods home each night due to a lack of municipal storage, often walking long distances with heavy loads after a full workday. The physical toll is immense, yet invisible.
- Many avoid drinking water to avoid dangerous, unhygienic, or paid public toilets leading to chronic dehydration, Urinary Tract Infection (UTI), and other heat-related illnesses, a silent epidemic.
- monsoons, transportation During the becomes unreliable as buses and autos often get delayed or are unavailable. As a result, many women workers, especially domestic workers, vendors, and waste pickers, spend hours commuting to their workplaces. This means they end up traveling in the dark or late at night, when streets are deserted and lighting is poor.
- Waterlogged streets mean fewer rickshaws or buses, especially in narrow lanes. Women often have to walk long distances through isolated and flooded routes, which makes them more prone to violence and accidents.

Climate Extremes are **Triggering Debt** and Destitution



A single day of heavy rain can ruin the workers' goods, collected waste, or stock. For vendors, it reduces customer footfall and forces urgent restocking. heatwave can halve a rickshaw puller's daily income, even as they pay more for water, shades for resting, or basic shelter. With limited access to formal credit, workers are often drawn into private financiers' informal lending networks, where they borrow small amounts at high interest rates just to stay afloat. For example, street vendors report borrowing ₹500-₹2000 from local lenders to restock perishables or pay rent after being hit by a climate disaster or extreme weather. But this debt often compounds before they can recover enough earnings.

Green Transitions are Excluding the Poorest

As cities implement climate- or energy-friendly initiatives, such as e-rickshaws and Material Recovery Facilities, the livelihoods of informal workers are impacted.

- E-rickshaws, touted as an eco-friendly solution to traditional rickshaws, are financially out of reach for many pullers, who struggle with the high initial cost of purchasing electric vehicles. For these workers, the shift to e-rickshaws intensifies their financial insecurity, pushing them further into debt cycles or forcing them out of work altogether.
- Waste pickers face a similar exclusion. As Material Recovery Facilities become more widespread, this erases the livelihoods of waste pickers, as the very recyclables they depend on for income are no longer available to them. Rather than benefiting from the socalled "green economy," they are pushed to the margins.

Caste, Climate, and Informality:

Marginalized caste groups are disproportionately represented in informal and low-paid occupations, such as waste picking, domestic work. and rickshaw pulling. According to the Periodic Labour Force Survey (PLFS) 2022-23 by the Ministry of Statistics and Programme Implementation, more than 40-50% of SC/ST workers are engaged in informal work. Caste is not incidental, it is climate central to how impacts are experienced.

For instance, domestic workers are often not allowed to use the bathroom, kitchen, or even sit on the same furniture as the households they serve. This exclusion persists even during extreme weather. In heatwaves, they cannot access cool, shaded spaces. During floods, they are expected to show up soaked, clean up the messes, and leave without rest or

rerecognition. Similarly, waste pickers, who handle society's discarded materials and maintain the city's cleanliness, are denied access to housing societies, waste collection points, and basic infrastructure. This exclusion is not only economic; it is tied to ritual pollution and the historical caste assignment of waste work as "impure" or "dirty." Even in spaces of governance, they remain unseen while their labor keeps the system running.

Climate change deepens these everyday caste-based exclusions. It forces workers to bear the costs of recovery, navigate unsafe and unhygienic conditions, and continue serving communities that deny them dignity. Caste doesn't just shape who does the most precarious work; it also determines who gets to be safe, and who doesn't, when the climate breaks down.

Resilience exists, but it's Informal and Unsupported

In the face of systemic neglect, workers across sectors have forged informal resilience networks to survive and adapt to the challenges posed by the climate crisis. However, these networks remain precarious and invisible, lacking the formal support they desperately need.

- · Waste pickers, especially women, form mutual support networks in their communities. They share survival tips, help each other access waste, and offer emotional support in the face of climate-related disruptions. These women have learned to navigate the compounding challenges of waste scarcity, unsafe work environments, and environmental health risks together.
- Street vendors also create support systems within their communities by offering one another financial assistance after extreme weather pooling events. resources restocking after damage, and sharing space during the worst heatwaves or floods. They organize collective responses to local authorities when faced confiscations with harassment.



INTRODUCTION

Background

Delhi's informal workforce, comprising street vendors, waste pickers, domestic workers, and rickshaw pullers, forms the backbone of the city's economy and daily functioning. Around 80% of Delhi's total workforce is employed in the informal sector, including 82% of working men and 76% of working women. The city is home to over 4,00,000 street vendors (SEWA n.d.), an estimated 200,000 waste pickers (PRC n.d.), around 500,000 domestic workers (WIEGO 2020), and around 500,000 rickshaw pullers (Jeevika n.d.), many of whom operate without formal recognition or social and legal protections. These workers often lack access to basic infrastructure, including water, rest areas, sheds, sanitation facilities, and adequate housing, making them particularly vulnerable to climate-related shocks.

In 2024, India experienced one of its hottest summers in 14 years, with 536 recorded heatwave days across the country (AQI 2025).

Temperatures soared to 50.5°C in Rajasthan, the highest of the season. Between March and June 2024, over 700 people died from heatstroke across 17 states. A 2024 study by CEEW revealed a sharp spike in extreme weather, with the highest number of heavy rainfall events in the last five years (2019-2024). June and July of 2024 saw recordbreaking very and extremely heavy rains, while August (753 stations) and September (525 stations) marked the highest rainfalls since 2020 (CEEW 2024). This signals an alarming intensification of the monsoon. The burden falls heaviest on those whose survival depends on outdoor and physical labour.



Context

Informal workers in India are disproportionately exposed to climate-related hazards, including heatwaves, erratic rainfall, floods, droughts, and coastal storms. Urban informal workers, including street vendors and rickshaw pullers, are also highly susceptible. Between 2001 and 2020, India lost approximately 259 billion labour hours annually due to climate impacts, with extreme heat alone accounting for a loss of 181 billion labour hours, disproportionately affecting informal workers who often work outdoors without adequate protection (Vattakuzhy 2023). A study in Delhi found that for every degree Celsius increase in temperature, informal workers experienced a 19% decrease in net earnings, with income losses reaching up to 40% during heatwaves (Patwary & Nepal 2023). These workers also faced a 14% increase in medical expenses for every degree of temperature rise, illustrating the climate-health nexus. Financial losses due to reduced productivity or destroyed assets are common, but health impacts are equally severe. Heat stress, respiratory illnesses from pollution, waterborne diseases after floods, and mental health challenges are prevalent among informal workers, who often lack access to adequate healthcare (Rais & Asif, 2024).

The International Labour Organization (ILO) predicts India could lose over 34 million full-time jobs by 2030 due to climate change, with informal workers being the most affected (ILO 2019). The disproportionate burden of these events on informal workers remains largely unspoken, rarely measured, seldom reported, and rarely addressed in policy conversations, particularly from the workers' perspectives. Their everyday losses, whether economic, physical, or psychological, slip through the cracks of both data systems and public discourse. These events are not isolated anomalies but part of a growing pattern of climate crisis and disruption. The Intergovernmental Panel on Climate Change (IPCC) has established strong links between climate change and the rising frequency, severity, and unpredictability of heatwaves, erratic rainfall, urban flooding, and seasonal disruptions (Seneviratne et al. 2021). Extreme Weather Events (EWEs) are among the most visible expressions of climate change, and their increasing regularity in India is shifting the climate baseline with direct implications on livelihoods, health, and public infrastructure.

Objective

The objective of this study is to understand the experiences and perspectives of informal sector workers in Delhi, particularly in the context of increasingly frequent and intense extreme weather events, focusing on street vendors in Lal Qila Market, waste

pickers in Seemapuri, domestic workers in Govindpuri, and rickshaw pullers in Kashmere Gate. The study objectives are as follows -

- To identify the social, economic, and environmental challenges faced by the workers.
- To assess how the climate crisis affects the livelihoods of informal workers.
- To examine the coping strategies and informal support systems used by the workers to manage climate shocks.
- To provide insights that can inform policy and other interventions aimed at improving the adaptation capacity and well-being of informal sector workers in Delhi.

METHODOLOGY

3

This qualitative study aimed to investigate the lived experiences and challenges faced by informal sector workers in India, specifically street vendors, waste pickers, domestic workers, and rickshaw pullers, in the aftermath of climate disasters.

(i) Participants

The study involved a total of 40 informal sector workers, divided into four categories: street vendors, waste pickers, domestic workers, and rickshaw pullers. Each category consisted of 10 participants. Additionally, four activists and researchers who have been working in these sectors were interviewed to provide an external perspective.

(ii) Demographic Composition

- Street Vendors- All participants in this category operated in Lal Qila Market, a
 market area near the Red Fort. All participants in the Lal Qila Market were evenly split
 between men and women, with a 50-50% ratio. They sold a diverse range of
 products, from essential items like shoes and clothes to dry fruits and other goods,
 catering to the daily needs of the working-class population.
- Waste Pickers: In Seemapuri, East Delhi, waste pickers were evenly split between men and women (50-50%). They mainly conduct door-to-door collection and segregate the waste into different categories.
- Domestic Workers: All participants in this category were women, reflecting the
 prevalent gender dynamics in this sector. They come from different informal
 settlements and travel to Govindpuri, a residential area in South Delhi, to work in
 various households, undertaking tasks such as cleaning and cooking.
- Rickshaw Pullers: All the participants were men, as this occupation predominantly has male workers. The respondents were migrant workers, and worked in Kashmere Gate, a transportation hub in North Delhi.

(iii) Data Collection Methods

 Observations were made during field visits regarding the physical environments of the workers- the conditions of their workplaces, such as streets, homes, residential colonies, and market areas. These direct observations helped triangulate the qualitative data and provided crucial contextual understanding of how the climate crisis impacts workers. Approximately one-hour-long FGDs were conducted with groups of 8-10 workers from each informal economic sector. These discussions were guided by a structured questionnaire attached in the annex. A second round of interviews was conducted with activists/ grassroots social workers who have extensive experience working in these sectors. This provided an external perspective on the challenges faced by informal workers and potential solutions.

(iv) Ethical Considerations

All interviews and FGDs were recorded with the informed consent of the participants. Participants were assured of confidentiality and anonymity in the reporting of the findings. The recordings were transcribed to ensure accuracy and facilitate thematic analysis.

(v) Data Analysis

The transcribed data from the FGDs were analyzed using thematic analysis. This involved identifying, coding, and categorizing themes that emerged from the discussions.

(vi) Limitations

The study has several limitations. Geographically, it focused on select areas in Delhi, which may not reflect the wider experiences of informal workers across India. The sample size was 40 workers and 10 activists/researchers, which limits the diversity of perspectives. It only considered the experiences of cisgendered male and female individuals, excluding non-binary, transgender, and other gender-diverse voices. Methodologically, while the qualitative approach provided deep insights, it lacked the quantitative data needed for broader generalization. Climate-related findings were confined to specific events such as heatwaves, floods, and erratic rainfall. Thematically, the study was limited to four areas: livelihoods, health, gender, and coping mechanisms.

vii) Report Structure:

This report is structured around four key thematic areas: livelihoods, health, gender, and coping mechanisms. These themes were chosen to holistically capture the impacts of the climate crisis or disasters on informal workers. Here's a breakdown of the five thematic areas of the report, with a brief explanation for why each was selected:

- **1. Livelihoods-** To understand how extreme weather events, like heatwaves, floods, and erratic rains, directly impact income, working hours, productivity, and job security for informal workers.
- **2. Health-** To understand how rising temperatures, floods and erratic weather patterns are leading to new physical health challenges, along with healthcare access.

- **3. Gender-** To understand how women in the informal sector face climate risks due to caregiving responsibilities, mobility constraints, safety issues, and poor access to sanitation.
- **4. Coping Mechanisms-** To understand how informal workers innovate daily to adapt, adjusting work hours, sharing local knowledge, and modifying tools or routines, making it important to document and learn from their resilience strategies.
- **5. Support Groups/ Solidarity Group for Collective Climate Resilience** To explore how informal workers are coming together to build collective strategies for coping with climate risks.

NARRATIVES





4.1 Livelihood Precarity

Climate crisis is not just a matter of rising temperatures or erratic weather. It is a political and economic crisis that deepens inequality. This is evident in India's urban informal sector, where street vendors, waste pickers, domestic workers, and rickshaw pullers form the backbone of the economy but remain invisible in climate policy, urban planning, and labour protections. This is not merely neglect, it is a form of structural violence that treats these workers as expendable in the face of environmental breakdown.

Street vendors represent one of the most visibly informal segments of India's urban workforce. Their work may appear self-directed or employed, but behind every sale lies a matrix of informal taxation, spatial insecurity, and climate vulnerability that leaves them in a state of constant vulnerability.

Daily earnings that once hovered around ₹1000 now fluctuate dramatically, ranging from ₹300 on a bad day to ₹1200 on a good one.





Waste pickers occupy the very margins of urban life. They provide critical environmental services like recycling, waste segregation, and resource recovery, yet remain unrecognized by municipal authorities. Their work is invisible in both the economy and climate planning, even though they are among the first to bear the brunt of climate disasters. "When the rains come, our homes are the first to go" (Waste pickers focus group), revealing the spatial precarity that defines their lives. Settlements in low-lying areas flood regularly, destroying not only their belongings but also their sorted recyclables, the very materials they rely on for income.

Under the guise of urban renewal, waste collection points have been shut down, forcing women to store recyclables inside their cramped, poorly ventilated homes. "Our homes have become our workplaces, but people dislike that too" (Waste pickers focus group). The climate crisis has transformed their work from marginal to near-impossible. Carefully sorted waste becomes hazardous debris, exposing them to toxic gases and chemicals like Dioxins, Furans, Mercury and Polychlorinated Biphenyls and infections. Housing insecurity intensifies their vulnerability. "One gust, and the tin roof was gone" (Waste pickers focus group). The financial and emotional burden of rebuilding without assistance plunges families deeper into debt. Climate crisis thus becomes a recursive cycle of loss – of work, home, health, and dignity. Monsoons bring destruction and displacement, forcing families to rebuild lives and livelihoods from scratch:

"All our work floats away with the floodwater, and we start from zero again" (Waste pickers focus group)

Yet there is no social security, no institutional compensation for the loss of recyclables, no health coverage for injuries or infections. These are workers on the frontlines of climate labour, yet their erasure from formal policy frameworks renders their suffering invisible.

Domestic workers exist in a liminal space; they enter middle-class homes, but never as equals. Their workplaces are very often poorly ventilated kitchens that offer no relief from extreme weather. "It's only February, but it's already so hot" (Domestic workers focus group). Kitchens with gas stoves and poor ventilation turn into heat chambers.



Breaks are not permissible because time off means lost wages and possibly job loss.

Commuting itself has become a form of climate stress. Winter fog heightens the risk of road accidents, while summer heat turns overcrowded, non-air-conditioned buses into health hazards. Yet, there is no climate leave, no hazard pay, no room for flexibility.

"The informal contract is brutal: work through everything, or risk everything"

(Domestic workers focus group)

Forced evictions and urban redevelopment projects have pushed domestic workers further into the city's margins, lengthening commutes and deepening fatigue.

"We live far away now because our previous settlement was demolished... It takes me 45 minutes to an hour, but we still go to the same houses" (Domestic workers focus group)

Unstable housing, rising rents, and increasing exposure to extreme weather turn the daily journey to work into an unrelenting climate endurance test where the costs of adaptation are shouldered by the poorest.

Rickshaw pullers, who are mostly migrants from Bihar, Uttar Pradesh, and West Bengal, symbolize the forced mobility of the urban poor. They come to the city in search of work, but find themselves caught in exploitative rental systems, debt cycles, class inequality, and unlivable weather conditions.



"There is work in the village, but how can a family survive on ₹100-₹200 a day?" (Rickshaw pullers focus group)

Yet urban life offers only the illusion of security. "We drive for eight, ten, sometimes twelve hours. But if it rains, that day is a complete holiday" (Rickshaw pullers focus group). There is no sick leave, no rainy-day pay, no social insurance. If you don't work, you don't eat. Worse, you still pay the rent: "Even on holidays, we have to pay rent to the owner" (Rickshaw pullers focus group). Rickshaw rentals cost ₹200-₹250 per day, whether or not income is earned. Heatwaves shorten working hours, reduce footfall, and exhaust bodies.



"When it gets hot, it becomes unbearable; there's no difference between day and night"

(Rickshaw pullers focus group)

In summer, the cost of drinking water alone, ₹2 per glass, twenty to thirty glasses daily, devours a chunk of their income. Toilets cost extra.

The promise of e-rickshaws remains out of reach for most. "Those who have money will buy e-rickshaws and get licenses. For us, we neither have a home nor land; we just earn and eat here" (Rickshaw pullers focus group). Climate transitions are being built around green technology, but not around the people who will be most affected by climate disruptions. Worse, the city actively worsens their conditions. "While corporations sit in air-conditioned offices, the hot air from their ACs makes the streets even worse for those working outside" (Rickshaw pullers focus group). This isn't a metaphor; it is a literal redistribution of thermal comfort, where the elite are cooled while the poor absorb the externalized heat.



4.2 Health Risks

In India's rapidly warming cities, the informal workforce is bearing the brunt of the climate crisis, physically, emotionally and financially, before it is seen in the news. Climate disasters are carving deep precarity into the lives of workers like street vendors, waste pickers, domestic workers, and rickshaw pullers.

For street vendors, extreme heat now begins earlier in the year and lingers longer into the calendar and reshapes the rhythms of survival. With no shaded stalls or regulated workspaces, vendors stand for hours under direct sun, enduring headaches, dizziness, and fainting spells. "By 11 AM, the sun feels like it's piercing through the skin" (Street vendors focus group). This captures the intensity of street-level heat exposure. Despite these conditions, as discussed earlier, most vendors consciously avoid drinking water during work hours, not by choice, but due to the lack of accessible, safe and functional public toilets. This forced dehydration has silently seeded a wave of UTIs, kidney stones, and chronic fatigue, especially among women. Yet, there is no health surveillance or municipal intervention. These are climate-induced health crises rendered invisible.

Monsoons bring different risks. Prolonged dampness from standing in wet shoes all day has increased joint pain, skin infections, and circulation issues.



This reflects the physiological cost of a full workday in waterlogged streets. Constant exposure to dust, vehicle fumes, and industrial emissions also takes a toll. "Our chest feels heavy all the time. Irrespective of our smoking, it's like we are inhaling smoke every day" (Street vendors focus group). Many vendors reported that they have developed asthma in recent years. Vendors reported that they lack the time, documentation like Ayushmaan cards, or confidence to access public health systems. With clinics often hostile or overcrowded, workers self-medicate, ignore symptoms, or work through illness until their bodies break down. Climate crisis, in this context, is not just ecological, it is deeply biological, marked by silent inflammation, exhaustion, and untreated ailments.



Waste pickers very often live and work around toxic sites like landfills with zero protective infrastructure. "Sometimes, even breathing difficult" (Waste Pickers focus group). This points to chronic respiratory issues from inhaling landfill gases, burning plastic, and chemical residues. As temperatures rise, the emissions from decomposing waste intensify, releasing methane and other toxins that saturate the air. Their daily toolsplastic bags, iron rods, aluminium scraps absorb and radiate heat, turning the act of waste collection into a physically punishing experience.



There are no gloves, no boots, no masks. "We sometimes find gloves in the garbage, wash them, and use them" (Waste Pickers focus group). The monsoons offer no reprieve. Heavy rains flood informal settlements and dumpsites alike, washing away days of sorted recyclables and breeding waterborne illnesses. "The settlement smells worse in the heat, but we have to keep working" (Waste Pickers focus group). Medical waste, often disposed of without safeguards, seeps into public garbage, increasing their exposure to infection and skin allergies. Yet, waste pickers are absent from occupational health policies and urban climate adaptation plans. Their exposure to biohazards, chemical toxins, and heat stress is treated as collateral damage in the city's waste management system. As the climate crisis intensifies, they are forced to carry its heaviest burdens without equipment and recognition.

Domestic workers face climate-related health hazards both inside employers' homes and during their long commutes from the city's periphery. Heatwaves now kitchens become stifling hotboxes. (Domestic workers focus group). Prolonged exposure to heat, gas stoves, and poor ventilation triggers dizziness, rashes, and dehydration. Many are denied drinking water or rest breaks, structural indignities that push their bodies to chronic exhaustion.

"While cooking, they (house owner/employer) turn off the fan, and it becomes unbearable"

(Domestic workers focus group)



"Even if we faint from the heat, they still make us work"

(Domestic workers focus group)

The denial of rest is not simply an issue of employer cruelty, it reflects the lack of labour rights, cooling spaces, or regulated work conditions in the domestic sector. Medical care remains inaccessible. Low wages, rising rents, and job insecurity mean that even a minor illness can lead to lost wages or job loss altogether. "If we miss a day, we might lose the job entirely" (Domestic workers focus group).

Despite the rising toll of allergies, respiratory issues, and skin infections, healthcare is considered a luxury. Without paid sick leave, health insurance, or regulatory oversight, domestic workers are rendered invisible in climate resilience frameworks. As the heat builds and weather extremes become the new normal, this workforce will experience more frequent, intense, and prolonged health risks unless interventions center their bodies and workplaces in adaptation policies.

For cycle rickshaw pullers, the climate crisis translates directly into life-threatening conditions. The physicality of their labour, pulling vehicles under the scorching sun or through flooded streets, has become increasingly perilous. "Earlier, we worked for twelve hours. Now, as it gets hotter, we can only pull for eight, then five, then three" (Rickshaw pullers focus group). "If it goes beyond 60°C, we will still have to work" (Rickshaw pullers focus group). The health risks are real. Dehydration, heatstroke, high blood pressure, and respiratory distress are rampant. "Last summer, a puller drank some water and collapsed. He died right there," another recalled. Winters aren't any kinder. Lacking warm clothes or shelters, many burn waste to stay warm, exposing themselves to noxious fumes that further erode their health. Even when ill, they work. "If we go to the hospital, they don't have the medicine we need, so we have to buy it ourselves" (Rickshaw pullers focus group). The economic burden of illness is crushing. "If we fall sick, we still have to pay rickshaw rent. The ₹400-₹500 we earn daily turns into a loss of ₹500-₹600 due to medical expenses" (Rickshaw pullers focus group). And illness is not their only adversary. Pullers also face systemic social discrimination.



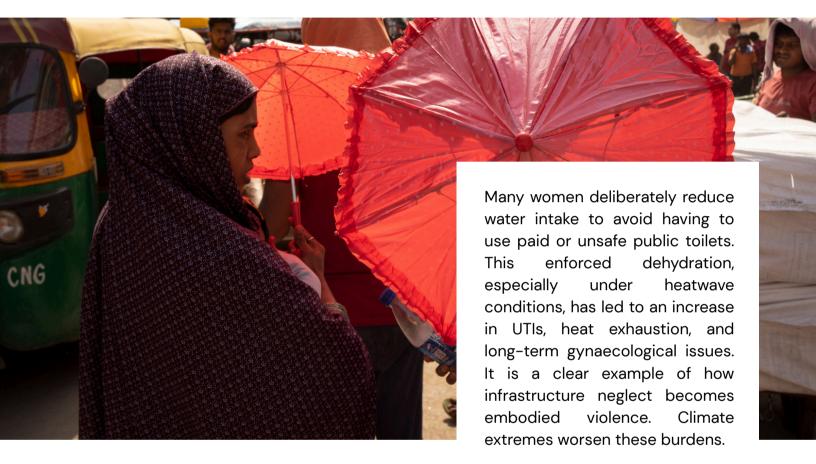
Cooling shelters are promised but not delivered. Healthcare is nominally available but practically inaccessible.



4.3 **Gendered Burden**

In India's climate-fractured cities, the experience of working-class women in informal sectors is marked by compounded burdens. As climate extremes accelerate, the women street vendors, waste pickers, and domestic workers find themselves on the frontlines of both environmental collapse and gendered impacts.

For women street vendors, work does not end when the day's sales are done. The absence of municipal storage facilities forces them to carry heavy goods home every night. "We have to carry all our goods home every evening, or they'll spoil or get stolen (Street vendors focus group). This routine, repeated daily, results in chronic back pain, exhaustion, and the erosion of energy that could be used for rest, caregiving, or recovery. Sanitation remains an unaddressed crisis.



During heatwaves, perishable goods like dry fruits spoil quickly, cutting into women's earnings that often fund their children's education, household groceries, and rent. Because women are often primary caregivers and financial managers in low-income households, the loss isn't just economic; it heightens their emotional and social burden too. Yet, municipal authorities routinely prohibit even basic adaptations like makeshift shade, denying vendors protection from dangerous heat. "They don't allow us to put up cloth covers, even when everything's melting" (Street vendors focus group). This highlights how even minor acts of self-preservation are policed. In the monsoon, flooded roads destroy goods, raise safety risks, especially for women traveling with heavy loads and often eliminate an entire day's income. "Water floods the streets. It damages our goods and ruins our earnings" (Street vendors focus group). For women, this loss is not just financial, it has cascading consequences for entire families. Unlike many male counterparts, female street vendors carry the double burden of earning and caregiving. When climate disruptions slash their incomes, they must still return home to cook, clean, and care for children and elders, often without rest, relief, or recognition.

In the ecosystem of urban waste, women waste pickers occupy some of the most precarious and marginalized positions. Their work is physically exhausting- bending, lifting, and collecting heavy sacks of recyclables often over long distances, and it remains deeply undervalued. However, gender compounds their vulnerability in ways that are both visible and invisible. Most women waste pickers work during daylight hours, not out of convenience, but out of necessity, as safety concerns and social norms restrict their mobility at night. This exposes them to daytime heat stress, public scrutiny, and increased competition for waste.



This shows how gendered timing limits access to better materials and earnings.

In addition, women balance paid work with unpaid domestic labour as they do their segregation activity at home, making their homes their workplaces. "We work for fewer hours and lower collection yields than men" (Waste pickers focus group). Similar to women in other sectors, domestic workers often avoid drinking water due to the lack of safe public toilets, putting them at risk of urinary tract infections and kidney problems. Women waste pickers often see their earnings subsumed into the broader family income, typically attributed to male heads of household. This reinforces their status as secondary earners or "helpers" and denies them formal recognition as primary workers in their own right.

Perhaps the most invisibilized in the climate-informality nexus are **domestic workers**. Their labour is indispensable, but its invisibility is structural. "We go at 6:00 AM, but sometimes it's so foggy, you can't see cars ahead. Yet if we're five minutes late, they shout" (Domestic workers focus group). Unlike other workers who may delay commutes, work remotely, or take sick leave, domestic workers are expected to show up, rain, smog, or heat notwithstanding. During heatwaves, they clean hot kitchens without fans. In polluted winters, they walk for miles with no masks or protection. In storms, they wade through waterlogged streets only to be reprimanded for arriving wet. This rigid expectation of presence is not simply about individual employers. It is reflective of a systemic disregard for domestic labour within India's labour laws and urban governance. Their exclusion from formal labour protections means that issues like climate relief, cooling rest areas, or even paid leave remain out of reach.



Layered with caste and class discrimination, domestic workers find themselves shouldering the emotional and physical labour of the climate crisis without acknowledgement. Their health issues, dizziness, chest pain, and exhaustion are rarely treated. Their absence from municipal disaster relief or climate planning underscores a political logic that treats them as both essential and expendable.



4.4 Coping Mechanism Street vendors adopt a range of adaptive strategies to cope with extreme weather. To protect themselves and their goods from the sun and rain, they use tarpaulin sheets, umbrellas, plastic covers, or set up stalls under trees and near buildings. During monsoons, makeshift drainage channels, raised platforms like bricks or wooden pallets, and shifting to higher ground help avoid waterlogging. For personal protection, vendors wear cotton clothes, headscarves, and hats, drink water frequently, carry glucose, and use wet clothes to cool down. In heavy rains, many relocate temporarily to sheltered areas like footbridges, metro stations, or even sell from home or enclosed spaces.



Similar to street vendors, waste pickers adopt several innovative strategies to cope with extreme weather. To shield themselves from the sun, they often attach large plastic sheets or discarded umbrellas to their carts, creating makeshift shade. Many begin work early in the morning between 4:00 AM and 8:00 AM, resuming after 6:00 PM to avoid the midday heat. To stay hydrated, they carry bottles of water mixed with salt and sugar to maintain electrolyte balance. In flood-prone areas like Yamuna Pusta and Okhla Mandi, waste pickers use tarpaulin sheets to protect recyclables, especially paper and cardboard, from water damage, and rent or borrow cycle rickshaws to keep collected materials above flood levels

Domestic workers adjust their routines to cope with rising temperatures, often starting their tasks early in the morning or later in the evening to avoid peak afternoon heat. Some even negotiate with employers to reschedule strenuous chores like cooking or cleaning to cooler parts of the day. Dehydration remains a serious concern, prompting workers to request access to drinking water in employers' homes, though this access is

not always guaranteed. Many opt for cotton or linen clothing to stay cool, but rigid dress codes in some households limit their choices. During breaks, workers seek out shaded or well-ventilated areas to rest, sometimes using handheld fans or wet scarves for relief. In monsoon months, they carry plastic bags or waterproof pouches to protect essentials like money, phones, and ID documents from rain damage.

During breaks, workers seek out shaded or well-ventilated areas to rest, sometimes using handheld fans or wet scarves for relief. In monsoon months, they carry plastic bags or waterproof pouches to protect essentials like money, phones, and ID documents from rain damage.

Some rickshaw pullers are shifting their working hours to mornings—from 7 am to 10 am-and late evenings to avoid the intense midday heat, but others are still doing their afternoon shifts due to financial pressures and the need to meet daily earning To with targets. cope high temperatures, many install tarpaulin covers on their rickshaws and use water-soaked cloths on their heads or necks to cool down. Informal support with systems have emerged, experienced pullers mentoring newcomers on identifying heatstroke symptoms, locating shaded spots, accessing affordable clinics, and basic first aid. Instead of taking long breaks, pullers opt for short 5-10 minute rests in shaded areas such as under flyovers, near temples, or metro station exits. In response to extreme weather, some groups of pullers collectively negotiate with rickshaw owners for rent reductions during heatwaves or rain, and even request rent holidays following health-related absences.





4.5
Support Groups/
Solidarity Group
for Collective
Climate Resilience

For street vendors, organizations like the National Hawker Federation (NHF) and Janpahal play an instrumental role in collectivizing vendors, offering legal aid, and advocating for their rights with municipal authorities. Women's unions like SEWA (Self-Employed Women's Association) Delhi have provided additional support in empowering women street vendors by helping them access finance, legal awareness, vending space and social security benefits. These support groups are critical not just during episodes of state-led eviction drives or crackdowns but also during periods of distress. For example, during the COVID-19 lockdown or even heatwaves, union networks mobilized relief in the form of ration kits, temporary shelters, and even health check-ups. In the long term, collective bargaining has enabled street vendors to secure identity cards and vending certificates under the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014. This legal recognition has been a crucial turning point. The power of collectivisation here lies in its ability to move street vendors from social margins into being legitimate actors in the urban economy by incorporating them into planning and policymaking processes.

Waste pickers, meanwhile, operate at the fringes of the city's waste economy, often without formal recognition or rights. Yet, over the years, their struggles have coalesced into powerful forms of collective organisation. Groups like Safai Sena, CHINTAN, and the Basti Suraksha Manch in Delhi have brought together waste pickers to fight for access to waste, identity cards, safety equipment, and inclusion in municipal waste management systems. These organisations work across several fronts- policy advocacy, legal support, health and safety, and financial inclusion. During climate-induced crises such as the flooding of landfill sites or extreme summer temperatures, these groups step in to demand protective gear, health interventions, and emergency aid. The solidarity built through these networks also enables them to resist the privatisation of waste systems, which often displaces informal workers.

For domestic workers, support groups like the **National Domestic Workers' Movement** (NDWM), SEWA Delhi and Jagori have worked in Delhi to collectivise workers, press for legislative protections, and intervene in cases of workplace violence. These unions also provide access to legal aid, negotiation skills, and training for grievance redressal. During climate crises like floods or heatwaves — these groups advocate for paid leave, rest hours, maternity benefits, and access to welfare schemes. For them, collectivisation has been particularly powerful. It allows them to move from being isolated individual workers to being part of a shared struggle, one that speaks to their rights as both workers and women. In several Indian states, such as Kerala and Tamil Nadu, persistent union-led advocacy has led to the formation of welfare boards and the provision of pensions, health insurance, and minimum wage guarantees. The union thus becomes not only a defensive mechanism but a space of affirmation, where women workers reclaim power over their labour and lives.

In Delhi, the limited unionisation among rickshaw pullers severely constrains their capacity to build collective power. Union platforms are often the first spaces where informal workers begin to recognise themselves as rights-bearing citizens rather than isolated individuals hustling for daily survival. Without these collectives, rickshaw pullers have limited avenues to understand legal protections, urban mobility policies, or labour entitlements, let alone connect these with climate-induced disruptions such as extreme heat or erratic rainfall patterns that impact their health and income. This lack of formal organisation also fragments their response to climate risks. For example, during a heatwave, there is no coordinated mechanism to demand shaded rest areas, access to drinking water, or healthcare support. The absence of strong collectivisation delays the political articulation of climate vulnerability. Without a shared narrative or representative voice, the climate crisis is experienced as a personal crisis (heat exhaustion, declining rides, or police harassment) rather than a structural injustice.

CONCLUSION

5

In India, the climate crisis is not an abstract threat; it is a lived reality that plays out on the bodies and backs of informal workers. But to truly address the escalating impacts of the climate crisis, one must recognize that environmental vulnerability does not exist in a vacuum. It is entangled with systems of labour inequality, social exclusion, and structural neglect. This is why understanding the intersectionality of labour justice and climate justice is not only important, it is essential for building any meaningful pathway to resilience. Informal sector workers in India face a disproportionate burden from climate-induced environmental hazards, shaped by long-standing structural inequalities and gaps in protection. Their vulnerability stems from the intersection of precarious and unregulated work, insecure living conditions, and limited access to social safety nets. For workers whose daily income depends on being physically present, such as street vendors, rickshaw pullers, domestic workers, or waste pickers, even a single day of climate disruption can mean a loss of income, food insecurity, or exposure to serious health risks.

Unlike those in the formal sector, informal workers often lack access to institutional safety nets such as access to public infrastructure, paid leave, health insurance, or workplace safety regulations.

This structural gap makes them less able to absorb climate shocks and more vulnerable to long-term socio-economic displacement. While ongoing government efforts and schemes aim to extend social protection and climate resilience to wider sections of society, implementation often remains uneven, and informal workers frequently fall through the cracks. Their realities, working in open-air environments, living in informal settlements, and relying on unpredictable earnings, place them at the frontlines of climate impact, often without the benefit of targeted adaptation strategies. Importantly, addressing the climate vulnerability of informal workers is not only a question of environmental justice but also of labour rights and inclusive development.

As India takes strides in climate action and urban resilience, integrating the specific needs of informal workers, many of whom belong to historically marginalized caste and community groups, into policy design and delivery systems can create more equitable and durable outcomes. Strengthening participatory governance, expanding access to basic services, and building climate-adaptive infrastructure in worker-dense areas are key steps toward ensuring that no one is left behind in the face of a changing climate.

Recommendations



Climate Policy Recognition for Vulnerable Workers

The union government must recognise the special vulnerabilities and exposure of informal workers during climate disasters. This includes the National Disaster Management Authority (NDMA) officially declaring heatwaves as a notified disaster and ensuring dedicated funds for adaptation, mitigation, and relief efforts.



Legal Recognition and Policy Inclusion

- Street vendors under a robustly enforced Street Vendors Act (2014) with citywise audits and penalties for harassment of both certified and non-certified vendors.
- Waste pickers as environmental service providers under the Solid Waste Management Rules (SWM) 2016 and Extended Producer Responsibility (EPR) frameworks.
- Domestic workers as formal labourers through the National policy and establishment of a Domestic Workers Welfare Board, and their inclusion in labour and climate resilience policies.
- Rickshaw pullers in urban transport and climate adaptation policies through the legal recognition of rickshaw stands and social protections.



Integration into Emergency Response Plans

Informal sector workers should be integrated into city-wide climate emergency plans, receiving timely warnings and support. Workshops and training should educate informal workers on heat stress prevention, with easy-to-understand guidelines on how to handle extreme heat events.



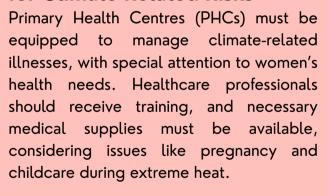


Participation and Representation:

There is a need to enhance worker participation in planning and governance.

- Strengthen Town Vending Committees (TVCs) with strict mandates for participatory urban planning and climate response. Form official local committees for waste pickers, domestic workers and rickshaw pullers, and ensure the representation from unions, associations and NGOs in the committees.
- Include the workers in climate awareness, disaster preparedness, health resilience programs, Heat Action Plans (HAPs) and smart city governance frameworks.
- Institutionalize grievance redressal mechanisms for harassment.
- Gender sensitive budgeting, public health inclusion, and legal recognition must form the backbone of any future-proof urban climate policy.







'Drinking Water Stations' should be set up in vending areas to ensure vendors have continuous access to clean water, reducing heat-related health risks. Additionally, clean and well-maintained washroom facilities must be available to ensure hygiene, especially for women.



Public and Climate Sensitive Infrastructure Programs:

Existing schemes and programmes such as the AMRUT Mission, Jal Jeevan Mission, MGNREGA, etc, should be leveraged to ensure access, rebuilding and generation of basic services like water, drainage, electricity, and sanitation in informal markets, workplaces and settlements. Urban Planning documents like Master Plans, Mobility Plans, vending plans and climate resilience frameworks must account for informal workspaces and integrate labour-friendly zoning.

- Designated vending zones in Master Plans and Local Area Plans with heatresilient roofs, ventilation, drinking water, and sanitation for vendors. Ensure vendors can use umbrellas, tarpaulins, and mobile carts without fear of confiscation.
- Revival of dhalaos (waste sorting centers) for waste pickers, equipped with proper roofing, storage, and sanitation facilities. Distribute protective equipment (gloves, masks, pushcarts, footwear) to waste pickers at low or no cost.
- Construction of cooling shelters, canteens and resting points in residential areas for domestic workers.
- Development of shaded rickshaw stands, hydration points, and mobile misting fans for pullers.
- Offer mobility and resting tools like benches, shaded spaces, and carts for all workers.



Cooling Solutions for Vendors:

Community Cooling Centres (CCCs) should be established in high-density areas, offering cool spaces for vendors and outdoor workers. These centres should be eco-friendly and designed with vendors' specific needs in mind.



Loss and Damage Fund:

Create a Loss and Damage Fund managed by urban local bodies (ULBs) to compensate for income loss and out-of-pocket expenses due to Extreme Weather Events, especially in the informal economy. Further, big polluters such as the fossil fuel industry should be taxed through measures such as Climate Damage Tax, windfall tax, etc, of which the proceeds should be channeled into adaptation and community resilience building plans on the ground, such as insurance and targeted schemes.

Annexure - Questionnaire

General Household and Demographics

- 1. Personal information: Name, gender, and age
- 2. Settlement and migration details:
 - a. Where do you live?
 - b. How long have you lived in this settlement?
 - c. Did you move to this area for work or other reasons? If so, from where?
- 3. Occupation and work:
 - a. What is your main occupation or type of work?
 - b. Do you work in the same area where you live? If not, where do you work?
 - c. Are other members of your household engaged in work? If yes, what do they do?
- 4. Household composition:
 - a. How many members are there in your household?
 - b. Are there any elderly, children, or differently-abled individuals in your household?
- 5. Expenses:
 - a. What are your household's biggest expenses (e.g., rent, food, healthcare)?
 - b. How much are you able to save?
- 6. Living conditions:
 - a. What type of house do you live in? (e.g., pucca, semi-pucca, or kutcha)
 - b. Does your house have access to basic amenities like water, electricity, and sanitation?

Livelihood-Specific Questions with Gender Integration

A. Street Vendors

- 1. Impact of CC on livelihood
- How do weather conditions like heat, rain, or pollution impact your vending business?
- Does extreme weather reduce your sales or customer footfall? If yes, by how much?
 - Yes, less than ₹500- ₹1000 per day
 - Yes, between ₹1000 ₹1,500 per day
 - Yes, between ₹1,500- ₹2000 per day
 - Yes, between ₹2,000- ₹2500 per day
- Have you had to change the types of goods you sell due to changing weather patterns?
- What coping mechanisms (e.g., setting up shade, adjusting inventory) do you use to deal with weather disruptions?
- 2. Health and well-being
- Have you experienced any health issues (e.g., headaches, fatigue, dehydration) due to extreme heat while working?
- Do you face recurring health problems due to the changing weather patterns?
- Do you seek medical help for health issues caused by your work environment? If not, why? (e.g., cost, distance, time)
- Are there affordable and accessible healthcare facilities near your vending location?

- 3. Gender-specific impacts
- Have you experienced any health issues (e.g., headaches, fatigue, dehydration) due to extreme heat while working?
- Does extreme heat or poor sanitation at work affect you during menstruation?
- Have you experienced any infections (e.g., urinary tract infections, skin rashes, fungal infections) due to working conditions, lack of sanitation, or exposure to extreme weather?
- Do men and women workers perform different tasks on-site?
- Do care responsibilities (e.g., childcare, household chores) limit women's ability to work during such events?
- 4. Work hours and income
- Do you have to adjust your work hours due to weather conditions? If so, how does this impact your income?
- 5. Damage to stock and equipment
- Have you experienced damage to your vending stock or equipment due to sudden rain, floods, or heatwaves?
- Do you have any support systems (e.g., NGOs, community groups, government schemes) to recover from such losses?
- 6. Public facilities and accessibility
- Are there public facilities like toilets or water points available near your vending space?
- If yes, are they safe and accessible for women?

B. Waste Pickers

- 1. Impact of weather conditions on work
- How do weather conditions like heat, rain, or pollution impact your waste work?
- Does this differ for men and women?
- How many days of work/wages have you lost due to extreme weather?
- Have you noticed changes in your work hours due to climate change (e.g., more extreme heat, more rainfall)?
- Does the amount of waste you collect or the type of waste you find change with different weather patterns (e.g., more plastic waste during heatwaves)?
- Are there places you used to collect waste from that have become inaccessible due to climate-related changes?
- 2. Health and safety concerns
- Do you face specific health issues (e.g., injuries, infections) while working in hazardous conditions? Does this differ for men and women?
- During heatwaves or heavy rainfall, do you have access to safe spaces to rest or sort waste?
- How does working during extreme hat or cold affect your health, especially during longer working hours in the field? (e.g., dehydration, fatigue)
- Have you faced more frequent infections or health issues (e.g., waterborne diseases, skin infections) due to climate-related disruptions like floods or contaminated water?
- 3. Coping mechanisms and protection
- How do you protect yourself from heat/cold/floods?
- 4. Gender-specific impacts
- Have you experienced any health issues (e.g., headaches, fatigue, dehydration) due to extreme heat while working?
- Does extreme heat or poor sanitation at work affect you during menstruation?

- Have you experienced any infections (e.g., urinary tract infections, skin rashes, fungal infections) due to working conditions, lack of sanitation, or exposure to extreme weather?
- Do men and women perform different tasks on-site?
- Do care responsibilities (e.g., childcare, household chores) limit women's ability to work during such events?
- 5. Support systems and recovery
- Do you have any support systems (e.g., NGOs, community groups, government schemes) to recover from such losses?
- 6. Healthcare access
- Do you seek medical help for health issues caused by your work environment? If not, why? (e.g., cost, distance, time)
- Are there affordable and accessible healthcare facilities near your living and working location?

C. Domestic Workers

- 1. Impact of weather changes on work
- How do weather changes (e.g., heatwaves) impact your ability to work in employers' homes?
- Are there additional tasks or responsibilities assigned to women domestic workers during extreme weather?
- Are there specific tasks that become harder or unsafe due to extreme weather (e.g., carrying materials)?
- 2. Access to facilities
- Is there a reliable supply of clean drinking water and clean toilets available in employers' homes for all workers?
- 3. Safety and commuting concerns
- Do women domestic workers feel safe commuting to work during extreme weather events, especially early in the morning or late at night?
- 4. Health and safety concerns
- How does working during extreme heat or cold affect your health, especially during longer working hours in the field? (e.g., dehydration, fatigue)
- During health emergencies caused by heat or pollution, what challenges do you face?
- 5. Gender-specific impacts
- Have you experienced any health issues (e.g., headaches, fatigue, dehydration) due to extreme heat while working?
- Does extreme heat or poor sanitation at work affect you during menstruation?
- Have you experienced any infections (e.g., urinary tract infections, skin rashes, fungal infections) due to working conditions, lack of sanitation, or exposure to extreme weather?
- Do care responsibilities (e.g., childcare, household chores) limit women's ability to work during such events?
- 6. Coping mechanisms
- How do you protect yourself from heat/cold/floods?
- 7. Employer support
- Do you feel supported by your employers (e.g., sick leave, medical help)?
- 8. Support systems
- Do you have any support systems (e.g., NGOs, community groups, government schemes) to recover from such losses?

9. Healthcare access

- Do you seek medical help for health issues caused by your work environment? If not, why? (e.g., cost, distance, time)
- Are there affordable and accessible healthcare facilities near your living and working location?

C. Rickshaw Pullers

- 1. Impact of weather conditions on work
- How do weather conditions like extreme heat, rain, or dust storms impact your ability to work?
- Are there specific tasks that become harder or unsafe due to extreme weather
- How often does work get disrupted due to extreme weather?
- 2. Coping mechanisms and adaptation
- How do you cope with reduced working days or delays caused by bad weather?
- How do you protect yourself from heat/cold/rain/floods?
- 3. Support and compensation
- Does the government provide compensation or support during days when you can't work due to extreme weather?
- Are workers provided with protective gear (e.g., gloves, masks, helmets) or adequate rest breaks during harsh weather?
- 4. Access to facilities
- Is there a reliable supply of clean drinking water and clean toilets available on-site for all workers?
- Where do you live? How are your living conditions?
- 5. Health and safety concerns
- How does working during extreme heat or cold affect your health, especially during longer working hours in the field? (e.g., dehydration, fatigue)
- Have you faced more frequent infections or health issues (e.g., waterborne diseases, skin infections) due to climate-related disruptions like floods or contaminated water?
- 6. Healthcare access
- Do you seek medical help for health issues caused by your work environment? If not, why? (e.g., cost, distance, time)
- Are there affordable and accessible healthcare facilities near your living and working location?
- 7. Support systems
- Do you have any support systems (e.g., NGOs, community groups, government schemes) to recover from such losses?

References

AQI (2025, April 8). First Heatwave Alert in India 2025: What do you need to know? AQI India. https://www.aqi.in/blog/first-heatwave-alert-in-india-2025/

International Labour Organization. (2019). Working on a warmer planet: The impact of heat stress on labour productivity and decent work.

https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_711919.pdf

Jeevika. (n.d.). Cycle rickshaw pullers in Delhi. Retrieved from https://jeevika.org/wp-content/uploads/cycle-rickshaw-pullers-in-delhi.pdf

Pandey, D. (2024, March 15). Enhancing climate resilience among informal workers in coastal Odisha: Leveraging World Bank initiatives. Society for Policy Research and Empowerment. https://sprf.in/enhancing-climate-resilience-among-informal-workers-in-coastal-odisha-leveraging-world-bank-initiatives/

Patwary, M. A. H., & Nepal, M. (2025, January 31). The impacts of heat on labour supply, productivity, and earnings: Insights from India. International Centre for Integrated Mountain Development. https://blog.icimod.org/regional-action/the-impacts-of-heat-on-labour-supply-productivity-and-earnings-insights-from-india/

People's Resource Centre. (n.d.). Waste picker & waste management in Delhi: Another city is possible. Retrieved from https://prcindia.in/events/waste-picker-waste-management-in-delhi-another-city-is-

possible/#:~:text=There%20are%20more%20than%202%20lakh%20waste%20pickers%20in%20Delhi

Prabhu, S., & Chitale, V. (2024). Decoding India's changing monsoon patterns: A tehsil-level assessment. Council on Energy, Environment and Water.

https://www.ceew.in/sites/default/files/decoding-how-climate-change-is-changing-monsoon-rainfall-patterns-in-india.pdf

Rais, S., & Asif, M. (2024). Climate change and informal workers in India: An analysis of the demographic factors. In Proceedings of the 8th International Conference on Future of Education (ICF8) (pp. 84–108). D-Conference. https://www.dpublication.com/wp-content/uploads/2024/12/84-ICF8-10866.pdf

Seneviratne, S. I., Zhang, X., Adnan, M., Badi, W., Dereczynski, C., Di Luca, A., Ghosh, S., Iskandar, I., Kossin, J., Lewis, S., Otto, F., Pinto, I., Satoh, M., Vicente-Serrano, S. M., Wehner, M., & Zhou, B. (2021). Weather and climate extreme events in a changing climate. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/chapter/chapter-11/

SEWA Delhi. (n.d.). Street vendors. Retrieved from https://sewadelhi.org/advocacy-campaigns/street-vendors/

Vattakuzhy, J. (2023). Informal sector workers in climate change. The Times of India. https://timesofindia.indiatimes.com/readersblog/unorganisedworkers/informal-sector-workers-inclimate-change-49815/

Women in Informal Employment: Globalizing and Organizing (WIEGO), International Domestic Workers Federation (IDWF), & Self-Employed Women's Association (SEWA). (2020). Domestic workers, risk & social protection in Delhi National Capital Region (WIEGO Policy Brief No. 21). https://www.wiego.org/wp-



Greenpeace India is an independent campaigning organization that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.

Greenpeace India Society #142 Ground floor , 2nd Main, 2nd Cross, Domlur 2nd stage, Bangalore 560038

Supporter Services: supporter.services.in@greenpeace.org

www.greenpeace.org/india