Working Without Walls

Climate exposure in food delivery, ridesharing and home services platform sectors in Asia



People's Courage International

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October 2026

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Report Design: Studio Ananas

Photo Credits: Unsplash, Pixabay, Pexels

Acknowledgements:
We would like to thank Danish Raza, Nitish Narain, Pranab Kumar Chanda and Yamini Srivastava for their inputs in strengthening the study.

How to cite:
Bhattacharjee, S.S. & Kidwai, A. (2026). Working Without Walls:
Climate exposure in food delivery, ridesharing and home services platform sectors in Asia. People's Courage International.

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Executive Summary



Digital labour platforms organise work across roads, vehicles, waiting areas, customer premises, and digital systems and worker households. This dispersed geography makes platform workers particularly exposed to climate-related disruption. Food delivery and ridesharing workers spend much of their working time on roads, while home service workers travel across cities and transport equipment to perform services in customer homes. Across these sectors, they depend on electricity, transport infrastructure, telecommunications, mobile phones and platform applications to obtain and complete paid tasks.

This report examines how extreme heat, heavy rainfall, flooding, urban flooding, typhoons, cold conditions and air pollution affect platform workers in five Asian countries. Its central finding is that climate-related risks are not distributed according to the control and resources of the actors involved. Platforms influence payment, task allocation, performance evaluation and continued access to work. Governments regulate labour markets, social protection, disaster response and urban infrastructure. Yet workers and their households absorb much of the resulting loss through unpaid time, interrupted earnings, health expenditure, damaged assets, reduced consumption, depleted savings, debt and additional labour.

Climate hazards do not simply interrupt an otherwise stable employment arrangement. They interact with task-based payment, unpaid availability, algorithmic management, cancellation consequences, incentives and worker responsibility for productive assets. These features of platform work can increase exposure, make withdrawing from unsafe conditions financially costly and transfer the consequences of disruption away from platforms and onto workers. When institutional protection is limited, those losses move into household budgets and may continue long after the immediate hazard has passed.

This research draws on survey and interview data collected between April and August 2025 from 1,006 platform workers across five countries and nine urban locations: Dhaka, Bangladesh; Bengaluru, Delhi and National Capital Region, Hyderabad and Mumbai, India; Jakarta and Yogyakarta, Indonesia; Kathmandu, Nepal; and Metro Manila, the Philippines. Respondents worked in food delivery, ridesharing and home services. We analyse worker experiences alongside secondary data on precipitation, air temperature, floods, tropical cyclones, winter conditions and air pollution from 2021 through the end of fieldwork in 2025.

A. Key findings

1. Platform workers experience climate risk across work, travel and their homes

81% of the workers surveyed reported that climate-related hazards had affected their work or households. Workers described exposure to extreme heat, heavy rainfall, flooding, typhoons, poor air quality and, in some locations, cold conditions. These hazards affected their ability to leave home, travel safely, access platform applications, reach customers and complete services.

Climate exposure is shaped by urban conditions. Workers describe how limited shade, retained heat and congested traffic intensify high temperatures, while inadequate drainage, waterlogged or obstructed roads and disrupted transport increase the effects of heavy rainfall and flooding. Electricity and communications failures disrupt the infrastructure through which they obtain and complete tasks, and housing conditions influence whether workers and their families can remain safe during an event and whether workers can rest and recover.

Exposure also differed among sectors. Food delivery workers describe working through extreme heat and heavy rain, navigating flooded and damaged roads and facing delays or periods when they could not work. Ridesharing workers describe heat and illness while driving in traffic, flooded or obstructed roads and longer journeys. Home service workers perform services indoors but remain exposed while travelling, transporting equipment and entering customer premises, leading to reduced bookings and increased transportation costs. Because women are concentrated in home services and men predominate in food delivery and ridesharing, occupational gender segregation shapes where exposure occurs and the forms it takes.

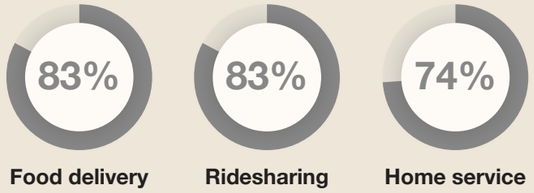
A food delivery worker in Kathmandu explains how workers encounter distinct hazards across seasons, each affecting a different aspect of the job:

> *Due to heavy rainfall, we can't go to work, and that means we can't take orders either — they have to be cancelled. Similarly, during extreme cold, it's difficult to work late hours, and during the summer, it's hard to take many orders due to the heat and air pollution, which also affects our health.*
>
> *(Transcript ID: c4941733-3322-4e27-ab1c-7769e67dbe1d)*

Infographic 1: Platform workers exposure to climate risks

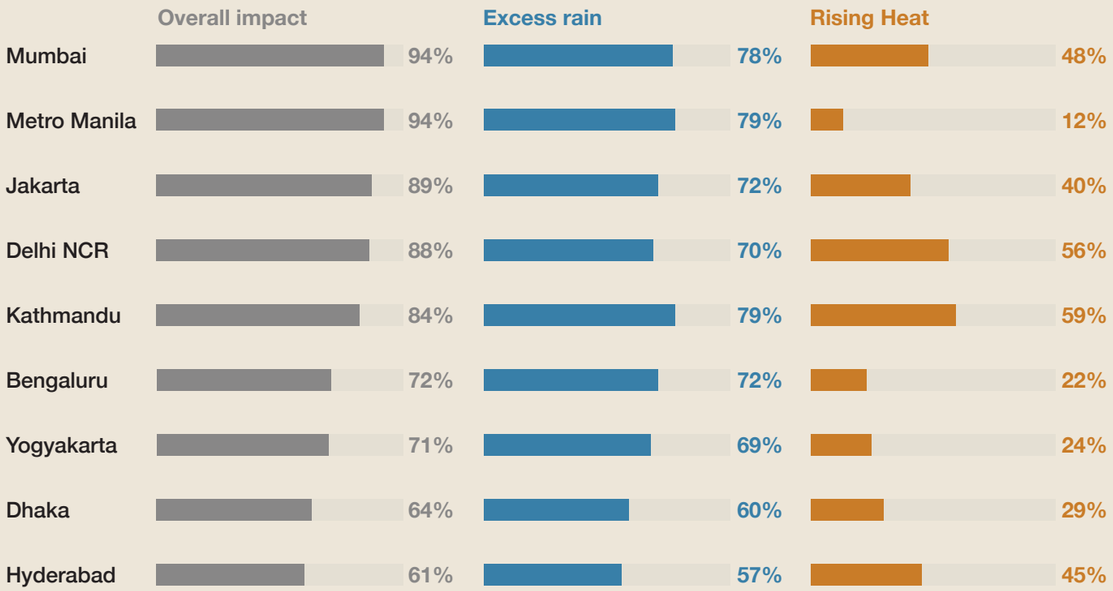
Nine cities, one climate reality

Food delivery, Ridesharing & Home services
impacted by extreme weather events

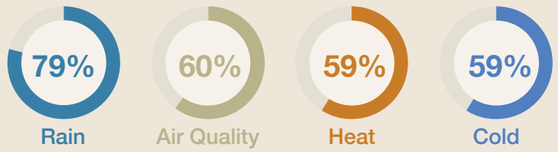


Top cities where workers were impacted the most were **Mumbai** and **Metro Manila: 94%**, followed by **Jakarta: 89%** and **Delhi: 88%.**

Overall impact, and where it's coming from

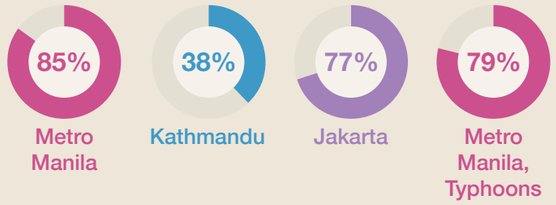


Kathmandu faces multiple vulnerabilities



The only city where four separate hazards all sit near 60% or higher

Flooding risks



2. Climate hazards disrupt earnings

Among workers who report that climate-related hazards affect their work or households, 91% experience disruption to their earnings. This was reported by 94% of affected food delivery workers, 93% of affected ridesharing workers and 81% of affected home service workers. A ridesharing worker in Metro Manila explained that typhoons and extreme heat could reduce demand even when workers remained willing and available to work:

> *During typhoons it is not easy to work because even if you want to work, there are no passengers needing your service. People would rather stay at home. This is also the same during extremely hot weather. While you can still work your route, but few passengers will book a destination.*

(Transcript ID: ccdee50-2129-4abf-95c4-aa19ae15998b)

Food delivery, ridesharing and home service workers describe losing earnings because of disruptions in applications, electricity and communications; reduced orders, rides or bookings; delayed journeys; and damaged vehicles and other equipment. Ridesharing workers also report demand changing across the day, while home service workers describe sustained rain reducing bookings and hazardous travel leading them to reject work or turn off the application. Climate-related earnings loss is therefore not confined to formal platform shutdowns or days when all work stops: **workers can remain available but unpaid, complete fewer tasks because journeys take longer, or withdraw from conditions they consider unsafe. Under task-based payment, workers largely bear the costs of interruption, delay, reduced demand and precautionary withdrawal.**

25% of food delivery workers, 28% of ridesharing workers and 25% of home service workers reported that climate-related impacts reduced their ability to buy food. These findings show that among the workers surveyed, climate-related income disruption was sufficiently severe to affect an essential household expenditure. They also show that the effect was not confined to the ridesharing and food delivery, sectors with the greatest outdoor exposure. Approximately one-quarter of home service workers reported reduced capacity to purchase food, demonstrating that climate risk can reach household consumption even where the principal service is performed indoors.

Infographic 2: Disruption to platform workers earnings

Ways the weather cuts into pay



43%
Delay in service provision



36%
Damage to delivery item, vehicle or tools



25%
Wage loss - app not operational



28%
wage loss - low orders/bookings



26%
wage loss - couldn't leave the house

Each country's sharpest points

Bangladesh
Delay in service - **45%**
Wage loss, stuck at home - **35%**

India
Delay in service - **54%**
Damage to item - **49%**

Indonesia
Delay in service - **46%**
Wage loss, stuck at home - **37%**

Nepal
Delay in service - **77%**
Wage loss, application down - **34%**

Philippines
Delay in service - **33%**
Wage loss, stuck at home - **29%**

3. Platform governance, increased exposure and transferred costs

Platform systems influence whether workers can withdraw from unsafe conditions. Cancellation requirements and financial consequences make it costly to abandon tasks affected by flooding, rainfall or other hazards. Targets, ratings and time pressure can encourage workers to remain active or move more quickly when conditions require greater caution. Incentives and higher rates during periods of disruption can increase the financial pressure to work through danger.

This creates a double bind. Stopping work may protect a worker's health but cause an immediate loss of income, incentives or access to future tasks. Continuing to work preserves the possibility of earnings but increases exposure to illness, injury, accidents and equipment damage. The flexibility associated with platform work is constrained by worker dependence on task-based earnings and the platforms influence over future work.

Workers also commonly provide and maintain the assets required to perform platform services. Climate-related damage to a motorcycle, bicycle, autorickshaw, car, phone, or other equipment can produce two losses simultaneously: the cost of repair or replacement and the income forgone while the asset remained unusable. An Indian ridesharing worker describes experiencing both losses:

> *The rides take longer than usual. I had to do a repair that cost around INR 7,000 to 8,000. I lost wages for 8 days due to the repair work.*
>
> *(Transcript ID: d3336280-4ddd-4382-abc4-8e61c400ffa1)*

Infographic 3: Increased climate exposure and transferred costs due to platform governance

When leaving isn't an option

Platform rules make it costly to stop working when the weather turns - so workers keep going, and absorb the risk themselves.



38%
of workers, across sectors, say cancelling a task risks their account - even in bad weather



44%
of workers, across sectors, report anxiety or stress from targets and ratings

Three pressures to keep going, by sector



Food delivery
No cancellation allowed: 47%
Anxiety from ratings: 57%
Surge pricing: 9%



Ridesharing
No cancellation allowed: 40%
Anxiety from ratings: 36%
Surge pricing: 4%



Home services
No cancellation allowed: 21%
Anxiety from ratings: 36%
Surge pricing: 1%

Data highlights

Indonesia

No cancellation, food delivery : **82%**, the highest figure in the data

Anxiety from ratings, home services - **78%**

Nepal

Surge pricing, food delivery: **13%**, highest of any country

No cancellation, ridesharing: **47%**, stricter than food delivery here



4. Employment losses become household and care-related risks

Climate-related earning disruptions enter households that are simultaneously facing additional expenses and interruptions to essential services. Approximately one-quarter of workers in each sector report that climate-related impacts reduced their ability to buy food. Because workers supported dependent household members, the consequences extend beyond the individual respondent. Some workers also report reducing remittances sent to family members in their source locations. Income disruption in the city could therefore affect households elsewhere, transmitting climate-related risk across geographic distance. A home service worker in Jakarta describes how competing household needs translated interrupted or inadequate earnings into reduced food consumption:

> *If the children have urgent school needs, then the food portion has to be reduced, from three meals a day to two meals a day.*
>
> *(Transcript ID: d3b36652-2d23-4970-8825-bf88bb17d296)*

Hazards damage homes and household assets and disrupt access to water and healthcare. Illness or injury can increase expenditure on consultations, medicines and transport while reducing the income available to pay for them. Household members also provide unpaid care when workers or relatives became ill or injured. Because platform workers generally lack paid leave, time spent giving or receiving care produces another potential loss of earnings. **These findings show that the boundary between occupational and household risk is porous. The effects of a disrupted task can enter expenditure on food, health, housing and care, altering the resources available to the entire household.**

Infographic 4: Household related risk due to climate exposure

What extreme weather costs at home



29%
of households overall report damaged transportation routes



26%
of households overall report reduced ability to buy food

Each country's sharpest points

Bangladesh
Home damaged: **12%**
Lost access to health facilities: **10%**

India
Water access lost: **15%**
Lost access to health facilities: **15%**

Indonesia
Home damaged: **33%**
Assets lost: **29%**

Nepal
Lost access to health facilities: **26%**
Water access lost: **16%**

Philippines
Home damaged: **10%**
Water access lost: **6%**

Infographic 5: Assistance received by platform workers during extreme weather

Support that doesn't reach the workers who need it

80% received no support of any kind - the overall picture across all nine cities

15% received government emergency relief during or after a weather event

Knowing about help isn't the same as getting it : General social protection schemes workers may be entitled to - not specific to weather events

Health schemes
Aware 69%
Access 34%

Livelihood and income schemes
Aware 54%
Access 15%

Food security schemes
Aware 48%
Access 27%

Worker reported benefits provided by platforms
Health insurance 26%
Life insurance 18%
Accident insurance 17%
Paid leave 1%

When disaster strikes, by city
Most workers in the cities get almost nothing
No support received: Delhi NCR & Mumbai 98%, Dhaka 93%
Government relief received: under 2% in most of these cities

The exceptions - The Philippines & Indonesia
Government relief received — Metro Manila 36%, Jakarta 28%

5. Government and platform support remains limited and uneven

Government emergency relief was the most reported form of institutional support during climate-related events, but it reached only a minority of workers and varied substantially among locations. Relief was reported more frequently in the Philippines and parts of Indonesia, where systems may activate in response to sudden disasters such as floods and typhoons. Such assistance may provide important supplies such as food and basic amenities, but is generally temporary and less suited to recurrent or slow-onset conditions.

Social protection programmes exist across the study countries, but awareness did not consistently result in access. Workers reported being generally entitled to at least some government schemes, but for the most part, existing schemes do not directly respond to extreme weather events. However, they do cater to specific vulnerabilities which heighten during weather events. **Across the sample, 69% of workers were aware of a health-related scheme, while only 34% reported access. A similar 39% difference appeared in livelihood and income support: 54% were aware of a relevant scheme, but only 15% reported access.** The gaps were particularly pronounced in some countries with highly visible flagship programmes.

Platform-provided protection is similarly fragmented. **Across the sample, 26% of workers report health insurance, 18% life insurance and 17% accident insurance.** Coverage varies sharply among countries and sectors. Only 1% of workers report paid leave, with no food delivery or ridesharing workers reporting access and limited coverage among home service workers concentrated in India and Nepal. The study found no systematic layer of climate-responsive platform support. **Only 8 respondents reported receiving compensation or emergency relief from a platform during an extreme weather event.** Existing insurance, where available, did not necessarily replace earnings lost through reduced bookings, application outages or unsafe conditions, nor did it necessarily cover damaged productive assets or increased household expenditure.



Infographic 6: Risk absorption by platform workers during extreme weather

When the system doesn't provide, families do

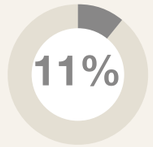


32%
of workers, across sectors, drew down savings after a climate-related impact



35%
borrowed from family or friends - the most common coping response of all.

When informal help isn't enough, it becomes debt



took an informal loan



took a formal loan

Coping mechanisms across regions

South Asia
Borrows from family or friends: **36%**, average of Bangladesh, India, Nepal
Worker takes on additional work: **7%**

Southeast Asia
Savings drawn down across sectors: 45%, average of Indonesia and the Philippines.
Worker takes on additional work: 13%

6. Households absorb institutional failures

In the absence of adequate support, workers and their households finance climate-related disruption themselves. **Roughly one-third of workers across the three sectors report drawing down savings. Across the sample, 35% borrow from family or friends, 11% use informal loans** and 10% sought formal loans. Workers also respond by taking additional employment, increasing work through platforms or bringing other household members into paid work.

A food delivery worker in Dhaka describes how this process operates in his everyday life. During rainfall, he can complete fewer than one delivery an hour, compared with at least three in ordinary conditions. The resulting loss of income affects the household's ability to meet daily food and medical needs. When this happens, he borrows from coworkers and repays them once the weather improves:

> *In these situations, I usually borrow money from my coworkers. I use the money to meet my family's needs. Later, when the weather is good, I work and pay back the money. . . This is just how I live.*
>
> *(Transcript ID: BAN_DHK_125)*

Such responses, however, do not necessarily amount to successful household economic recovery. Savings used for food, medicines or repairs are no longer available for the next emergency. Loans shift present losses into future repayment obligations. Additional employment may increase working time, exhaustion and exposure to further hazards. Where another household member enters paid work, existing care and domestic responsibilities must also be redistributed. Households may therefore appear to recover while becoming less able to withstand the next climate-related or economic shock. Coping can preserve immediate survival while deferring and compounding vulnerability.

B. What these findings mean for worker exposure to climate-related risk

The report traces a connected movement of climate-related risk across workers' lives. Environmental hazards are intensified by unequal urban infrastructure. Platform management and payment systems shape workers' exposure and transfer the economic costs of climate disruptions to workers and their households. Employment losses enter household budgets and care relationships. Where government, platform and civil-society protection is limited, workers and their households absorb those costs through reduced consumption, depleted savings, debt and additional work.

This climate risk transfer circuit for workers in the digital platform economy demonstrates why climate resilience cannot be limited to enabling workers to endure more dangerous conditions or finance their own recovery more effectively. Nor can any single intervention redistribute the full range of risks identified. For instance, protective equipment cannot compensate for targets or cancellation rules that encourage work through danger. A shutdown without earnings protection transfers the cost of prevention to workers. Emergency relief may address immediate food needs without replacing income or repairing productive assets. Insurance may finance specified losses but cannot substitute for safe work systems, paid climate leave or inclusive public provision.

A fair response, therefore, must include prevention, protection and compensation. Platforms and public authorities should first reduce avoidable exposure. Workers must then be able to withdraw from unsafe work without immediately losing essential income. Climate-responsive social protection should address needs extending beyond a particular task or platform. Insurance should supplement these protections by financing defined residual losses that cannot reasonably be prevented or met through existing entitlements.



Infographic 7: Climate risks and required redistribution of risks

Climate risks move through a connected system within the platform work structure

Coordinated interventions at different levels in the risk flow, are needed to break the chain or redistribute risks.



No single fix is enough:

safety measures can be undermined by work pressures, while unpaid shutdowns shift costs to workers.

Relief and insurance remain conditional, leaving long-term resilience gaps.

Support that workers require to deal with climate exposure



C. Key recommendations

The complete recommendations by stakeholder are presented in Chapter 5. The following key recommendations identify immediate priorities and corresponding responsibilities across actors.

- **Governments should integrate platform workers into portable and climate-responsive food, health, livelihood and disaster-protection systems.** Civil society should assist government and workers in accessing benefits and complaints mechanisms and support platform workers to overcome documentation, eligibility, registration and other implementation barriers.
- **Governments, platforms, and civil society should work together on implementing and scaling pilot programmes to address climate-related vulnerabilities for digital platform workers.**
  - Governments could invest in shaded rest areas, drinking water, toilets, cooling facilities, emergency shelters, drainage, safe roads, transport and climate-resilient housing in locations accessible to platform workers.
  - Platforms could provide appropriate protective equipment without charge, replace damaged equipment and finance or contribute to accessible rest, water, sanitation, cooling and emergency facilities.
  - Civil society could use pilot evidence to strengthen public and platform systems rather than allowing temporary projects to substitute for continuing institutional responsibility.
- **All stakeholders should work together to build financial resilience for platform workers during climate shocks.**
  - Governments could require platforms to finance work-related protections and contribute to shared infrastructure and social protection systems.
  - Platform companies could finance portable health, accident and climate-risk insurance as a supplement – not an alternative – to prevention, earnings protection and social security.
  - Insurers could design products around losses reported by workers, including earnings, health, and work infrastructure costs; and develop and test multi-peril products using reliable climate data.
  - Civil society could co-design and independently evaluate adaptation, wage protection, social protection and insurance pilots with workers.
  - Worker organisations could participate in determining hazard thresholds, operational protocols, replacement-earnings calculations, benefit packages and insurance design.
- **Governments, platform companies, and worker organisations should ensure protective measures to support platform workers during climate distress are in place.**
  - Governments can recognise climate-related exposure as an occupational health and safety (OHS) issue for platform workers regardless of employment classification.
  - Platforms could establish publicly verifiable climate-response protocols covering heat, rainfall, flooding, storms, dangerous air quality and other locally relevant hazards.
  - Governments and platforms could provide paid climate leave or an equivalent earnings guarantee and compensate workers for climate-related damage to vehicles, phones, tools and other productive assets for platform work.
  - Worker organisations could ensure that the experiences of women, migrants, workers with care responsibilities and workers using multiple platforms shape institutional responses.

The report's overarching recommendation is that responsibility should correspond more closely to control and capacity. Workers and their households should no longer function as the default absorbers of climate-related disruption. Governments and platforms must assume primary responsibility for preventing avoidable harm, protecting workers' earnings and financing the losses that remain.



Introduction



A food delivery worker in Dhaka describes how heavy rain affects the road, his bike, the food being transported and the number of hours in which work remains possible:

> *During heavy rain, there's a risk of the bike slipping, and the brakes don't work well.… Even if we have bags, in heavy rain, the food can get wet. We also get soaked. We can't wear a raincoat all day. If it rains continuously all day, we can't work more than one shift.… In extreme heat, work slows down, and we have to take breaks. When we work less, our income decreases*
>
> *(Transcript ID: BAN_DHK_170)*

The climate effects continue within his household, impacting his health and the health of his family:

> *My daughter is young. She can't tolerate the heat. She gets itchy and can't sleep. Because I work outdoors, my skin gets sunburnt and my face swells up.*
>
> *(Transcript ID: c93424d6-c291-4353-9141-11aba77a1302)*

Compounding these employment and health issues, existing water shortages worsen during hot periods and heavy rain prevents him from sending his daughter to school, creating additional household care burdens. In short, his account traces the movement of climate-related risk across work, transit and household life.

This report examines how climate impacts the livelihoods and lives of digital platform workers in Asia and the Pacific. **The research draws on survey and interview data from 1,006 platform workers in food delivery, ridesharing and home services, collected between April and August 2025. It covers nine urban locations: Dhaka, Bangladesh; Bengaluru, Delhi National Capital Region, Hyderabad and Mumbai, India; Jakarta and Yogyakarta, Indonesia; Kathmandu, Nepal; and Metro Manila, the Philippines.**

A. Platform work in a changing climate

Digital labour platforms organise services across cities without containing work within a conventional workplace. Food delivery workers travel between restaurants and customers, carrying food that may be damaged or delayed by rain, flooding and heat. Ridesharing workers remain on roads and in vehicles for extended periods, exposing themselves, their passengers and the vehicles on which their earnings depend. Home service workers generally perform the booked service indoors but must first travel to customers' homes while transporting phones, tools, products and other equipment. Across all three sectors, workers depend on mobile phones, electricity, telecommunications, transport systems and platform applications to access, navigate and complete task-based work. Their homes are also places of rest and recovery and, in some cases, storage for productive assets required to earn.

The title *Working Without Walls* captures this dispersed geography. Platform workers' exposure extends across roads, vehicles, waiting areas, restaurants, customer premises, digital systems and households. The location of the principal task does not necessarily determine where climate exposure occurs. A home service worker in Metro Manila described arriving at a customer's home after travelling through heavy rain:

> *Sometimes you get soaked. Yes. And even your equipment gets wet and damaged.*
>
> *(Transcript ID: 21e994b5-18a7-4952-866e-0b0ac641ea87)*

Further, extreme heat and poor air quality may affect workers throughout a shift. Heavy rainfall, flooding and typhoons may make roads impassable, interrupt communications or prevent workers from leaving home. Damage to a vehicle, phone or tool may continue to prevent work after the immediate event has passed, while unsafe or inadequate housing may limit workers' ability to rest and recover.

These risks are shaped by the cities in which platform work takes place. Limited shade, dense construction and retained heat can intensify high temperatures. Inadequate drainage and road infrastructure can turn heavy rainfall into waterlogging, longer journeys and dangerous travel. Electricity and telecommunications failures can disconnect workers from the applications through which work is allocated and recorded. Unequal access to secure housing, water, healthcare and public transport further affects whether a worker can avoid exposure or recover from its consequences.

The interaction between physical and digital infrastructure was particularly visible in food delivery. A worker in Kathmandu described rain simultaneously affecting the phone, network, application, food and bicycle required to complete a delivery:

Rain causes many problems—our mobiles get wet, the network goes down, calls don't connect, and we can't contact customers. Without internet and data, we can't use the food delivery app. Sometimes the food gets cold, and bikes often break down during the rainy season. The phone display may also get damaged, and we lose contact with the office.

(Transcript ID: 01ee1c7f-b9e6-4c7f-a57f-ee9834ea9596)

Climate-related hazards therefore do not encounter workers under equal conditions. Their consequences depend on the work a person performs, the infrastructure on which that work relies and the resources available to absorb a loss. They are also shaped by gender and migration. Women were concentrated in home services within this study, while men are predominant in food delivery and ridesharing. Migrant workers may work and live at some distance from the administrative systems, family networks and entitlements available to them at source locations. These patterns influence where exposure occurs, what forms it takes and what support is available afterwards.

B. Climate risk and the organisation of platform work

81% of platform workers surveyed reported that climate-related hazards had affected either their work or households or both. Among those affected workers, 91% reported disruption to their earnings. These figures establish the significance of climate-related disruption and the need to examine how those losses are produced and absorbed.

Addressing this central concern, this report focuses on the interaction between climate-related hazards and the organisation of platform work. Platforms may determine or influence how tasks are allocated, how payment is calculated, how performance is evaluated and whether workers retain access to future work. In many of the arrangements surveyed, workers are paid by the number of completed tasks, receive no payment for waiting or interrupted platform availability, and bear responsibility for vehicles, phones, tools and other productive assets. The combination of interrupted work and worker responsibility for productive assets can generate several losses from the same event. An Indian ridesharing worker described longer journeys, substantial vehicle-repair costs and the earnings lost while the vehicle remained unusable:

Also, the rides take longer than usual. I had to do a repair that cost around INR 7,000 to 8,000. I lost wages for 8 days due to the repair work.

(Transcript ID: d3336280-4ddd-4382-abc4-8e61c400ffa1)

Platform arrangements shape the choices available when conditions become hazardous. A worker may technically be able to log off but lose all income for doing so. A worker who has already accepted a task may face cancellation consequences, reduced ratings or other financial penalties if weather conditions make completion unsafe. Targets and incentives may encourage workers to remain active for longer or complete additional tasks. Conversely, workers may remain willing and available to work but lose income because demand declines, applications stop functioning or customers and routes become inaccessible. Climate change is consequently not simply an external shock to an otherwise stable employment arrangement, it interacts with task-based payment, algorithmic management and worker-funded productive assets to accelerate existing occupational and economic insecurity. The findings suggest that, in some platform-based work arrangements, workers bear a significant share of the financial and practical consequences of climate-related disruption.

An Indonesian home service worker describes choosing to disconnect from the application because heavy rainfall makes travelling to customers unsafe:

When it rains—especially when it rains heavily and continuously—I always turn off the app because I don't want to accept orders in such conditions. The consequence, of course, is that I have no income.

(Transcript ID: 32d6911e-8892-428d-9a58-0abc205bdd69)

Turning off the application reduces her exposure to hazardous travel, but it also eliminates her earnings. The costs of precautionary withdrawal therefore remain with the worker.

Consequences, then, move beyond the employment relationship. Lost earnings enter household budgets alongside additional expenditure on food, water, healthcare, transport, housing repairs and care. When formal support is unavailable, households draw down savings, borrow money, reduce consumption or increase paid labour undertaken by the worker or another family member. These responses can meet an immediate need while reducing the household's capacity to withstand the next disruption.

This report examines – (1) how heat, rainfall, flooding, typhoons, cold conditions and air pollution affect platform work; (2) how payment and performance systems mediate those effects; (3) how employment losses become household risks; (4) what workers receive from governments, platforms and civil-society organisations when disruption occurs, and (5) how responsibility can be redistributed through preventive measures, earnings protection, climate-responsive social protection and supplementary insurance.

We describe this process as the transfer and absorption of climate-related risk. Transfer refers to how the organisation of work can result in workers bearing a greater share of disruption-related consequences than platforms and other institutions. Absorption concerns what happens once the loss reaches the household, whether it is met through external protection or financed through consumption cuts, depleted savings, debt and additional labour. The distinction is important because it distinguishes coping from recovery: a household may survive a climate-related event while emerging with fewer resources, new repayment obligations or greater exposure to future harm.

C. Report structure

This report is divided into the following chapters:

Chapter 1 explains platform workers' climate exposure across cities in Asia. Heat, heavy rainfall, flooding, typhoons, cold conditions and air pollution interact with urban heat, drainage, transport, electricity, telecommunications and housing. The chapter argues that climate risk emerges through the interaction between environmental hazards, urban inequality and the dispersed geography of work.

Chapter 2 shows how exposure to climate risks interacts with the organisation of platform work. Task-based payment, unpaid availability, cancellation consequences, performance metrics, incentives and worker responsibility for productive assets affect whether workers can stop working safely and who bears the cost when work is disrupted. The chapter argues that climate hazards accelerate existing employment insecurity. Further, for many workers, the structure of platform work operates to transfer climate-driven physical and financial risks from platforms to workers.

Chapter 3 follows the transfer of climate risk into workers' households. In periods of climate risk, lost earnings interact with heightened expenditure on food, water, healthcare, transport, housing repairs and care, while reduced remittances transmit the effects to family members living elsewhere. In this way, the chapter argues, the consequences of climate-related disruption become household and, in some cases, geographically dispersed risks.

Chapter 4 examines who absorbs these losses once they have occurred. Government emergency relief, social protection programmes and platform benefits provided partial and uneven support, with substantial gaps between workers' awareness of schemes and their reported access. In the absence of adequate institutional protection, workers and their households turn towards strategies that meet immediate needs but that may also create debt, exhaustion and reduced capacity to withstand the next shock.

Chapter 5 turns to the redistribution of responsibility. The chapter argues that climate resilience strategies should depend not only upon workers but also platform companies and states. Critical interventions can include climate-responsive platform operations, urban infrastructure adaptation, earnings guarantees, social protection and supplementary insurance.

The conclusion draws these arguments together. Its argues that responsibility should correspond more closely to institutional control and capacity. The responsibility for climate-related disruptions in platform economy should be more equitably shared across workers, platforms and relevant institutions.

Studying Climate in the Digital Platform Economy in Asia: Methodology



This research draws on insights and experiences of 1,006 digital platform workers in Bangladesh, India, Indonesia, Nepal and the Philippines. In most of these countries, digital platforms are emerging as a major employer for informal sector workers. Research for this report was conducted in 2025 and findings were first released in Invisible Control, Visible Risks, a wider study of working conditions in the digital platform economy.[1] The present report returns to that dataset to examine the climate-related dimensions of workers' experiences.

The research was conducted in partnership with grassroot organisations and consultants working on the platform economy across the five countries. Each of the following organisations was engaged in data collection for the: **Karmojibi Nari, Bangladesh; Migrants Resilience Collaborative, India; Gabungan Serikat Buruh Indonesia, Indonesia; Nepal Mahila Ekta Samaj, Nepal; ASKI Foundation, The Philippines.**

A. City and sector selection

Respondents worked in three segments of the digital platform economy: food delivery, ridesharing and home services (Table 1). These sectors were selected because they are prominent forms of location-based platform work and provide contrasting sites of climate exposure. Food delivery and ridesharing workers perform most of their work outdoors and in transit, while home services workers travel between workplaces but ordinarily perform tasks inside customers' homes. While the inclusion of home services brings more women into the sample, the study, like the digital platform economy is not gender balanced.

Inclusion of five countries and nine cities provides context for analysing national and urban contexts across South and Southeast Asia. These sites encompass differences in climate conditions, platform-market development, labour regulation and urban infrastructure. Within these countries, the study focused on cities in which location-based platform work has an established or growing presence (Figure 1). Accordingly, the findings laid out in this report provide a robust and credible snapshot of the interaction between climate conditions and platform labour in Asia's digital economy. While the sample cannot claim statistical representativeness, its internal coherence and external consistency with documented regional patterns give it strong analytical value.

B. Sampling and recruitment

The research used a purposive quota-sampling strategy to recruit active digital platform workers. Country-level field researchers identified potential participants according to their location and the platform companies through which they worked. Sampling quotas were established by country, city, sector and gender to support comparison across study locations and sectors. To be eligible to participate, respondents were required to be actively engaged in work mediated through a digital platform at the time of the research. Their participation in the research was voluntary.

The near-equal number of respondents recruited in each country was a feature of the research design rather than an indication of the relative size of the national platform workforces. Country-level quotas were used to create sufficiently sized samples for comparative analysis, resulting in approximately 200 respondents in each country. The distribution of participants among countries, cities and sectors is presented in Table 1 and Figure 1.

C. Data collection and research ethics

Fieldwork was conducted between April and August in 2025. The research combined a structured survey with an interview format, allowing researchers to collect comparable quantitative data while also documenting labour processes through workers' accounts of how platform work and climate-related hazards affected their lives at work and within their households. Interviews were conducted in person by trained country-level researchers and lasted approximately one hour. Researchers used the language commonly spoken by participants in each study location. Across the nine cities and five countries, the questions were

Table 1: Distribution of respondents by country and DPE sector

Country	Food Delivery	Ride Sharing	Home Service	Total
Bangladesh	76	76	51	203
India	70	80	51	201
Indonesia	79	96	27	202
Nepal	74	76	50	200
Philippines	63	102	35	200
Total	362	430	214	1006

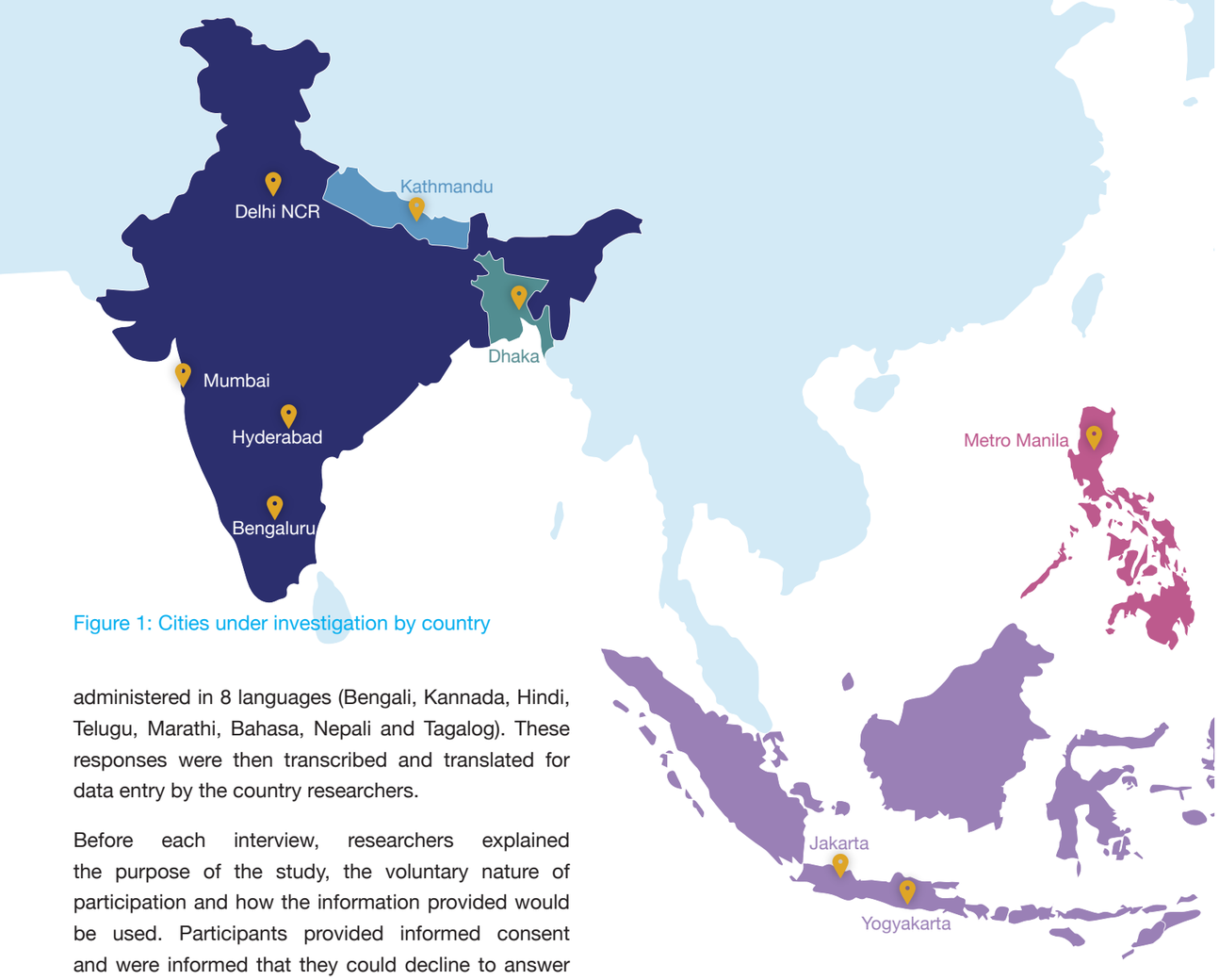


Figure 1: Cities under investigation by country

administered in 8 languages (Bengali, Kannada, Hindi, Telugu, Marathi, Bahasa, Nepali and Tagalog). These responses were then transcribed and translated for data entry by the country researchers.

Before each interview, researchers explained the purpose of the study, the voluntary nature of participation and how the information provided would be used. Participants provided informed consent and were informed that they could decline to answer particular questions or end the interview. They were assured that their identities would be kept confidential and that their responses would be anonymised in research outputs. Personal identifying information was removed from or separated from the material used for analysis. Workers' names are not included in the report.

The research instrument included sections on: **algorithmic management and organisation of work, working conditions and earnings, occupational health and safety, impact of extreme weather on workers, and access to employer benefits and social security.** The climate-related questions first determined the extreme weather events that platform workers face and then addressed workers' experiences across weather events and the effects of these conditions on work and households. The interviewed guides were structured with by questions containing multiple answer options and open-ended questions. Multiple responses were allowed based on the understanding that workers may be impacted by not only one climate event but multiple.

Quotations reproduced in the report are English translations of workers' accounts rather than verbatim English language speech. The report preserves the substantive meaning and first-person character of the translated testimony while allowing light editing for readability, including the removal of repeated interviewer prompts, verbal fillers and material unrelated to the point being illustrated. Ellipses indicate omissions within a quoted response. Quotations were checked against the available translated transcript and are attributed using anonymised interview identifiers (Transcript IDs). So that quotations and qualitative findings can be traced to the underlying research material without disclosing participants' identities.

D. Data Analysis

The analysis treats climate exposure as the interaction between environmental hazards, occupational conditions, platform organisation and the urban systems on which workers depend. It therefore combines worker reported survey and interview data with secondary climatic and environmental indicators.

Survey responses were analysed descriptively by country, city and sector. Unless otherwise stated, percentages use the number of respondents who answered the relevant question as the denominator. Because workers could identify multiple hazards, percentages across hazard categories are not mutually exclusive and may exceed 100%. Comparisons are descriptive: no population weights were applied, and the findings should not be interpreted as nationally representative. The report avoids drawing conclusions from small subgroups, particularly women in food delivery and ridesharing.

Interview material was reviewed by researchers and coded thematically by the report's authors using categories derived from the research questions alongside themes emerging from workers' accounts. The analysis examined hazards; the site and duration of exposure; effects on work, income, health, safety, productive assets and households; and access to assistance or protection. Interviews were reviewed within country – city – sector groups before comparison across the corpus, preserving differences that an immediate cross-country synthesis might obscure. The analysis identified recurring mechanisms and sequences – such as rainfall producing delays, cancellations, lost task income and household borrowing – while retaining contradictory, minority and countervailing accounts, including reports of limited effects, some ability to stop working or isolated institutional assistance. Direct testimony in this report has been selected for its analytical function – to clarify a mechanism, connect consequences across work and household life or convey evidence not captured adequately by survey categories. Short excerpts and grouped references illustrate recurring patterns, while severe or unusual accounts establish possible forms of harm without being treated as representative.

E. Secondary climate and environmental data

Worker reported findings were contextualised using secondary data on precipitation, surface air temperature, floods, tropical cyclones, winter temperatures and air pollution. These data cover the period from 2021 through the end of 2025. The five-year period was selected to situate the study year within recent climate variability, including transitions among La Niña, El Niño and neutral ENSO conditions. It was not selected to establish long-term climate trends or to attribute an individual worker's experience to a particular recorded event.

F. Methodological limitations

Despite measures to minimise error, the study has several limitations. Its purposive sample does not permit generalisation to all platform workers in the five countries. The findings rely substantially on workers' self-reported experiences and recognition of hazards; terms such as "heatwave," "flood" and "air pollution" may be understood differently, while less visible or cumulative hazards may be underreported. Interviews capture experiences recalled at a particular point in time rather than continuously measuring environmental exposure. Secondary climate data provide contextual, not individual, exposure measures: monthly or annual averages may obscure acute hourly conditions, and national event records may overlook neighbourhood-level disruption. The report therefore reads these indicators alongside worker accounts without treating either as a substitute for the other.

Sector and gender were also closely related within the sample. Food delivery and ridesharing respondents were overwhelmingly men, while women formed a majority of the home services sample. Apparent sectoral differences may consequently also reflect gendered differences in occupation, mobility, household and care responsibilities, and hazard recognition. Testimony from predominantly male food delivery and ridesharing samples may reveal gendered relationships within workers' households, but it cannot substitute for direct evidence about women's experiences in those sectors. The data also provide limited grounds for separate conclusions concerning disability, social identity, ethnicity, religion, sexual orientation or gender identity. All country, city, sector and demographic comparisons should therefore be interpreted as patterns within the study sample rather than representative population estimates.

G. Workforce demographics

In this section, we provide an overview of worker demographics to provide a brief snapshot of our sample. For more detailed analysis, please look at the demographics section in our previous report derived from the same study and sample.[2]

Figure 2: Gender distribution of digital platform workers in the sample by sector and country

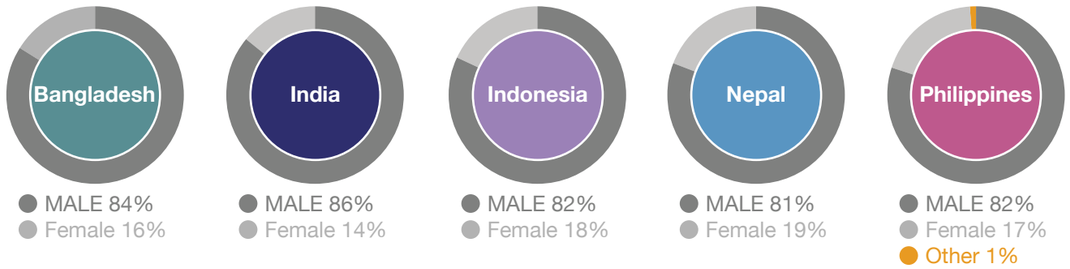


Figure 3: Reported ages of digital platform workers by country



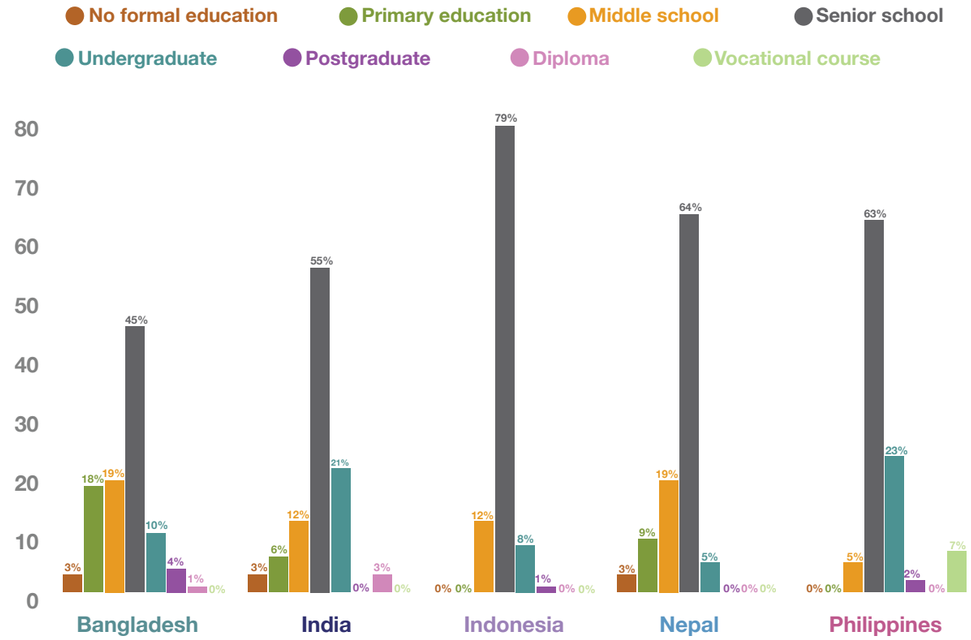


Figure 4: Education levels of digital platform workers by country

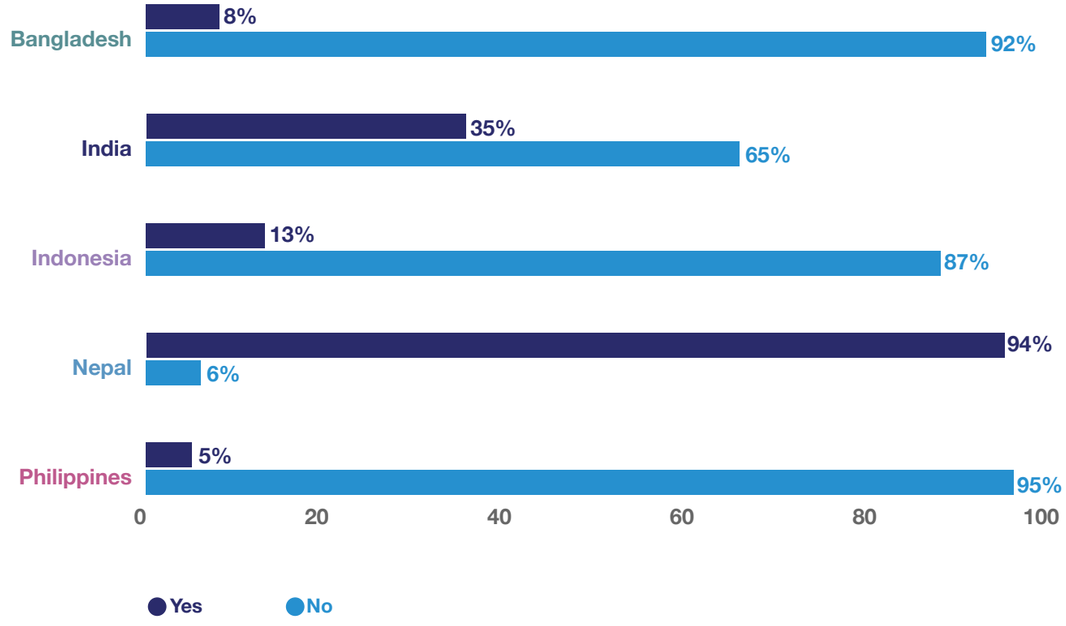


Figure 5: % of digital platforms workers who self-described as internal migrants (moving in the last five years) by country



Chapter 1: Climate Risks in the Digital Platform Economy in Asia

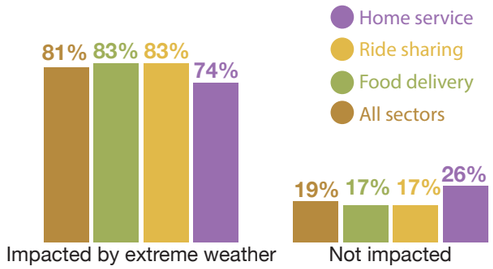
Asia and the Pacific region bears a disproportionate share of weather-related disasters and is experiencing accelerating climate risks. The Emergency Events Database (EM-DAT) reports that between 2024 and 2025, Asia and the Pacific accounted for 42% of all weather-related disasters recorded globally – the highest share of any region.[3] Asia is also warming rapidly. The World Meteorological Organization (WMO) reports that the regional warming trend during 1991–2025 exceeded the global land and ocean average and was nearly twice as strong as during 1961–1990. In 2025, Asia's annual mean temperature was 0.96 ± 0.08°C above the 1991–2020 average, ranking between the second and fourth warmest year on record, depending on the dataset used.[4]

Against this regional backdrop, 81% of the digital platform workers surveyed across Bangladesh, India, Indonesia, Nepal and the Philippines reported that extreme weather had negatively affected their work or households. Workers described exposure to extreme heat and heatwaves, excess rainfall, flooding, typhoons, cold and poor air quality. These hazards were widespread but not uniform, types and intensity varied according to workers' cities, sectors and working environments. Confirming this high level of reported exposure, our 2024 study of 23,915 internal migrants across the same five countries found that 90% had experienced weather-related effects at either their source or destination locations. While concerning internal migrants rather than platform workers specifically, the findings of this forgoing study situate the present results within a regional pattern of climate-related insecurity.[5]

Sectoral analysis reveals minor variation: in food delivery and ridesharing sub-sectors, 83% of digital platform workers reported climate impacts; in home services, 74% reported climate impacts. Food delivery and ridesharing workers encountered sustained exposure while travelling, waiting for tasks and providing services outdoors. Home services workers faced climate hazards while commuting between jobs, performing tasks inside customers' homes and managing the effects of extreme weather within their own households. Across all three sectors, workers encounter climate conditions through the particular organisation of platform work and through the urban environments in which that work takes place.

Across all three sectors, the organisation of platform work shapes how workers experience climate-related occupational hazards. Workers' income is closely linked to remaining available for tasks and travelling through climate affected areas. Platform workers also rely on functioning roads, electricity, telecommunications and digital platforms. Environmental hazards can therefore result in interrupted work, longer journeys, damaged equipment, health risks or lost earnings. The chapters that follow examine these consequences in detail.

Figure 7: % share of workers impacted by extreme weather across sectors



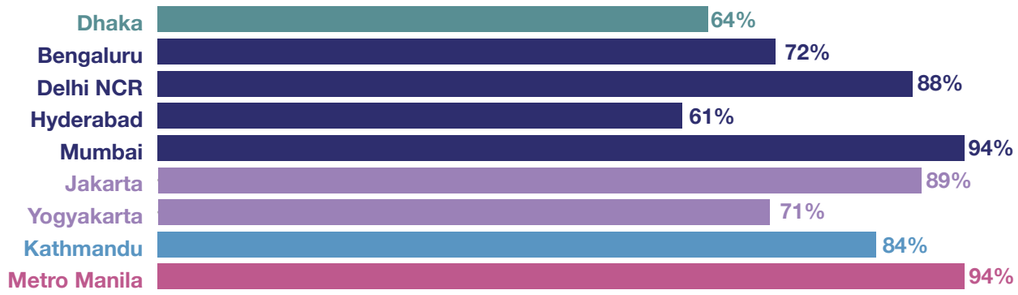


Figure 6: Share of workers reporting that climate-related hazards affected their work or households

To contextualise worker accounts collected in 2025, this chapter draws on secondary climate data covering the five-year period from 2021 to 2025. This window helps situate conditions during the study year within a wider period of recurring and variable exposure. Encompassing transitions between La Niña, El Niño and neutral conditions, this frame captures fluctuations in rainfall, flooding, typhoon activity, heat and cold that would be obscured by examining 2025 alone.

The chapter proceeds by hazard. It first distinguishes sudden- and slow-onset hazards and considers the influence of year-to-year climate variability. It then examines rainfall, flooding and typhoons; extreme heat and rising temperatures; cold conditions; and air pollution. The final section considers how urban heat, density, drainage, and transport, electricity and telecommunications infrastructure shape workers' exposure. Throughout, climatic indicators are read alongside workers' accounts of where they travelled, waited, performed tasks and recovered.

A. Sudden and slow-onset climate hazards

Workers across the five countries described both acute events and persistent changes in their everyday working conditions. Sudden episodes of extreme rainfall, flooding, typhoons and heatwaves occurred alongside recurring or increasingly difficult levels of heat and rainfall. Platform workers therefore encountered climate-related hazards across different and sometimes overlapping timescales.

Sudden-onset hazards develop rapidly and can cause immediate disruption, including storms, typhoons, flash floods, extreme rainfall and heatwaves.[6] Slow-onset processes develop progressively or cumulatively and include rising average temperatures, sea level rise, changing rainfall patterns and prolonged drought.[7] The distinction concerns the speed at which a hazard develops, rather than the meteorological phenomenon alone. Rising average temperatures and changing rainfall patterns are slow-onset processes, whereas a particular heatwave or episode of extreme rainfall may emerge rapidly.

These categories are not absolute. Gradual changes in background conditions can increase the likelihood or severity of acute events, while repeated sudden events can produce cumulative and compounding losses.[8] Rising temperatures may intensify a heatwave; repeated rainfall and flooding may progressively damage roads, housing and productive assets; and longer-term changes in rainfall may be experienced through particular episodes of waterlogging and transport disruption.

This interaction is especially important in platform work. Acute events can immediately prevent workers from travelling, completing tasks or earning income, while gradual and recurring hazards progressively reshape the conditions under which they work and recover. Workers may experience both simultaneously — for example, working outdoors under increasingly hot conditions during an acute heatwave, or navigating changing seasonal rainfall punctuated by a sudden flood. The following sections examine how these overlapping forms of exposure appeared across the study locations during the period surrounding the 2025 research.

B. ENSO and year-to-year climate variability

Workers' accounts in 2025 emerged from a recent period of substantial climate variability. Between 2021 and 2025, the study locations experienced changing combinations of heat, rainfall, floods and storms rather than stable climatic conditions. For platform workers whose livelihoods depend on daily mobility and continued availability for tasks, this variability altered the conditions under which work was performed from one season and year to another.

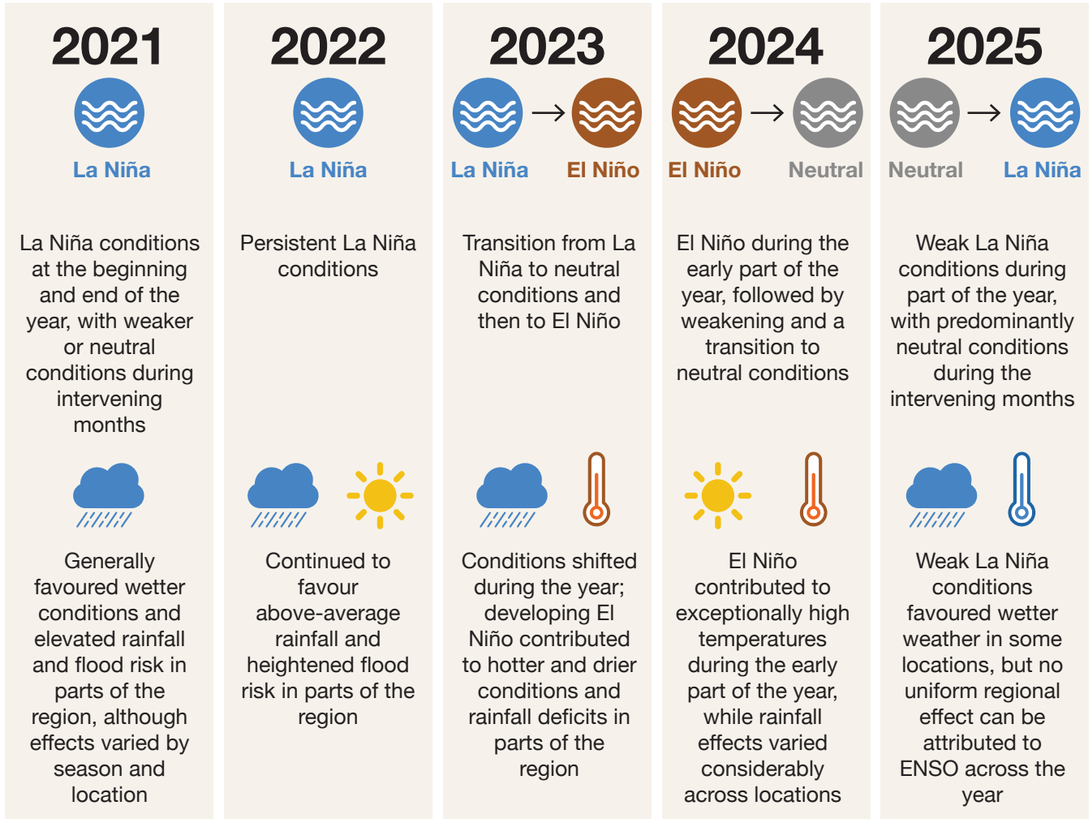
The El Niño–Southern Oscillation, or ENSO, is a recurring fluctuation in ocean and atmospheric conditions across the tropical Pacific that influences weather worldwide. Its three phases are El Niño, La Niña and neutral conditions. El Niño is associated with warmer-than-average surface waters in the central and eastern tropical Pacific and generally weaker trade winds; La Niña is associated with cooler-than-average waters and stronger trade winds. Neither pattern predominates under neutral conditions.[9] The study period included all three phases. La Niña prevailed through much of 2021 and 2022. Conditions shifted from La Niña to neutral and then to El Niño during 2023. El Niño peaked around the end of 2023 and beginning of 2024 before weakening. Weak La Niña conditions returned briefly in early 2025, followed by neutral conditions through the conclusion of fieldwork.

ENSO helps contextualise some of the year-to-year variation in the temperature, rainfall and disaster data presented in this chapter. La Niña can favour wetter conditions and greater flood risk in parts of Asia and the Pacific, while El Niño can contribute to hotter or drier conditions in parts of the region. These effects are neither uniform nor deterministic: they vary by season and location and interact with monsoon systems, the Indian Ocean Dipole, local geography and human-induced warming.[10] ENSO should therefore be treated as one influence on conditions during 2021–2025, not as the direct cause of any particular flood, typhoon, drought or period of extreme heat. Wetter periods can increase exposure to intense rainfall, flooding and transport disruption; hotter or drier periods can intensify heat and water insecurity. Successive hazards may also reduce the time and resources available to recover before another disruption.

C. Digital platform workers' exposure to extreme weather events

Platform workers across the five countries described exposure to multiple climate-related hazards, with the combination and intensity of those hazards varying by location and sector. Their accounts include excess rainfall, flooding, typhoons, extreme heat, cold conditions and poor air quality. These hazards affect the environments in which workers travel, wait for tasks and provide services, as well as the homes to which they return.

Figure 8: ENSO phases and their broad influence on climate conditions in parts of Asia and the Pacific, 2021-2025[1]



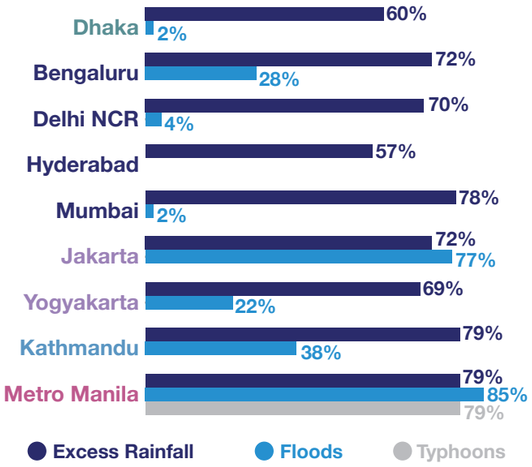
Note: ENSO influences climate conditions but does not determine individual weather events. Its effects vary by location and season and interact with monsoon systems, ocean conditions, local geography and long-term climate change. Because ENSO phases change within calendar years, the figure provides a simplified summary of conditions during the five-year period rather than assigning a single climatic effect to each year.

[1]Authors' compilation based on NOAA Climate Prediction Center, Oceanic Niño Index, and ASEAN Specialised Meteorological Centre, El Niño and La Niña.

1. Rainfall, floods and typhoons

Excess rainfall was the most widely reported climate hazard across the study. More than 70% of workers across the five countries and three platform sectors reported that excess rain created challenges for their work or households. Flooding was reported less uniformly and was concentrated in particular national and urban contexts, and typhoon exposure was specifically concentrated among workers in the Philippines. Figure 9 shows how worker-reported exposure to these three hazards varied by country and sector.

Figure 9: Workers reporting challenges associated with typhoons, rains and floods by sector and country



These findings show that precipitation-related exposure did not take a single form. Workers across the study geography encountered excess rainfall, but exposure to floods and typhoons depended more heavily on location. Rainfall may disrupt work without producing a formally recorded flood, while a typhoon may affect workers through intense rainfall, flooding, high winds, transport disruption or some combination of these conditions.

Excess rainfall

Worker reports of excess rainfall extended across all five countries and all three platform sectors, but the circumstances of exposure varied according to location and the organisation of the work. Rainfall was a recurring part of the working environment for food delivery and ridesharing workers, while home service workers encountered it principally while travelling between appointments and transporting the equipment required for their work.

For food delivery workers, rainfall affected several elements of the task simultaneously. A worker in Dhaka described the interaction between rain, waterlogging, wind, a mobile phone, protective equipment and impacts on the condition of the food being transported:

> *During heavy rain, my mobile gets wet, the touchscreen stops working, and it becomes hard to hold the phone. Raincoats let water in, and the food gets cold. Strong winds make cycling difficult, and water collects on the roads.*
>
> *(Transcript ID: BAN_DHK_124)*

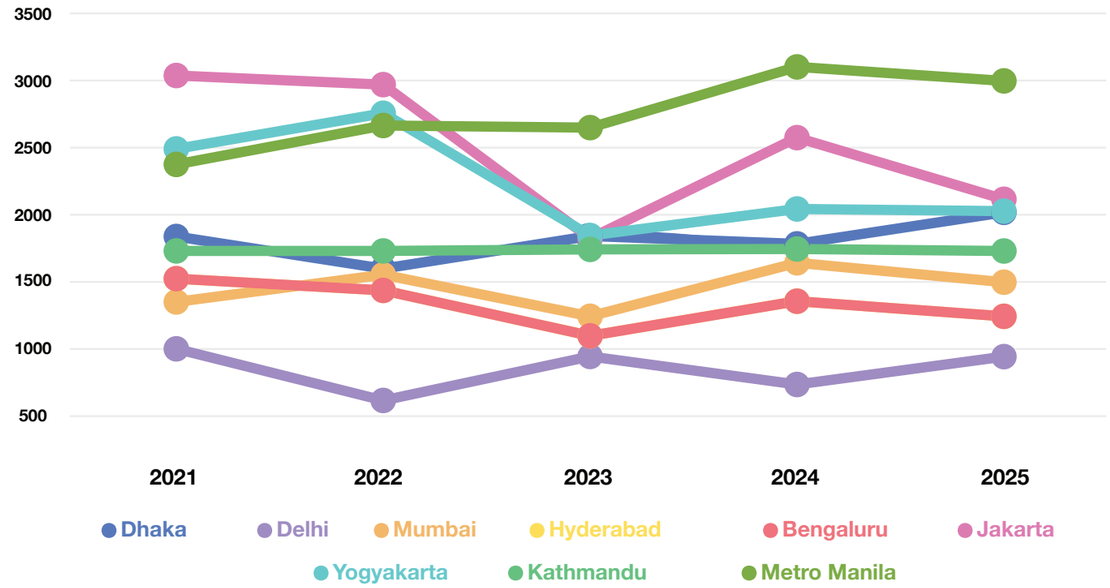
These were recurring features of food delivery workers' accounts in Dhaka. Workers described rain entering protective clothing, interfering with mobile phone navigation, affecting food packages and making flooded or waterlogged roads difficult to traverse. Rainfall therefore became occupational exposure through the combination of outdoor work, travel and dependence on functioning digital and other equipment. A home services worker in Yogyakarta explained:

> *I don't own a vehicle, so I rely on public transportation for my daily commute. During the rainy season, if I receive an order, I leave 1–2 hours earlier because the distance from my house to the main road is quite far—about 500 metres. If it's only a light drizzle, I can still walk to the nearest bus stop. But if it's heavy rain, I have to take a pedicab and pay IDR 25,000 to get to the bus stop. If the rain is very heavy, I have no choice but to take an online taxi to prevent my equipment, like the vacuum cleaner, from getting wet and damaged.*
>
> *(Transcript ID: 040525_Yogyakarta)*

Her account shows how rainfall can affect home services work before the worker reaches the customer's premises. Distance from public transport, the availability and cost of alternative transport, and the need to protect equipment all shaped whether a booking could be completed. Rainfall consequently increased both travelling time and the worker-financed cost of reaching paid work.

Figure 10 presents annual mean precipitation across the nine study cities between 2021 and 2025. These annual averages provide an indication of broad rainfall conditions but may conceal shorter episodes of intense rainfall, which can cause flooding, waterlogging and severe transport disruption without substantially altering a city's overall precipitation level.

Figure 10: Annual mean rainfall across the nine study cities, 2021-2025[2]



Source: World Bank Climate Change Knowledge Portal, historical climate data for Bangladesh,[11] India,[12] Indonesia,[13] Nepal,[14] and the Philippines.[15]

Rainfall conditions varied considerably across the study geography. Among the South Asian locations, Dhaka recorded relatively high but broadly stable rainfall across the period. Delhi was the driest of the nine locations. Bengaluru and Hyderabad showed modest downward patterns, while Mumbai displayed greater year-to-year variation, including a peak in 2024. Rainfall in Kathmandu remained comparatively stable across the five-year period.

The Southeast Asian locations exhibited different patterns. Jakarta and Yogyakarta recorded sharp declines in rainfall during 2023, coinciding with the development of El Niño, while rainfall in Metro Manila increased through 2024. These patterns were shaped by the interaction of monsoon systems, local geography, ocean and atmospheric conditions and broader climate variability. Their coincidence with a particular ENSO phase, should not be interpreted as establishing that ENSO alone caused the recorded change in any city.

The five-year precipitation data does not establish long-term changes in rainfall. Nor do city-level means directly measure workers' exposure to particular downpours. They show the recent rainfall conditions surrounding the 2025 research and provide context for workers' widespread reports that excess rain affected their work or households.

Floods

Worker-reported exposure to flooding was more geographically uneven than exposure to excess rainfall. Figure 9 shows particularly strong concentrations among workers in Indonesia and Nepal, although flooding was also prominent in the Philippines, where it frequently accompanied heavy rainfall and typhoon activity.

A food delivery worker in Jakarta described flooding as a disruption to both physical mobility and the communications infrastructure required for platform work:

> *Heavy rainfall and increased water volume definitely lead to flooding. And once flooding occurs, transportation access is disrupted. The same goes for communication networks, because the internet signal becomes slow or even completely lost.*
>
> *(Transcript ID: 260425_Jakarta)*

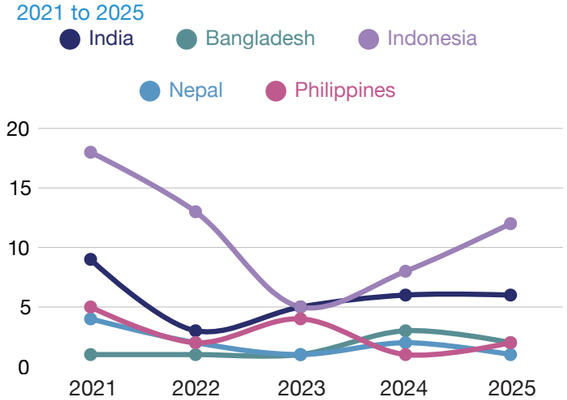
[2]Specific unit of measurement: annual mean (mm). Data presented is as follow- Dhaka, Bangladesh; Bagmati Provice, Nepal; Delhi, Maharashtra, Telangana, Karnataka, India; Jakarta and Yogyakarta Indonesia; NCR, The Philippines. All figures are for full calendar year.

This account shows how flooding can interrupt several components of a platform task simultaneously. A worker may be unable to travel through affected areas, while weakened internet connectivity prevents access to the application through which orders, navigation and communication with customers are managed. Flood exposure is therefore shaped not only by the presence of water but also by the resilience of roads, drainage, electricity and telecommunications systems.

The localised character of flooding is also important when interpreting the country-level results. Workers may experience severe exposure in particular cities or neighbourhoods even where the proportion reported across a national sample remains comparatively low. Flooding must also be distinguished from excess rainfall because intense rain can disrupt work through waterlogging and transport delays without workers identifying the conditions as a discrete flood event. Food delivery workers in Dhaka, for instance, repeatedly described water accumulating on city roads, concealing damaged surfaces, slowing travel and making some routes temporarily impassable, without necessarily identifying these conditions as a discrete flood event. Their accounts show why event records alone may understate the localised conditions through which flooding and waterlogging affect work and household mobility.[16]

Unlike precipitation averages, flood records classify events, indicating their frequency rather than the total amount of rainfall or severity of resulting damage. Figure 11 presents the number of recorded flood events in the five study countries between 2021 and 2025.

Figure 11: Number of flood events across countries, 2021 to 2025



Source: World Bank Group, Climate Change Knowledge Portal, historical natural-disaster data for Bangladesh,[17] India,[18] Indonesia,[19] Nepal,[20] and the Philippines.[21]

The data show a comparatively high number of recorded flood events across the five countries in 2021, during a period of La Niña conditions. Flood counts subsequently declined from 2021 levels, including during the development of El Niño in 2023. The data appear to show a further increase in recorded events in the Philippines, Indonesia and Bangladesh in 2025.

Notably, while ENSO may influence rainfall and flood risk, it does not independently determine whether flooding occurs. Monsoon conditions, the intensity and concentration of rainfall, river systems, land use, drainage capacity and disaster-reporting practices also affect recorded flood counts.[22] Moreover, event counts do not measure severity: a year with fewer floods may nevertheless produce greater displacement, infrastructure damage or loss of life. Further, the flood records and worker data also operate at different geographic scales. A nationally recorded flood may not have affected workers in the selected study city. Conversely, localised flooding or waterlogging reported by workers may not appear in national disaster records.

Typhoons in the Philippines

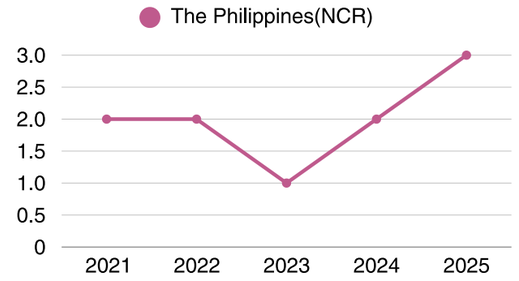
Worker-reported exposure to typhoons was confined to the Philippines. Figure 9 shows that workers across the three platform sectors in the Philippines reported typhoon-related challenges, although the proportion varied by sector. Typhoons may affect workers through several overlapping pathways – including high winds, extreme rainfall, flooding and interruptions to transport, electricity and communications – so some workers may have reported both the typhoon itself and the associated rain or flooding.

For instance, home service workers in Metro Manila described being unable or afraid to leave their homes because surrounding roads were flooded and they feared getting trapped while travelling. A home service worker in Metro Manila described the fear created by flooded roads during typhoon conditions:

> *It's scary on the road because you might get trapped when it floods.*
>
> *(Transcript ID: 050825_MANILA_d298afb2-155b-494c-8439-18c5b60eba64reynaldo_phl_029*

Her account demonstrates that work performed inside customers' homes nevertheless depends on workers being able to cross an outdoor urban environment during a storm. Workers also described concerns about navigating bookings and service expectations when typhoons made such journeys risky or unsafe. Similar accounts appeared across interviews.[23] The impacts of continued bookings and workers' limited ability to withdraw from unsafe journeys are examined in Chapter 2.

Figure 12: Number of typhoon events recorded in The Philippines, NCR (2021-2025)



Sources: Quezon City Government, Annual Report 2021–2022[24]; Department of Social Welfare and Development, reports on Severe Tropical Storm Paeng, Severe Tropical Storm Kristine, and the combined effects of the southwest monsoon and tropical cyclones Crising, Dante and Emong: 2022,[25] 2024,[26] 2025;[27] Asian Disaster Reduction Center, Record 2025-000115.[28]

In the Philippines, the number of identified tropical cyclones affecting the National Capital Region varied between 2021 and 2025.[3] The increase recorded in the data for 2025 coincided with weak La Niña conditions during part of the year. However, the number of tropical cyclones affecting Metro Manila cannot be attributed to ENSO alone and instead depends upon on storm trajectory, intensity, associated monsoon rainfall.

2. Heat and rising temperatures

Workers across all nine study cities reported challenges associated with increasing heat, although the proportions varied substantially. As shown in Figure 13, reporting was highest in Kathmandu (59%) and Delhi (56%), followed by Mumbai (48%), Hyderabad (45%) and Jakarta (40%). Lower proportions were recorded in Dhaka (29%), Yogyakarta (24%), Bengaluru (22%) and Metro Manila (12%).

Figure 13: Workers reporting challenges associated with heat and heatwaves, by city

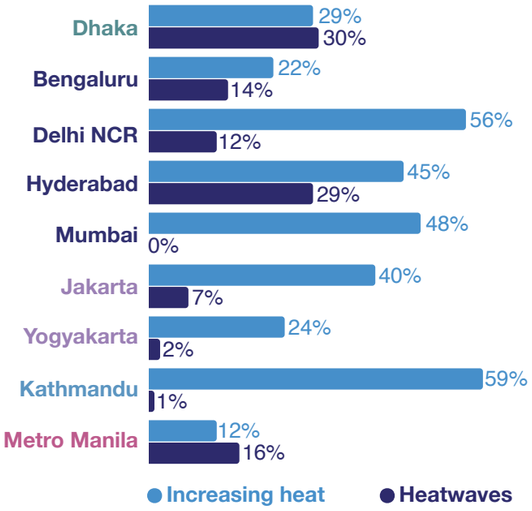


Figure 13 also shows that workers distinguished between increasing heat and heatwaves. Increasing heat was reported more frequently than heatwaves in seven of the nine cities. The two exceptions were Dhaka, where 29% reported increasing heat and 30% reported heatwaves, and Metro Manila, where the corresponding proportions were 12% and 16%.

Heatwave reporting was highest in Dhaka (30%) and Hyderabad (29%), followed by Metro Manila (16%), Bengaluru (14%) and Delhi (12%). Lower proportions were recorded in Jakarta (7%), Yogyakarta (2%) and Kathmandu (1%), while no workers in Mumbai reported heatwave-related challenges. Kathmandu and Dhaka therefore present a particularly revealing contrast: **Kathmandu recorded the highest reporting of increasing heat but almost no reporting of heatwaves, whereas Dhaka recorded a comparatively lower level of increasing heat but the highest heatwave reporting. Metro Manila similarly recorded more reports of heatwaves than of increasing heat.**

These differences reflect variation in the conditions workers experienced as well as how they understood the two survey categories. "Increasing heat" may be understood as a gradual or persistent change in everyday conditions, while "heatwave" may suggest a discrete and unusually severe episode. The findings

[3] The events identified in Figure 12 illustrate the recurring exposure of Metro Manila to tropical cyclones and associated rainfall and flooding during the study period. They should not, however, be interpreted as a complete annual census of every cyclone that affected the National Capital Region. The sources were produced by different institutions for different purposes: some document city-government activities, while others report the effects of particular storms or combined weather systems. An events absence from the reviewed sources therefore should not be treated as evidence that no cyclone affected NCR in that year.

should therefore be interpreted as worker-reported categories of experience rather than meteorological classifications of particular events.

Kathmandu's results are especially notable. Figure 14 shows that its average surface-air temperature remained lower than those of the other study locations, yet it had the highest proportion of workers reporting challenges associated with increasing heat. Absolute annual temperature alone therefore does not determine how heat is experienced. Seasonal peaks, departures from locally familiar conditions, humidity, direct sunlight, the timing and duration of exposure, and workers' ability to rest and cool down may all influence whether heat becomes consequential.

Even where workers did not necessarily use the term "heatwave" they described the bodily effects of working under intense sunlight and high temperatures. A food delivery worker in Dhaka explained:

> *Due to excessive heat, my body becomes weak and I sweat a lot. When I sweat so much and feel weak, I lose the motivation to work. It feels like my head is spinning, and I might fall down. Working under the sun is very difficult, and our work becomes challenging when there is too much sunlight or high temperatures.*
>
> *(Transcript ID: BAN_DHK_202)*

Similar accounts from Dhaka referred to dehydration, dizziness, weakness, exhaustion and the need to rest or slow down.[29] A motorcycle-taxi platform worker in Jakarta similarly described the direct physical effects of heat:

> *During the dry season and extreme heat, I get tired more quickly and often get headaches from the heat.*
>
> *(Transcript ID: 260425_ Jakarta)*

This account shows that heat exposure is not confined to food delivery. A ridesharing worker in Hyderabad also described how heat and rainfall produced different but overlapping constraints:

> *I get dizzy sometimes because of the heat. Also, the bookings are less. People prefer cars more. Even I get tired during sunny days. During rainy days there is always traffic, potholes and, if it is too intense, I will have to stop doing rides. If I stop doing rides, I won't be able to meet my incentives also on rainy days.*
>
> *(Transcript ID: 6adf43ea-64be-41a3-9537-c1aab064c969)*

His account shows, exposure is shaped both by the hazard and by the organisation of platform work. Heat both causes dizziness and fatigue and reduces demand for his service, while intense rainfall makes roads unsafe but stopping work under these conditions places his incentives out of reach.

A ridesharing worker in Delhi describes how heat affects the vehicle, his health and the cost of providing a customer-facing service:

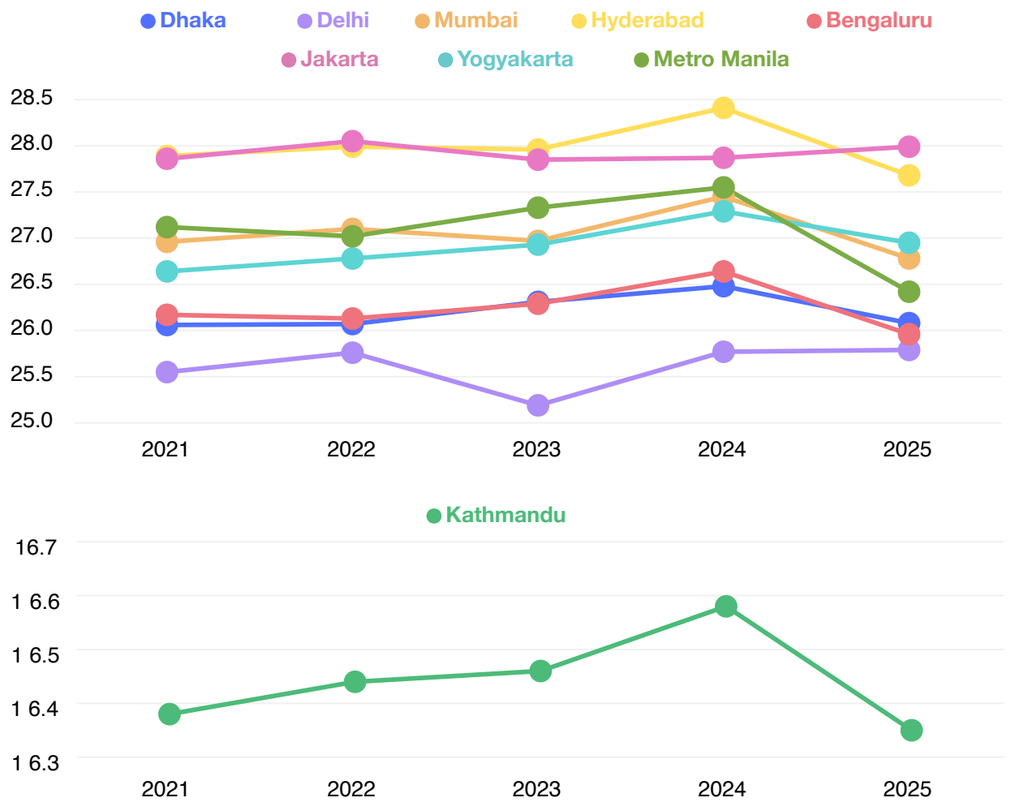
> *The biggest problem is that the car heats up so much that it gets unbearable. Because of the heat, there is also a greater risk of CNG catching fire. We also have to keep the AC constantly on for the customers. Our overhead costs increase, but the company doesn't compensate us for it and they don't pay anything extra. I also get ill during the peak summers due to exhaustion and dehydration.*
>
> *(Transcript ID: IND_DEL_001)*

In his account he explains that ridesharing workers experience heat both as bodily exposure and as an operating cost. Air conditioning is necessary to make the vehicle tolerable for customers, but the worker pays the additional fuel cost. Heat protection for customers inside the vehicle can therefore transfer expenditure to the driver while leaving the risks of exhaustion, dehydration and vehicle overheating for the driver unresolved.

In line with these findings, in a separate line of 2026 PCI research with informal workers in Dhaka, Delhi, Jakarta, Kathmandu and Quezon City, workers similarly characterise urban heat exposure as extending across the places where they live, work and travel. This complimentary study also identifies elevated nighttime temperatures and unreliable electricity as contributing to a "recovery deficit," in which workers remain unable to cool down and recuperate adequately before the following working day.[30]

Figure 14 presents the average surface air temperature recorded across the nine study cities between 2021 and 2025. In most of the cities, averages fell within a relatively narrow range of 25 – 28°C, while elevated Kathmandu recorded lower average temperatures. The figures nevertheless show year-to-year variation within and among the study locations.

Figure 14: Average Surface Air Temperature[4] across nine study cities in Asia, 2021-2025[5]



Source: World Bank Climate Change Knowledge Portal data for Bangladesh[31]; India[32]; Indonesia[33]; Nepal[34]; and the Philippines.[35]

Nearly all nine cities recorded an increase in average surface air temperature in 2024. This coincided with the mature phase of the 2023–2024 El Niño and exceptional global warmth. The World Meteorological Organization identified 2024 as the warmest year in the observational record, with the global mean near-surface temperature approximately 1.55°C above the 1850–1900 pre-industrial baseline. Notably, this 1.55°C figure refers to the difference between the 2024 global mean and the pre-industrial baseline, rather than a rise occurring within a single year.[36]

The exceptionally warm global conditions of 2024 provide context for the increase visible across the study cities. Several study cities recorded lower averages in 2025 as El Niño conditions receded. These changes should not be attributed solely to La Niña, which was weak and present during only part of the year. Lower averages during the portion of 2025 preceding the end of fieldwork do not establish a reversal of longer-term warming. They indicate only that temperatures in some study cities were lower than during the exceptional 2024 comparison period.

Kathmandu also recorded changes in annual average temperature during the five-year period, despite remaining cooler in absolute terms because of its elevation. Its combination of relatively low absolute temperatures and high worker reporting further demonstrates why climate exposure must be

[4]Average surface air temperature refers to the average temperature of the air near the Earth's surface over a specified period.
[5]Specific unit of measurement:- Annual mean (°C). Data presented is as follow- Dhaka, Nepal:- Bagmati Province, India:- Delhi, Maharashtra, Telangana, Karnataka, Indonesia:- DKI Jakarta, DI Yogyakarta, The Philippines:- NCR. All figures are for full calendar year.

assessed in relation to local conditions and workers' actual environments rather than through cross-city temperature rankings alone.

Moreover, average surface air temperatures provide only a partial indication of the conditions experienced by platform workers. Averages smooth out seasonal and daily variation and may therefore conceal periods of acute exposure during the hottest months and hours of the day. They also do not measure humidity, direct solar radiation, heat retained by urban surfaces or heat generated by cooking, appliances or inadequate ventilation inside the homes where home-service workers perform tasks.

Together, Figures 13 and 14 show the value of combining worker reports with climatic indicators. The secondary data establish the recent temperature conditions surrounding the research, while workers' accounts reveal where those conditions became consequential for work and household life. The employment, health and income effects of heat exposure are examined in the chapters that follow.

3. Cold conditions

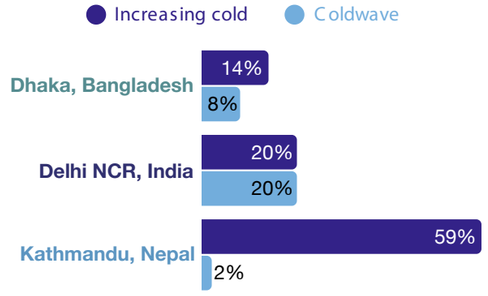
Cold was the most geographically concentrated temperature-related hazards reported by workers. Almost 60% of workers in Kathmandu reported challenges associated with cold, while reporting was limited in Delhi and Dhaka and negligible across the other study cities. Kathmandu's elevation distinguishes it from the other study cities and produces substantially cooler winter conditions.

A food delivery worker in Kathmandu described how cold affected the physical act of riding:

> *In the cold, it's hard to ride because our hands get frozen. It is always challenging in the rain, the heat and the cold, but you have to manage somehow.*
>
> *(Transcript ID: NEP_KAT_37)*

Other Kathmandu food delivery workers similarly described extreme cold while working at night, cold-related headaches and illness, and the need for jackets, gloves, hats and appropriate footwear. Their accounts also show variation in the protection available. Some workers consider warm clothing sufficient while others suggest that there is scope for improvement in platform-provided gear. These differences help explain why the same outdoor temperature may produce unequal exposure among workers.[37]

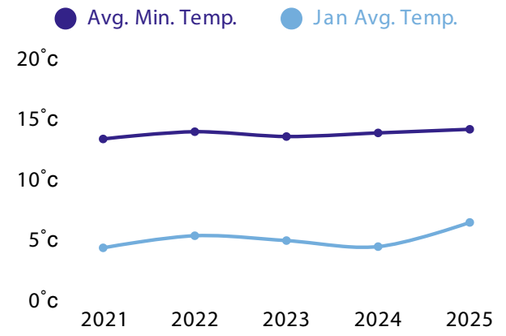
Figure 15: Workers reporting challenges associated with cold by country



To contextualise the concentration of worker reports in Kathmandu, Figure 16 presents the mean daily minimum temperature recorded at Kathmandu Airport during January each year from 2021 to 2025. January is used because it provides a consistent indicator of winter nighttime and early-morning conditions. Temperatures fluctuated across the five-year period, with average January temperatures ranging from 4.3°C to 6.4°C and reaching their highest level in 2025.



Figure 16: Average annual minimum temperature and January average temperature, 2021-2025[6]



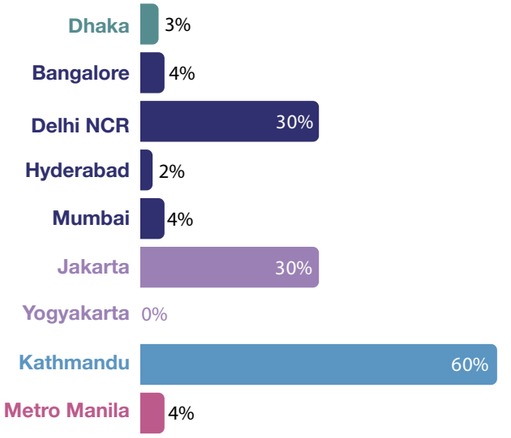
Source: Climate Kathmandu Airport, Climate data 2021, Tutiempo.net: Annual[38] & January[39]; Climate Kathmandu Airport, Climate data 2022, Tutiempo.net: Annual[40] & January[41]; Climate Kathmandu Airport, Climate data 2023, Tutiempo.net: Annual[42]; Kathmandu Weather in January 2023, Climate Yearbook[43]; Kathmandu Weather, Climate Yearbook: 2024 Annual[44] & January[45]; Kathmandu Weather, Climate Yearbook: 2025 January[46]; State of Nepal Climate: Department of Hydrology and Meteorology: 2025 Annual.[47]

The persistence of worker-reported cold exposure alongside fluctuating or somewhat warmer January averages is not contradictory. A monthly average may rise while workers continue to encounter cold temperatures during early mornings, evenings and particular cold spells. Exposure also depends on how long workers remain outdoors, the protection available to them and whether their work can be postponed when temperatures fall. Platform workers who begin work early, return home late or spend extended periods outdoors, may encounter temperatures considerably below the monthly average. Figure 16 therefore establishes the recent winter conditions surrounding the research, while Figure 15 shows where those conditions became consequential for workers. The climatic data therefore provide context for, rather than a direct measure of, workers' occupational and household exposure to cold.

4. Air pollution and occupational exposure

Air pollution was reported much less consistently than heat, rainfall and flooding, despite persistently poor measured air quality in several study cities. Kathmandu was the principal exception: 60% of workers surveyed there identified air pollution as a challenge, compared with single-digit proportions in Indian cities with the exception of Delhi NCR; Dhaka and Metro Manila. Figure 17 presents the reporting rate across all nine cities.

Figure 17: Workers reporting air pollution as a challenge by city



Kathmandu workers described air pollution as a tangible feature of their working environment. Food delivery workers referred particularly to dust entering food packages, irritating their eyes and accompanying coughing or other respiratory discomfort while travelling:

> *Air pollution causes dust to get into the food and affects the eyes.*
>
> *(Transcript ID: NEP_KAT_39)*

Another described its effects in bodily terms:

> *Due to air pollution, I experience coughing, cold, and eye irritation.*
>
> *(Transcript ID redacted. Contains respondent name)*

[6]For the Average annual minimum temperature is the mean of the daily minimum temperatures. For 2021-2023 it is calculated based on 362 days of data. For 2024 it is calculated on 366 days and for 2025 it is not mentioned. For January data; it was calculated based on 31 days

Other worker accounts in Kathmandu similarly described coughing, eye irritation and fatigue while working in dusty or polluted conditions.[48] While Kathmandu's unusually high reporting rate requires further investigation rather than a definitive explanation, the Kathmandu Valley's topography can restrict the dispersion of pollutants, particularly under stagnant winter conditions. Workers' recognition of the problem may also have been influenced by visibly polluted air, public discussion of severe pollution episodes or recent experiences of work disruption.[49]

Conversely, a comparatively low reporting rate across other cities should not be interpreted as evidence that workers are unexposed or unaffected. Unlike flooding or a typhoon, air pollution does not necessarily produce a clearly bounded interruption that workers can readily associate with a loss of work or income. Its health effects may emerge gradually, while symptoms such as coughing, headaches, eye irritation or breathlessness may not be identified by workers as consequences of polluted air. Survey responses therefore measure workers' recognition and reporting of air pollution as a challenge, rather than their actual level of exposure. The absence of a formal suspension of work may further obscure the hazard.

Measured air pollution across the study sites

The Air Quality Index (AQI) converts measured concentrations of selected pollutants into categories designed to communicate short-term health risks. Under the United States AQI system, a higher value indicates greater potential harm. The index may incorporate particulate matter, ground-level ozone, carbon monoxide, sulphur dioxide and nitrogen dioxide; the reported AQI is ordinarily determined by the pollutant producing the highest sub-index at that time. It is therefore not itself a direct measurement of the concentration of a single pollutant.[50]

A real-time snapshot taken in August 2026 illustrates the scale of pollution affecting several study cities. At the time the ranking was recorded, Delhi and Dhaka occupied 1st and 6th place respectively in IQAir's global city ranking. Jakarta was ranked 20th, Manila 44th, Mumbai 49th and Kathmandu 57th. Six of the nine study cities therefore appeared among the 100 cities recording the poorest air quality in the world at that particular time.[52]

This snapshot is especially striking when read alongside workers' reports. Kathmandu had the highest proportion of workers identifying air pollution as a challenge, but Delhi and Dhaka occupied substantially higher positions in the real-time ranking. The contrast suggests that worker reporting cannot be treated as a proxy for measured exposure. Severe pollution may become normalised, may not produce an identifiable interruption to work or may cause symptoms that workers do not immediately associate with air quality.

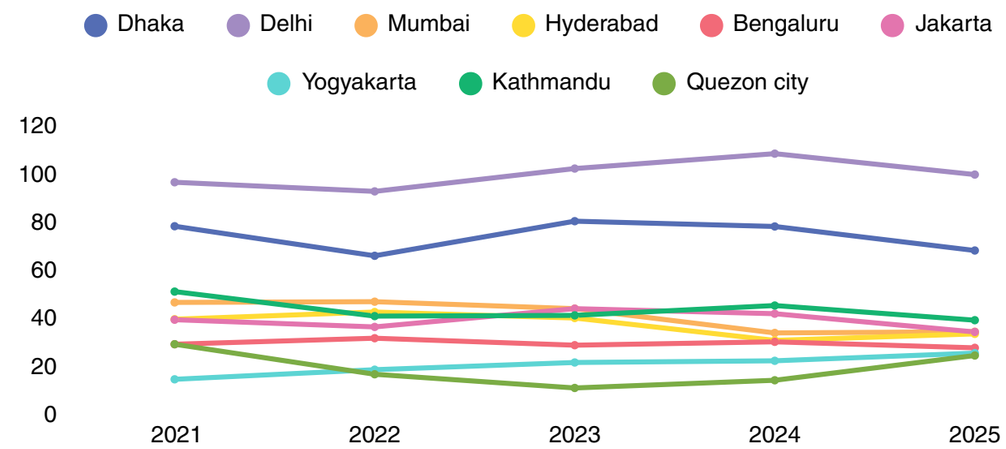
Further, real-time rankings change from hour to hour according to atmospheric conditions, the pollutants determining the AQI and the availability of monitoring data. The August 2026 snapshot also post-dates the 2025 fieldwork and is therefore included only to illustrate the continuing relevance of air pollution across the study cities. The analysis that follows uses annual mean $PM_{2.5}$ concentrations to provide a more consistent comparison across the study period. Figure 19 presents annual mean $PM_{2.5}$ concentrations, subject to the availability and comparability of monitoring data across all nine cities. $PM_{2.5}$ refers to fine particulate matter with an aerodynamic diameter of 2.5 micrometres or less.[53]

Figure 19 shows substantial differences in measured air pollution across the nine study cities between 2021 and 2025. Delhi recorded the highest value in every year, increasing from 92.6 in 2022 to 102.1 in 2023 and 108.3 in 2024, before declining to 99.6 in 2025. Dhaka consistently recorded the second-highest levels, fluctuating between 65.8 and 80.2 during the period. The remaining South Asian cities recorded substantially lower values. Mumbai and Kathmandu generally remained between approximately 34 and 51, while Bengaluru remained comparatively stable at approximately 28–32. Hyderabad declined from around 39–43 during 2021–2023 to approximately 30 in 2024, before increasing slightly in 2025.

Figure 18: US Air Quality Index scale[51]

0-50	51-100	101-150	151-200	201-300	301+
Good	Moderate	Unhealthy for sensitive groups	Unhealthy	Very Unhealthy	Hazardous

Figure 19: Annual mean $PM_{2.5}$ concentration across the study cities, 2021–2025 (µg/m³)[7]



Source: World's most polluted cities, IQAir[54]

Among the Southeast Asian cities, Jakarta recorded the highest values throughout the period. Its recorded level rose from 36.2 in 2022 to 43.8 in 2023 before declining to 34.1 in 2025. Yogyakarta showed the clearest upward pattern, rising from 14.4 in 2021 to 25.3 in 2025. Metro Manila followed a less consistent pattern: its recorded level declined from 29.0 in 2021 to 10.8 in 2023, before increasing to 24.3 in 2025.

These five-year patterns provide context for workers' accounts but do not, by themselves, establish long-term improvement or deterioration in city air quality. Changes may reflect variation in emissions and atmospheric conditions, but also differences in monitoring coverage, data availability and calculation methods between cities and years.

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Interactions with weather and urban conditions

Air pollution arises principally from emissions and other sources – including transport, industry, power generation, construction dust, waste burning, household fuel use and, in some locations, agricultural burning. Weather and urban form influence how those pollutants accumulate, disperse and affect workers. Wind can disperse pollution; rainfall can temporarily remove some airborne particles; and stable atmospheric conditions or temperature inversions can trap pollutants close to the ground.[55]

Heat can also interact with forms of air pollution. High temperatures and sunlight accelerate the chemical reactions that generate ground-level ozone, while hot and stagnant conditions can limit atmospheric dispersion. Heat does not invariably increase every pollutant, however, the outcome depends on pollutant sources, atmospheric chemistry, wind, humidity and other local conditions.[56] Traffic density, emissions, built form, limited ventilation and atmospheric conditions combine to shape workers' exposure as they travel, wait for assignments and perform tasks across the

[7]The most polluted cities according to data aggregated from over 80,000 data points. The 2025 IQAir World Air Quality Report provides a comprehensive overview of air quality across the globe for the calendar year 2025. This Report presents PM2.5 air quality data sourced from 9,446 cities spanning 143 countries, regions, and territories. The information is sourced from more than 40,000 regulatory monitoring stations and low-cost sensors, managed by a wide array of contributors, including government agencies, universities, non-profit organizations, private enterprises, and engaged citizen scientists around the world. PM2.5 concentrations are reported in micrograms per cubic meter (µg/m³), following the World Health Organization (WHO) annual PM2.5 air quality guideline and interim targets.

city. These conditions can expose platform workers to overlapping heat and pollution risks, even when neither hazard causes work to stop completely.

Long-term exposure to air pollution is associated with cardiovascular and respiratory diseases, including stroke, ischaemic heart disease, chronic obstructive pulmonary disease and lung cancer.[57] The potentially cumulative nature of these effects makes air pollution particularly concerning. While challenges associated with AQI are reported less in comparison to heat, rain, and cold where the impacts are more visible, the long-term and compounding nature of air pollution health effects on outdoor workers may only become apparent after years of exposure, meaning workers may not yet connect current symptoms to air quality.

C. Urban amplification

Workers experience the effects of heat, rainfall, flooding and air pollution as an interaction between climate and features of the urban environments through which they move and work, including heat-retaining roads, congested routes, low-lying neighbourhoods, poorly drained streets, multistorey buildings, customer premises and unreliable electricity and telecommunications systems. Physical forms and uneven infrastructure can intensify a hazard, extend its duration and generate additional obstacles to completing paid work.

Workers' accounts reveal several connected forms of urban climate amplification. Heat accumulates on roads and inside buildings, while limited shade restricts opportunities to cool down. Heavy rainfall produces waterlogging that conceals damaged road surfaces and makes routes impassable. Electricity failures prevent workers from charging phones or contacting customers and can stop lifts from operating, adding further physical labour to deliveries. The same disruptions continue at home, where flooding, water shortages, power failures and retained heat limit workers' ability to rest and recover.

Urban amplification consequently operates across the full geography of platform work: the worker's home, the journey to and between tasks, places of waiting, customer premises and the digital infrastructure through which work is allocated. These effects are unevenly distributed. Workers living in poorly serviced neighbourhoods or depending continuously on roads, electricity and mobile connectivity can bear a disproportionate share of the disruption, despite exercising little control over the systems producing it.

1. Urban Heat Island (UHI) Effect

The UHI effect occurs when built-up areas experience higher temperatures than surrounding areas. Asphalt, concrete and other dark or impermeable surfaces absorb and retain solar energy; limited vegetation reduces shade and evaporative cooling; buildings can restrict airflow and trap heat; and vehicles, air conditioning systems and industrial activity release additional heat. Together, these processes can raise daytime temperatures and, particularly importantly for workers' recovery, slow cooling after sunset.[58]

For platform workers, these urban conditions become part of the physical labour required to complete a task. A food delivery worker in Dhaka described the cumulative demands of travelling through intense heat and then entering a building without a functioning lift:

> *It's very difficult for us to work in extreme heat and intense sunlight. Sometimes, we have to deliver orders three or four kilometres away. Riding a bicycle that far and then having to deliver to a customer on the fifth floor, where there's no elevator, is very tough for us.*
>
> *(Transcript ID: BAN_DHK_174)*

His account shows how heat exposure combines with distance, human-powered transport and the vertical geography of the city. His task does not end when he reaches the customer's building: stairs, unavailable lifts and the location of the customer's home can add further exertion after an already heat intensive journey. Urban form therefore affects both the intensity of exposure and the physical effort required to earn the task payment. Recent cross-sectoral research further highlights the occupational significance of this effect. Heat-retaining roads, limited vegetation, restricted airflow and waste heat can extend the hours during which workers are exposed and reduce nighttime recovery. For digital platform economy workers and others who work on streets and roads, the urban heat island therefore affects both the intensity and duration of exposure.[59] Higher urban temperatures also increase demand for cooling and can contribute to ground-level ozone formation under suitable atmospheric conditions. Increased air-conditioning may protect people who can afford and access it, while simultaneously adding waste heat outdoors and placing additional pressure on electricity systems.[60]

2. Unequal urban geographies of rest and recovery

Concentrations of people, buildings, vehicles and economic activity can increase the number of people and livelihoods exposed when a hazard occurs. They may also concentrate transport emissions, energy demand and waste heat.[61] These outcomes are not inevitable consequences of population density, however. They depend on land-use planning, public transport, housing quality, vegetation, waste management and the provision and maintenance of public infrastructure.[62]

Infrastructure intended to improve one part of the city may also redistribute risk to surrounding residents. A Dhaka food delivery worker described how raising the road had altered the relative position of his home:

> *Our house is low-lying. Since the roads have been raised, the houses have become lower. When it rains heavily, water accumulates and floods the house; water enters inside. The family members fall ill and get fever. In extreme heat, the fan runs all the time, so the electricity bill is high.*
>
> *(Transcript ID: BAN_DHK_173)*

This account connects urban planning, household exposure and recovery. Raising the road did not eliminate flood risk; from the worker's perspective, it contributed to water being displaced into lower-lying homes. The same household then faced illness following flooding and increased electricity expenditure during extreme heat. Urban amplification thus operated not only by increasing exposure during paid work but also by weakening the conditions in which the worker and household could recover.

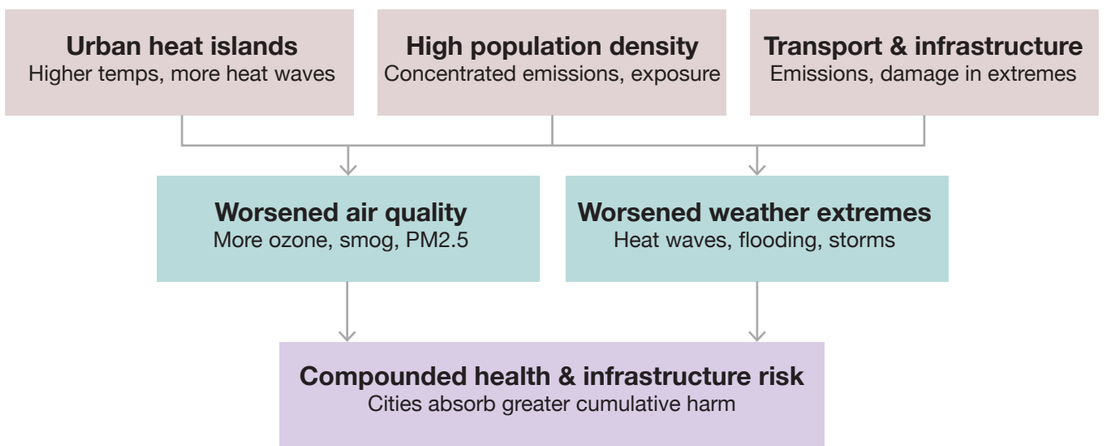
A ridesharing worker in Mumbai similarly described moving between exposure on the road and inadequate protection at home:

> *Excess rain and increasing heat affect work. In summer, we cannot increase the AC because it uses more fuel – we face extreme heat inside the car. During the rainy season, there is waterlogging in many parts of Mumbai. I don't have my own house, so I shift every year from one place to another. Because of this, we face many issues like leaking roofs.*
>
> *(Transcript ID: 0983be23-2573-469f-9059-1d885fcf4971)*

His account connects several urban sites of exposure: heat inside the vehicle, worker-financed cooling, waterlogged roads and insecure rental housing. He cannot fully escape climate exposure by completing a journey or returning home; the conditions he encounters while working are followed by inadequate protection and recurring relocation at home.

Further, lower income workers may live in neighbourhoods with fewer trees and shaded spaces, more precarious housing, inadequate drainage and unreliable electricity.[63] Platform workers also move through multiple parts of a city to reach customers or obtain sufficient work. Their exposure is therefore shaped not only by where they live, but also by the routes they travel, the places where they wait for assignments and the locations in which they perform tasks. A food delivery worker in Dhaka describes how

Figure 20: Urban conditions that amplify workers' exposure to climate-related hazards



several features of the city impact a single working journey:

> *When delivering food to distant places, we often get stuck in heavy traffic, have to pass through buses and trucks, and endure intense dust and heat. Economically, we also face losses. Many areas are dangerous where we encounter theft and robbery risks. We have to be cautious while delivering in such places. Sometimes, even when we lock our bicycles outside, the locks are broken and the bicycles get stolen. Often, guards inside housing complexes do not allow us to keep bicycles inside, saying it is prohibited.*
>
> *(Transcript ID: BAN_DHK_167)*

In his account, he moves between congested roads, polluted transport corridors, neighbourhoods perceived as unsafe and privately governed residential complexes. Access to customer premises does not necessarily provide protection since rules imposed by housing complexes may require workers to leave an essential productive asset outside, exposing it to theft. Urban inequality consequently shapes not only where climate-related exposure occurs, but also worker security and the security of the equipment on which their livelihoods depend.

Platform worker routes also differ from conventional commutes between one home and one workplace. Each task can send a platform worker to a new destination, producing a changing geography of heat, traffic, pollution, road danger and customer-controlled space. The allocation of tasks through a platform can therefore determine the urban environments workers must enter without giving them corresponding control over the conditions they encounter there.

3. Transport, drainage and other infrastructure

Platform work depends on several systems functioning simultaneously: roads and transport must remain usable, phones must be charged, telecommunications must connect and customer premises must remain accessible. A failure in any one system may delay a task; failures across several systems can make work impossible.

Roads and other impermeable surfaces limit the infiltration of rainwater and increase surface runoff. Where drainage systems are inadequate, obstructed or overwhelmed, intense rainfall can produce waterlogging and urban flooding.[64] Flooded or damaged roads can prevent workers from reaching customers, extend journey times, damage vehicles and equipment and increase the risk of accidents.

Home service workers are exposed not only while travelling between bookings but also to the conditions inside customers' homes. A worker in Bengaluru described carrying equipment through rain and then working with oils and heat in customer premises where access to fans or air conditioning depended on the customer:

> *It's very difficult to work while it's raining, so we have to carry the bed and all.… When it's very sunny, it's hard again because we have to use oils and heat.… When there's no fan in the customer's place, and when the customer doesn't want the fan or the AC, then you can't focus on your work.*
>
> *(Transcript ID: 691518ad-c0a0-4695-a898-aeb983cddd87)*

Her account shows why performing the principal service indoors does not eliminate climate-related occupational exposure since temperature and ventilation inside is controlled by individual customers rather than by the platform or the worker.

A food delivery worker in Dhaka also described how rainfall impacts access to work:

> *During heavy rains, there is no electricity. Then phones can't be charged and get switched off. It becomes impossible to contact anyone by phone. Also, in heavy rain, water accumulates on the roads, making movement very difficult.*
>
> *(Transcript ID: BAN_DHK_173)*

He encounters power failure, communications interruption and waterlogged roads as one combined barrier to completing paid tasks.

These infrastructures are interdependent and may be impacted across hazards. For instance, electricity systems may come under increased pressure during extreme heat as demand for cooling rises, while storms and floods can damage electricity and telecommunications infrastructure. Power or network interruptions can prevent workers from charging phones, receiving assignments, navigating routes or communicating with customers and platforms. Power failures may also stop lifts from operating, adding further physical labour to deliveries. For home service workers, interruptions to electricity or water may determine whether a task can be performed inside a customer's home.

D. Conclusion: Unequal exposure in the digital platform economy

Climate-related hazards affected digital platform workers across every country, city and sector covered by the research. More than 4 in 5 workers reported that extreme weather had negatively affected their work or households. Yet this exposure did not take a uniform form. Excess rainfall was reported across all five countries and three sectors; floods and typhoons were more geographically concentrated; heat affected workers in cities with substantially different average temperatures; and cold emerged as a significant concern primarily in Kathmandu.

The five-year climate data helps place workers' 2025 accounts within a recent period of substantial variability. Transitions between La Niña, El Niño and neutral conditions contributed to changing combinations of heat, rainfall and flood risk across the study locations. This data shows, that workers entered the study year after several years of recurring and shifting hazards rather than against a stable climatic background. Workers' accounts also demonstrate that climatic indicators alone cannot measure occupational exposure. Understanding climate risk in the platform economy therefore requires climatic and environmental data to be read alongside workers' accounts of where they travelled, waited, performed tasks and recovered.

The organisation of platform work shapes how these hazards are experienced - across all three sectors, access to work depends on workers' continued mobility, availability, digital connectivity and ability to absorb interruptions. Avoiding exposure may consequently require workers to forgo tasks and income, while continuing to work translates into health, safety and asset-related risks. Urban conditions further intensify this exposure. Climate risk is produced not only by the severity of a hazard, but by the interaction between environmental conditions, urban systems and the organisation of platform work.

This chapter establishes the conditions of exposure. The chapters that follow examine what happens when those conditions enter workers' livelihoods and households: how climate-related hazards interrupt work, reduce earnings, damage productive assets, affect health and care, and the impact of limited social protection on workers and their families.



Chapter 2: Climate-Driven Employment Risks in the Digital Platform Economy

Climate-related hazards become employment risks through the organisation of platform work. Because workers are generally paid by the task, interruptions caused by extreme heat, rainfall, flooding, typhoons and other hazards can result immediately in lost earnings. Yet workers cannot necessarily avoid these risks simply by withdrawing from work. Remaining offline, refusing a task or cancelling a booking may itself carry financial and employment consequences.

Workers therefore face a double bind: stop working and lose income, or continue working and accept greater risks to health, safety and productive assets. Although platform companies do not create the underlying climate hazard, their systems of payment, task allocation, evaluation and discipline influence how its consequences are experienced by workers. Where platforms continue operating without corresponding adjustments to targets, timelines, cancellation rules or worker protections, workers tend to bear a significant cost of climate disruptions.

This chapter first examines how climate-related hazards disrupt workers' access to work and earnings. It then considers how platform-management practices may create situations where workers find it difficult to withdraw from work under unsafe conditions, before examining the resulting occupational health and safety risks, damage to productive assets and additional work-related costs. The chapter concludes by explaining how climate hazards accelerate existing employment risks and transfer the costs of disruption and recovery onto workers.

A. Climate-related disruption of work and earnings

Among the 81% of workers who reported that climate-related hazards affected their work or households, **91% reported a resulting disruption to their earnings. This was common across all three sectors: among workers reporting climate impacts, 94% of food delivery workers, 93% of ridesharing workers and 81% of home service workers described impacts on work or earnings.**

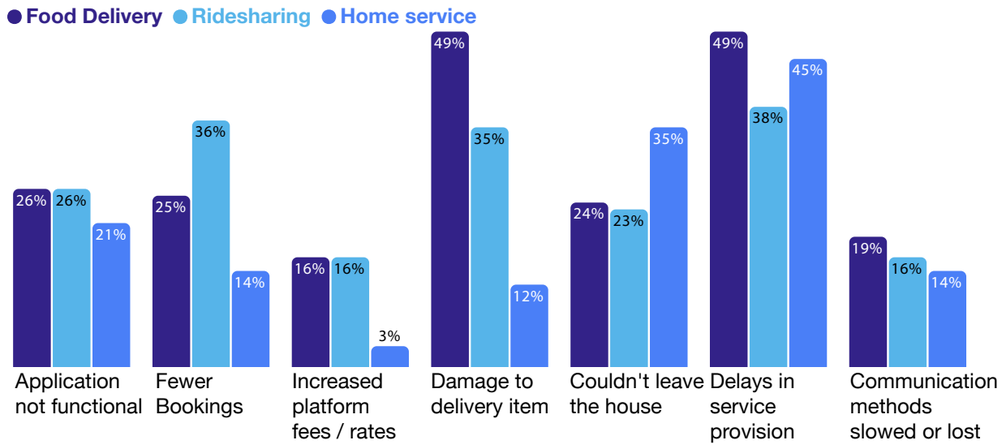
Figure 21 identifies seven ways climate-related hazards disrupt work and earnings. Some prevent workers from accessing work at all: workers cannot leave their homes, platform applications stop functioning, communications are slowed or lost, or fewer bookings become available. Other mechanisms affect tasks already under way through delays, damage to transported items, or increased platform fees or rates.

1. Barriers to accessing work

The digital platform workers we spoke to described climate-related barriers to accessing work. **35% of home service workers reported that climate-related conditions prevented them from leaving their homes, compared with 24% of food delivery workers and 23% of ridesharing workers.**

Digital and communications disruptions during climate events created an additional barrier. **Platform applications became non-functional for 26% of**

Figure 21: Mechanisms through which climate-related hazards disrupt workers' earnings



food delivery and ridesharing workers and 21% of home service workers. Communications were slowed or lost for 19% of food delivery workers, 16% of ridesharing workers and 14% of home service workers.

A food delivery worker in Kathmandu described how rainfall could disrupt the physical and digital systems required to obtain and complete tasks:

> *Weather events cause issues with transportation because accidents can happen when it's raining, roads can get damaged, and landslides may occur. Additionally, communication problems arise when it rains, causing power outages and internet disruptions.… Without internet, I can't receive orders and can't do my job, which is a significant issue for me.*
>
> *(Transcript ID: NEP_KAT_43)*

This account shows that access to platform work depends on several interconnected systems. A worker may be willing and physically able to work but still be unable to receive orders when electricity or internet connectivity fails. Conversely, a functioning application does not provide meaningful access to work when damaged roads, flooding or landslides prevent the worker from travelling. Because this interrupted availability is ordinarily unpaid, the worker bears earnings consequence of failures occurring across both urban and digital infrastructure.

Such interruptions have distinctive consequences in platform-mediated work. Applications and communication systems connect workers to customers, provide task offers and location information, and record whether work has been accepted and completed. Workers could therefore remain physically available but be unable to obtain or complete paid tasks. The time they spent waiting for these systems to resume ordinarily generates no earnings.

Workers also report receiving fewer bookings during climate-related disruptions. This affected 36% of ridesharing workers, 25% of food delivery workers and 14% of home service workers. In these cases, workers remained potentially available for work but customer demand or the number of tasks offered to them declined.

2. Disruption to tasks in progress

The most frequently reported climate-related disruption of work and earnings among food delivery and home service workers was delay in service provision. **Delays affected 49% of food delivery workers, 45% of home service workers and 38% of ridesharing workers.** Flooding, waterlogging and congestion could extend journeys, while extreme heat, rainfall and interruptions to electricity or communications could slow the task itself. Longer completion times reduced the number of paid services workers could perform during the working day.

Food delivery workers in Dhaka repeatedly described this conversion of slower travel into lower task income. One worker provided a concrete comparison:

> *Heavy rain makes it difficult for me to work. I get wet, delivering food becomes hard, and the food gets wet. During heavy rain, I can deliver fewer orders than usual. Normally, I can do about 15 deliveries a day, but in the rain, I manage around 10. Less work means less income. Sometimes, I also get sick from getting wet in the rain.*
>
> *(Transcript ID: BAN_DHK_172)*

The particular number of deliveries reflects this worker's experience rather than a general average. The underlying sequence, however – slower movement, fewer completed tasks, reduced income and possible illness – appeared across multiple Dhaka food delivery accounts.

Damage to items being transported was reported by 49% of food delivery workers and 35% of ridesharing workers, compared with 12% of home service workers. The high rate among food delivery workers is consistent with the exposure of food and packaging to rain, flooding and other conditions during transit. For instance, Dhaka food delivery workers described food packages becoming wet, leaving food cold or spoiled during rainfall. The consequences varied. Some workers were able to explain the delay to customers or obtain assistance from the office, while others reported rejection, cancellation, reduced payment or responsibility for the loss. Damage creates a direct financial loss where workers are required to replace or reimburse an item. As described in part B of this chapter, delays and damaged items could also prompt customer complaints, adverse ratings or other consequences.

3. Late-service penalties and related charges

Increased platform fees or rates were reported by 16% of food delivery workers and 16% of ridesharing workers, compared with 3% of home service workers. This survey category principally captured penalties or charges arising when hazardous conditions delayed a service rather than instances where platforms systematically increased commissions or customer prices, or offered workers higher rates, during climate-related events.

A ridesharing worker in Bengaluru described how rainfall and the resulting traffic affected arrival at a customer's pickup point:

> *When it rains, we face a lot of problems at the pickup point. We can't pick up even if we are close to the pickup point because of the traffic.… Customers keep cancelling our orders. Sometimes, we have to pay cancellation charges to the company.*
>
> *(Transcript ID: 263676e1-3e7c-44cc-bd49-9500c7718755)*

The account shows how a delay originating in rainfall and congestion could become a direct financial cost to the worker. Although the worker did not control the weather, traffic conditions or the customer's decision to cancel, the resulting charge was applied through the platform relationship. The worker consequently lost both the expected fare and, potentially, an additional amount through the cancellation charge.

These charges represent a distinct mechanism of earnings loss. Climate-related disruption does not merely reduce the number of tasks a worker can complete; platform rules can impose an additional financial consequence when the disruption makes timely completion impossible. The operation of cancellation rules, ratings and other performance consequences is examined further in section B.

B. Platform governance and pressure to work through hazards

While on one hand, climate-related hazards can prevent workers from accessing or completing paid tasks, workers also describe the opposite problem: platforms and customer bookings continue to operate during hazardous conditions, while existing rules governing cancellations, targets, ratings and incentives make the choice not to work financially or professionally costly. These systems shape the consequences of refusing, cancelling or slowing down, narrowing workers' practical ability to protect themselves without losing income or jeopardising future access to work.



1. Continuing to work despite climate risks

Climate-related hazards did not necessarily cause platforms or customer bookings to stop. For instance, home service workers in Metro Manila described being afraid to leave their homes and travel through flooded areas, while cleaning assignments continued during typhoons for as long as customers were able to make bookings.[65] One worker described the resulting conflict between the danger of travelling and the economic necessity of reporting for an assigned job:

> *It affects us because during the rainy season, there are floods on the roads. When there's a typhoon, we get anxious about going to work because we can't leave our house when there's flooding. But since we have a job, we have no choice but to go in.*
>
> *(Transcript ID: 060825_MANILA_57b689c4-74b5-4c1b-ab01-fea8e1d30af2)*

Here, the formal ability to remain at home was constrained by the loss of earnings attached to that choice and, once a booking had been assigned, by the possible consequences of failing to complete it. Continued service availability, therefore, did not mean that the underlying conditions were safe; it meant that workers faced a choice between working under those conditions or forgoing earnings.

The same tension appeared among food delivery workers in Dhaka. Workers described continuing because they needed to earn, despite flooded roads, ineffective rain protection, risks to the food and their own physical discomfort. One worker reported that once an order was accepted, the worker was required to complete it even where the roads were flooded:

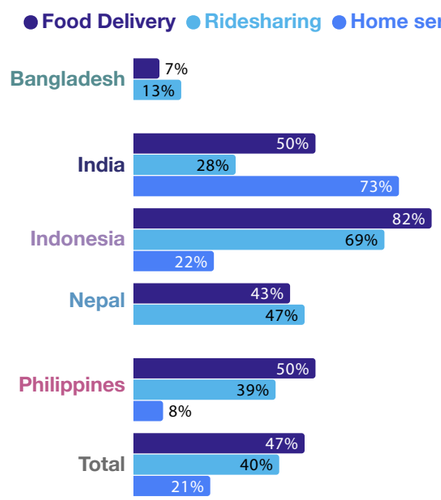
> *During the rainy season, water accumulates in many places on the roads. Often, if we accept an order, the company makes us deliver it, even when the roads are flooded. It becomes very difficult to navigate through the water with the food.*
>
> *(Transcript ID: BAN_DHK_143)*

Comparative research suggests that this pressure is not limited to the study countries. Interviews with 108 migrant delivery riders in Saudi Arabia and the United Arab Emirates documented work during extreme heat, rain and thunderstorms. Riders described the removal of in-app break options during hazardous conditions and wage deductions for skipped orders. The employment and migration systems in the Gulf differ substantially from those examined here, but the findings demonstrate how platform controls can make the formal ability to stop working ineffective in practice.[66]

2. Cancellation requirements and consequences

Financial penalties for cancelling gigs are a feature of platform work regardless of extreme weather. As laid out in Figure 22, **across the sample, 47% of food delivery workers, 40% of ridesharing workers and 21% of home service workers reported a no cancellation requirement associated with keeping their accounts active.** Reporting was highest in Indonesia, where 82% of food delivery workers and 69% of ridesharing workers identified such a requirement. Among home service workers, the highest rate was reported in India, at 73%, followed by Indonesia at 22%. The figures were substantially lower among Bangladeshi food delivery and ridesharing workers, at 7% and 13% respectively, and no home service workers in Bangladesh or Nepal reported the requirement.

Figure 22: Workers reporting a no cancellation requirement associated with maintaining an active platform account, by sector and country



Interviews with home service workers in Delhi NCR show how these requirements operate during rainfall. Workers described bookings being assigned through the application, limited opportunities to cancel and consequences extending beyond the loss of payment for a single task. One worker explained:

> *Customers select specific time slots, and we are expected to reach on time regardless of the weather. Even if it's raining heavily, we still have to arrive on time. If we're late, the job often gets cancelled.… Cancellations come with penalties. We're only allowed a limited number of cancellations – two or three times per month at most. And, as I mentioned, it affects our ratings. If our rating drops, we're downgraded in the category system, which reduces our opportunities. So we're forced to reach on time, rain or not.*
>
> *(Transcript ID: ab1161c3-f930-40e2-99b7-b5d449018f65)*

A second Delhi NCR home service worker described a related constraint: bookings were allocated automatically once the worker had made herself available, and the platform treated an inability to travel through heavy rain as the worker's "personal reason." Cancelling therefore counted against the worker. (Transcript ID: 250b277f-be39-437a-a790-101a6328a45b). These accounts together identify several possible consequences of a weather-related cancellation: loss of payment for the immediate task, a financial penalty, a lower rating, movement into a lower platform category and reduced access to subsequent work. A platform rule applied to one rain-delayed task could alter the worker's future earning opportunities.

The broader significance lies in the interaction between ordinary platform rules and hazardous conditions. A cancellation requirement established under routine circumstances can become a safety risk when flooding, extreme rainfall, typhoons or other hazards make a particular journey dangerous. Even where workers remain formally free to cancel, the possible loss of current earnings, ratings or future access to work can make that a financially costly choice.

3. Target, ratings and time pressure

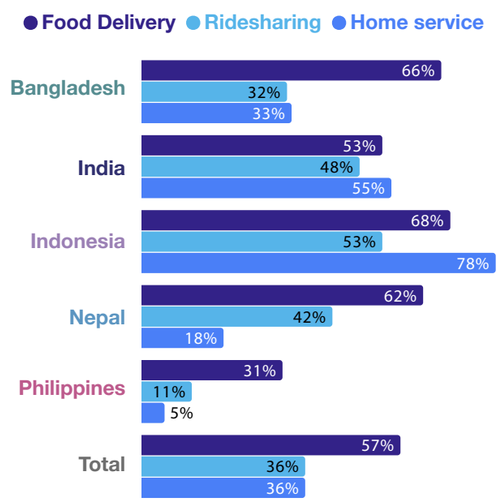
Targets and customer rating systems provide another way in which ordinary platform-management practices can intensify climate-related risk. Our survey asked whether workers experienced anxiety or stress arising from targets and ratings, with Figure 23 establishing a baseline employment condition against which climate-related disruption must be understood.

Target- and rating-related stress was most widely reported among food delivery workers: 57% reported it, compared with 36% each of ridesharing workers and home services workers. In Indonesia, reporting was high across all three sectors, reaching 68% among food delivery workers, 53% among ridesharing workers and 78% among home service workers. In India, the corresponding rates were 53%, 48% and 55%. Among food delivery workers, reporting was also high in Bangladesh at 66% and Nepal at 62%. The Philippines recorded the lowest rates in every sector: 31% in food delivery, 11% in ridesharing and 5% in home services.

This data suggests that workers understand delayed completion, ratings, performance classification and future task allocation as connected. That perceived connection can make sheltering, slowing down or cancelling financially consequential even where the platform does not explicitly direct the worker to continue.

Further, climate-related hazards can make targets and service timelines harder to satisfy. Flooded or congested roads increase journey times; extreme heat may require workers to slow down or take breaks; and failures of power, communications or platform applications can delay tasks for reasons outside a worker's control. A food delivery worker in Jakarta described how rainfall and flooding extended delivery times and exposed workers to customer complaints:

Figure 23: Workers reporting anxiety or stress associated with targets and ratings, by sector and



Even if I get an order while it's raining, the delivery time becomes longer because I have to find shelter and wait for the rain to ease, so the customer's food doesn't get wet or damaged.… It becomes even more difficult if the road I need to take is flooded. I have to find a longer route that's not flooded. This means I use more fuel, and customers may complain because their orders arrive late.

(Transcript ID: bfc1fe07-7019-44ef-8aaf-dd64db513928)

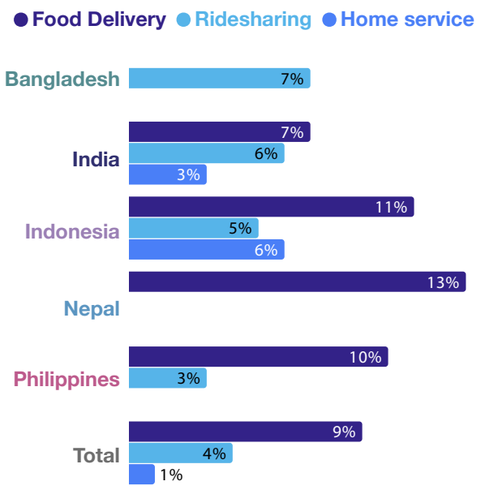
The same worker explained why a customer's response could affect earnings beyond the delayed task:

The rating is like a performance score used by the platform. If you get 3 or 4 stars, there's still a chance to get orders – you might get around 5 to 7 orders a day. But if you get 2 stars, or especially 1 star, that's a bad sign because it becomes very hard to get orders from the platform.… On the other hand, if you get 5 stars, you'll get lots of orders.

(Transcript ID: 63. 280425_Jakarta)

He also described incentives tied to daily trips or order targets and reported that rising targets had made those incentives increasingly difficult to obtain. Climate-related delays could therefore affect not only payment for the immediate task but also the worker's ability to reach a daily target and obtain future orders. Where targets, timelines and rating systems remain unchanged, workers may attempt to work faster, avoid necessary breaks or continue travelling through unsafe conditions to protect their ratings and access to future tasks.

Figure 24: Workers reporting surge pricing, by sector and country





4. Surge pricing

While only a small proportion of workers report experiencing surge pricing, this remains an important aspect of occupational health and safety exposure for digital platform workers. Surge pricing may provide valuable additional income to workers who choose to remain available. At the same time, higher rates during hazardous conditions can shift the calculation workers must make between immediate financial need and personal safety. Further, practices of specifically activating surge pricing during extreme weather, for instance in the form of heatwave bonuses, may increase the financial incentive to work under hazardous conditions rather than safeguarding workers.[67]

Surge pricing was reported by 9% of food delivery workers, 4% of ridesharing workers and 1% of home service workers. Among food delivery workers, reporting was highest in Nepal (13%), followed by Indonesia (11%) and the Philippines (10%). 7% of Bangladeshi ridesharing workers reported surge pricing, as did 6% in India, 5% in Indonesia and 3% in the Philippines. Among home service workers, surge pricing was reported only in Indonesia, at 6%, and India, at 3%.

Our qualitative interviews indicate that the category of surge pricing may not capture every weather-related change in payment. Several food delivery workers in Dhaka described a small additional amount – generally expressed as a "rain bonus," "rain request" or additional payment per completed delivery —during periods of rainfall. These accounts sit alongside the survey finding that no Bangladeshi food delivery workers reported surge pricing.[68]

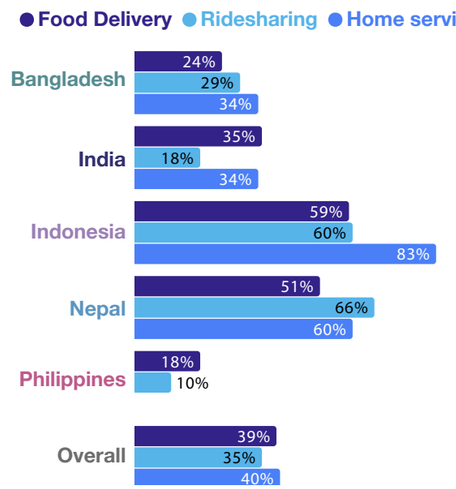
Comparative research has also shown how increased demand during extreme weather can transfer exposure from customers to delivery workers. For instance, a study drawing on platform data from 100 Chinese cities found that lunchtime food delivery orders increased by almost 13% as temperatures rose from 20°C to 35°C. It estimated that approximately 45% of the heat exposure customers avoided by ordering food was transferred to delivery workers. Separate research in Shanghai and Hangzhou found that couriers worked 6% longer during heatwaves and experienced an increase of more than 20% in delays.[69] Although these findings concern China rather than the countries covered by this study, they demonstrate how customer adaptation to extreme weather can increase workers' exposure and workload even where higher demand creates additional earning opportunities.

These findings show how platform governance structures may have an influence on workers' responses to climate hazards. Continued bookings, cancellation requirements, targets, ratings and surge incentives can each make withdrawing from unsafe conditions financially consequential. The result is that workers exposed to adverse weather while doing platform work have to decide whether to pause or stop, and also bear the economic costs of these choices.

C. Physical, psychological and economic risks

The platform management practices examined in the previous section shape not only workers' access to income but also the conditions under which they decide to continue working. When cancellation, ratings or financial need make it difficult to withdraw from work, workers may continue travelling or performing tasks during extreme heat, rainfall, flooding, typhoons, cold or severe air pollution. The resulting harms include exposure-related illness, physical exhaustion, psychological distress and increased risk of road-traffic injury.

Figure 25: Workers reporting health or wellbeing effects associated with climate-related hazards, by sector and country



1. Reported health and wellbeing effects

More than one-third of workers in each sector reported health or wellbeing effects associated with climate-related hazards. The overall proportions were relatively similar: 40% of home service workers, 39% of food delivery workers and 35% of ridesharing workers reported such effects. Although food delivery and ridesharing workers spend substantial periods outdoors, work performed inside customers' homes did not insulate home service workers from climate-related health risks. Their exposure could arise during travel as well as from heat, inadequate ventilation, air pollution or disrupted electricity and water inside the homes where services were performed.

The data shows considerably greater variation by country than by sector. Occupational health risk reporting was consistently highest in Indonesia and Nepal. Indonesia's home service workers recorded the highest rate in the figure, while Nepal's ridesharing workers reported the second highest. Reporting was lower but remained substantial in Bangladesh and India. The Philippines recorded the lowest proportions. These differences may reflect differences in the hazards workers encountered, the timing and location of fieldwork, working arrangements and workers' recognition or reporting of health effects.

Workers described weakness, exhaustion, excessive sweating, dehydration, dizziness and the need to rest during extreme heat. Rain-related exposure was associated with fever, colds and continuing work in wet clothing. Some workers described reducing their tasks or stopping temporarily; others continued despite feeling unwell. One food delivery worker in Dhaka explained the connection between physical exposure and task-based earnings:

During hot, sunny weather, my body becomes unwell due to the intense heat. When the temperature rises, we experience dehydration, which makes it hard to work, and we get tired. This affects my income, leading to lower earnings if I complete fewer deliveries.

(Transcript ID: BAN_DHK_141)

Table 2: Reported climate work interactions and associated physical, psychological and economic harms

Domain of harm	Climate work interactions and reported harms
Physical harm	**Continued work during extreme heat:** prolonged travel and work outdoors or in inadequately cooled customer premises contributed to excessive sweating, dehydration, headaches, dizziness, blurred vision, weakness, exhaustion, breathlessness and concerns about heat stroke. Some workers reported slowing down, seeking shade or stopping temporarily; others continued because their earnings depended on completing tasks.
	Exposure to rain, cold and air pollution: working or travelling in wet clothing was associated with fever, colds, coughs and other illnesses. Cold conditions contributed to stiff or painful hands and joints, particularly among workers riding bicycles or motorcycles. Dust, smoke and severe air pollution were associated with coughing, breathing difficulties and irritation of the eyes, nose and throat.
	Injury risks during travel and service provision: flooded and waterlogged roads concealed potholes and drains, reduced braking capacity and increased the risk of skidding, falling or colliding with other vehicles. Strong winds made motorcycles physically difficult to balance. Home service workers also described risks from wet roofs, slippery surfaces and electrical work performed in damp conditions.
Psychological harm	**Fear and anxiety associated with hazardous journeys:** workers described fear of accidents, becoming stranded, being exposed to lightning or strong winds, entering floodwater and damaging the vehicle or equipment on which their livelihood depended. Such fears could begin before leaving home and continue throughout a journey.
	Customer and platform pressure during weather-related disruption: workers reported anxiety when hazardous conditions made them late or prevented them from completing tasks. Customer complaints, anger, verbal abuse and demands that workers attend despite the weather interacted with cancellation rules, ratings, performance categories and incentive thresholds. Workers consequently feared not only the immediate response to a delayed task but also penalties, reduced bonuses, lower ratings and diminished access to future work.
Economic harm	**Reduced earning capacity:** heat, rain, flooding, congestion and the need to shelter or take longer routes slowed task completion. Workers consequently completed fewer deliveries, rides or services during the working day, while reduced demand or interrupted platform applications could leave them available for work but unpaid.
	Cancellations, deductions and unpaid time: weather-related delays could lead customers to cancel tasks, platforms to apply cancellation charges or deductions, and workers to lose all or part of the expected payment. Returning food, contacting support, waiting for a cancellation to be resolved or travelling to a customer without completing the service also consumed time that could otherwise have generated earnings.
	Additional operating and protective costs: workers reported spending more on fuel when flooding required detours or congestion extended journeys. They also incurred additional expenditure on drinking water, alternative transport, rain protection, vehicle maintenance and other measures required to continue working safely or reach customers.
	Damage to productive assets: floodwater, rainfall and heat damaged motorcycles, bicycles, cars, mobile phones, cleaning machines, tools and service kits. Workers commonly bore the cost of repair or replacement and simultaneously lost income while the asset was unusable.
	Illness-related expenditure and income loss: climate-related illness could generate consultation, medicine and transport costs while also preventing workers from completing paid tasks. In the absence of paid leave or earnings replacement, workers therefore experienced the cost of treatment and the loss of income at the same time.

The account illustrates the second employment consequence of climate-related illness: the worker experiences the physical effect and simultaneously loses earning capacity.[70]

The health effects reported by workers were produced through interactions among environmental conditions, the physical organisation of work, platform-management practices and workers' dependence on task-based earnings. Different sectors produced different pathways of exposure. Food delivery and ridesharing workers encountered heat, rain and polluted air while waiting and travelling and could remain exposed for much of the working day. Home service workers moved between outdoor travel and private indoor workplaces over which they had little control. Across all three sectors, taking shelter, slowing down or ending work could mean completing fewer paid tasks.

Table 2 synthesises these interactions across the qualitative corpus. It distinguishes physical, psychological and economic harms for analytical clarity, although workers frequently experienced them together. For example, travelling through floodwater could expose a worker to injury, create fear and anxiety, damage a vehicle and reduce earnings at the same time. The table maps reported mechanisms and consequences; it does not measure their prevalence. The footnotes identify representative interviews supporting each finding rather than every account in which it appeared.

2. Exposure while travelling and performing tasks

Occupational risk is not confined to the location where the principal service is performed. It can arise while workers wait for tasks, travel to customers, transport equipment, communicate through platform applications and perform services in customer-controlled premises. For instance, women providing home services in Hyderabad described exposure across these different locations. One worker explained that accepting a booking created an obligation to travel regardless of the conditions:

> *Even if it is rainy or sunny, once I get a booking I have to be there. It does not matter how bad the traffic or situation is. Sometimes I have to carry a bed also; at those times I struggle a lot.*
>
> *(Transcript ID: uuid:5c588a84-393a-437a-9408-b5e6ae82da62)*

Her account shows that climate exposure can be compounded by the physical demands of transporting equipment. Rain, heat and disrupted traffic affect the journey, while carrying a portable massage bed or heavy service kit increases the strain involved in reaching the customer.

Exposure does not necessarily end when a worker enters the customer's home. Another Hyderabad home service worker explained that customers determined whether she could use cooling while performing the service and how she was treated if she arrived wet:

> *If the customer is good, he does [allow me to work under the fan]. If not, he doesn't. It all depends on the customer.… If I am wet, he'll ask me to stay out.*
>
> *(Transcript ID: IND_HYD_002)*

Home service work may therefore move workers from an outdoor environment affected by heat or rainfall into a private workplace whose temperature, ventilation and facilities remain under the customer's control. A worker arriving wet may be required to wait outside, while access to a fan, drinking water, a toilet or a place to dry clothing cannot be assumed. The platform allocates and evaluates the task but they typically exercise limited operational control – or do not necessarily establish enforceable standards for – the conditions inside the premises where work is performed.

Dhaka food delivery workers described a more continuous form of outdoor exposure. Their accounts combined travel through heat and rain with waiting outside or in restaurants, handling a mobile phone for navigation and carrying food whose temperature and condition continued to change during delays. Some workers were unable to enter restaurants while wearing wet clothes; others could not remove their phones during rain to check the map. Exposure therefore affected not only the journey but workers' ability to obtain directions, collect the order and enter the spaces required to complete tasks.[71]

3. Road and accident risk

For location-based digital platform workers, roads are a central part of the workplace. Climate-related hazards alter the conditions under which workers travel, wait for passengers or orders and transport goods or home service equipment. Heavy rain reduces visibility and

road grip; flooding conceals potholes, drains and other obstacles; strong winds make motorcycles and bicycles difficult to control; and extreme heat can cause fatigue, dizziness and reduced concentration. These conditions increase the risk of falls, collisions, breakdowns and injury.

A ridesharing worker in Metro Manila described being caught in severe flooding while travelling by motorcycle:

> *The water was so high that my motorcycle was already submerged. A bus passed by, and the force it created made the flood even stronger, almost causing me to lose my grip on the motorcycle. It ended up underwater, so I had to feel around and dive into the flood just to retrieve my motorcycle.*
>
> *(Transcript ID: 45495a92-6852-49e3-af44-280e2eef6941)*

The account shows how a flooded road can create several risks at once. The worker faced the immediate danger of losing control of the motorcycle, the possibility of injury in fast-moving floodwater and the risk of losing the vehicle used to earn a living. The decision to retrieve the motorcycle also exposed the worker to further physical danger. The event consequently involved both road traffic risk and the protection of a productive asset on which future earnings depended.

One worker reported that roads became flooded "to the point where I couldn't see the path" and that the worker had fallen several times while delivering in heavy rain (Transcript ID: BAN_DHK_194). Less severe accounts described the same underlying conditions without reporting an accident: workers referred to the risk of slipping, poor braking and the need to travel more slowly through accumulated water (Transcript ID: BAN_DHK_170, 176, 198). Motorcycles became difficult to balance and journeys took longer as workers searched for routes that were not flooded.

Ridesharing workers described continuing to travel through rain, flooding and strong winds because passengers continued to request trips or because they needed to earn. Some workers reported choosing not to work when floodwater threatened to damage their vehicles, but while this protected the vehicle it also introduced immediate loss of bookings and income.[72]

Food delivery workers faced similar risks while carrying food and navigating roads whose condition could change during a single journey. Workers in Kathmandu described flooded roads, damaged surfaces, strong winds and pollution that impaired visibility or caused their eyes to close, increasing the possibility of an accident. Dhaka workers described concealed road hazards, impaired braking and falls while riding through waterlogged streets.[73]

Heat can also affect road safety indirectly through fatigue, dizziness, impaired concentration and reduced visibility. Research with migrant delivery riders in the Gulf documented dehydration, headaches, heat-related weakness and concern about accidents during long shifts. These findings identify yet another pathway through which climate exposure and work intensity can combine to increase risk.[74]

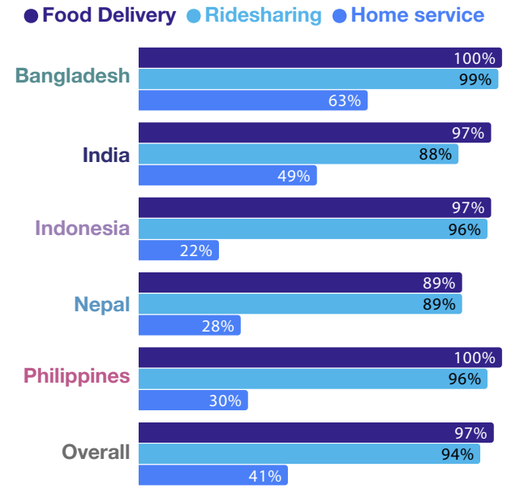
Road risk also affected workers whose principal service was performed inside customers' homes. Home service workers travelled by motorcycle, bicycle or on foot while carrying tools, beds, products or other equipment. Flooded or congested roads could delay arrival, require longer routes or make it necessary to walk through water while carrying equipment. A delayed or cancelled task could then produce a financial loss in addition to the physical danger of the journey.[75]

These accounts show why road and accident risk should be treated as an occupational health and safety issue rather than as an incidental feature of commuting. Platform systems may allocate the task and impose a required completion time, but workers generally bear responsibility for judging whether a road is passable, absorbing delays and repairing vehicles damaged in the attempt. Under a task-based payment system, avoiding an unsafe route can protect health while reducing income; taking the route preserves the possibility of payment while increasing the risk of accident, injury and asset damage.

Road traffic risk was reported almost universally among workers in the two mobility-based sectors. 97% of food delivery workers and 94% of ridesharing workers identified accident risk, compared with 41% of home service workers. Figure 26, then, provides important context for interpreting climate-related exposure by measuring workers' recognition of accident risk in platform work generally. The near-universal reporting among food delivery and ridesharing workers therefore establishes a high underlying level of road risk. Extreme heat, intense rainfall, flooding, impaired visibility and pressure to complete tasks may aggravate that baseline risk.

The pattern was consistent across countries. Among

Figure 26: Workers reporting accident risk in platform work, by sector and country



food delivery workers, reported accident risk ranged from 89% in Nepal to between 97% and 100% in the other four countries. Among ridesharing workers, it ranged from 88% in India and 89% in Nepal to 99% in Bangladesh. Home service workers reported substantially lower – but still notable – levels of accident risk, ranging from 22% in Indonesia to 63% in Bangladesh. The findings reflect the centrality of road travel to food delivery and ridesharing, while also showing that commuting between bookings exposes home service workers to transport-related risks.

Beyond the findings of this study, accident risk exposure to digital platform economy workers in food delivery and ridesharing has been widely reported. Read together, the sources in Table 3 establish two distinct points. First, food delivery and ridesharing workers operate within road environments in which motorcyclists and other relatively unprotected road users already face substantial risks. Second, features of platform work – including daily income targets, customer pressure, long working hours and time-bound delivery expectations – can intensify unsafe riding behaviour or fatigue. As laid out in this chapter, climate-related hazards add a further layer of risk by reducing visibility, making road surfaces slippery, obstructing routes and increasing physical strain.

Table 3: Selected secondary evidence on road safety and climate-related exposure in platform work

Country	Principal findings, relevance and limitations
India	National road-safety data shows that two-wheeler riders are an increasingly large share of road fatalities: their share of all road deaths rose from 30% in 2014 to 45% in 2023, when approximately nine two-wheeler riders died every hour. Delivery workers form part of this exposed population, and the authors identify time-bound deliveries as a safety concern that may encourage workers to take shortcuts. These mortality figures, however, cover all two-wheeler riders; they do not specifically identify platform workers or accidents occurring during climate-related hazards.[76]
	Reporting from Hyderabad further describes how extreme heat and rainfall worsen conditions for autorickshaw drivers, delivery workers and other outdoor workers, providing qualitative context for heightened risk of accidents or injuries during extreme weather events.[77]
Indonesia	A study of app-based motorcycle-taxi riders in Jakarta found significant associations between daily income targets, passenger pressure, safety attitudes and risky riding behaviour. Some 60.2% of respondents reported increasing their speed at a passenger's request, while riders prioritising daily income targets were more likely to report risky riding behaviour. This provides platform-specific evidence that income and customer pressures can conflict with road safety. Notably, however, the study did not examine climate-related hazards – a factor likely to heighten road safety risks further.[78]

Country	Principal findings, relevance and limitations
Indonesia	Company reported data provides further evidence of the scale of occupational injury: a platform reported 24 fatalities arising from work-related injuries, 248 high-consequence injuries excluding fatalities and 4,029 recordable work-related injuries among driver-partners in 2024. These figures are specific to platform workers but are company-reported and are not disaggregated by accident type, location or climate-related conditions.[79]
	A separate Yogyakarta study found that drowsiness was associated with increased road-accident risk, particularly among drivers travelling for more than two hours without a break and between 11 p.m. and 5 a.m. The study supports the relevance of fatigue and insufficient rest to road safety, but it was not limited to platform workers and did not investigate climate exposure.[80]
Nepal	National police records show that reported road-traffic accidents increased from 20,640 in fiscal year 2020/21 to 28,692 in 2024/25, while recorded vehicle crashes rose from 33,135 to 43,165. Motorcycles, four-wheelers and public-transport vehicles accounted for most incidents. These findings establish the wider road-safety conditions in which Kathmandu's platform workers operate. Notably, these figures are national rather than city-specific, do not identify platform workers and do not specifically link accident risk to climate-related conditions.[81]

D. Damage to productive assets and additional costs

Because workers supply many of the assets required to perform platform services, the same conditions that threaten their health and safety can also damage their means of earning. Platform work is frequently asset intensive. Food delivery and ridesharing workers rely on bicycles, motorcycles, autorickshaws or cars, together with functioning mobile phones, data connections and other equipment. Home service workers may depend on phones, tools, products and portable equipment required to perform services inside customers' homes. Although these assets are essential to the provision of platform services, workers commonly bear responsibility for acquiring, maintaining, repairing and replacing them.

Climate-related hazards can damage these productive assets while workers are travelling or performing tasks. Floodwater and heavy rainfall can damage vehicles, phones, delivery bags, tools and supplies, while extreme heat can contribute to overheating and mechanical failure. A woman working through a home services platform in Metro Manila described both arriving at a customer's home soaked and finding that her equipment had been exposed to the rain:

> *Sometimes you get soaked. Yes. And even your equipment gets wet and damaged. Sometimes, though, the client offers things like a towel. But you don't really have a choice - you're already there, completely drenched. You just have to dry yourself off.*
>
> *(Transcript ID: 030825_MANILA_21e994b5-18a7-4952-866e-0b0ac641ea87)*

Food delivery workers in Dhaka described related risks to the bikes and phones on which their work depended. One worker reported receiving a small additional payment for deliveries completed during rain, while also bearing the resulting repair costs:

> *During rain, we get a rain request and earn 10 BDT extra per order. In heavy rain, our clothes get wet and there's a chance of falling sick. Roads get muddy and flooded, bike brakes can get damaged, and wheels may get ruined. We have to repair these at our own expense.*
>
> *(Transcript ID: BAN_DHK_198)*

Here, the additional payment was attached to each completed delivery. It did not compensate for illness, bicycle damage or earnings lost if the worker became unable to continue. The account therefore distinguishes an incentive to remain active from protection against the losses associated with doing so.

Damage to a productive asset can generate two forms of financial loss at the same time: workers must meet the cost of repairing or replacing the asset while also losing the income they would have earned during the period in which it remains unusable. Where a vehicle was purchased through credit, leased or rented, payment obligations may continue even while the worker cannot use it to earn. Reporting from Hyderabad illustrates this double burden. Autorickshaw drivers interviewed during periods of extreme rainfall described damage to their vehicles and increased maintenance expenditure. They also reported that insurance did not necessarily cover the full cost of weather-related damage, leaving them to meet repair expenses directly.[82]

2026 PCI and ISET International research with informal workers across five cities in Asia also found employment-related asset loss during extreme weather. Although the reported proportions were lower than those for wage loss, these findings reinforce the importance of considering asset damage alongside income disruption.[83]

When workers are responsible for providing and maintaining the assets required for platform work, they bear several interconnected consequences of climate-related damage: the immediate cost of repair or replacement, the earnings lost while the asset is unusable and, where applicable, continuing rental, lease or loan repayments. Under these operational models, individual workers often bear a substantial share of the financial risk resulting from climate disruptions.

E. Climate as a risk accelerator and transfer mechanism

Climate-related hazards interact with existing features of platform work – including task-based payment, variable earnings, algorithmic monitoring, cancellation requirements and worker responsibility for productive assets – to intensify risks that workers already face. A period of extreme heat, rainfall or flooding can consequently affect several dimensions of work at once: it may restrict access to tasks, slow their completion, increase exposure to illness or injury, damage essential equipment and generate additional costs.

This interaction helps explain why the same climate-related event can produce apparently contradictory outcomes. Hazardous conditions may reduce bookings or prevent workers from logging on, producing an immediate loss of earnings. At other times, platforms and customers continue requesting services, while cancellation consequences, targets, ratings or temporary incentives make withdrawing from work financially costly. The flexibility formally associated with platform work is therefore constrained in practice. Climate-related hazards intensify this imbalance by making both available choices – continuing to work or withdrawing – potentially harmful.





Recent research describes this interaction as a form of climate-driven workplace harm in which environmental stress combines with systems of payment and workplace discipline to produce physical, psychological and economic consequences. In platform delivery work, algorithmic monitoring, acceptance and cancellation metrics, customer ratings and heat-related incentives can prolong workers' exposure and shift the economic consequences of slower work onto them.[84] The findings in this study demonstrate similar mechanisms across a wider range of climate-related hazards and across food delivery, ridesharing and home services.

Accounts from Dhaka food delivery workers demonstrate that these costs were not experienced as separate categories. The same rainfall could slow travel, leave workers wet, affect the food, expose a phone or bike to damage, prompt a customer complaint or cancellation and reduce the number of tasks completed. Heat similarly produced physical weakness and the need for rest while reducing task completion and income. Different workers described distinct parts of this sequence, but the cluster shows a recurring transfer mechanism: the hazard disrupted the service, while the worker absorbed the additional time, bodily exposure, equipment risk and resulting loss of earnings.[85]

Occupational gender segregation shapes where exposure occurs and the forms it takes. The distribution of climate-related risks reflects the gender and migration profile of the platform workforce. Women were concentrated in home services within the study sample. Although the service itself is generally performed indoors, workers still travelled through affected areas, carried equipment and entered private homes where working conditions were not necessarily controlled by the platform. Men predominated in food delivery and ridesharing and therefore accounted for most of the workers continuously exposed on roads. These patterns show that occupational gender segregation shapes where exposure occurs and the forms it takes. Migrant workers may face an additional layer of vulnerability where unstable housing, limited local networks or restricted access to social protection reduce their capacity to stop working or recover from a loss.

Climate hazards therefore expose an important asymmetry in platform work. Platforms retain substantial influence over payment, tasktly transferred into workers' households and how workers and their families attempt to absorb and recover from them.

Chapter 3: Climate-driven Risks to Workers' Households

When climate-related hazards interrupt platform work, delay tasks or affect workers' health, the resulting loss of earnings enters household budgets. The same event may damage workers' homes and possessions, interrupt access to water or healthcare, and cause illness or injury among other household members. Households can therefore experience two financial pressures simultaneously: a decline in the income available to meet ordinary needs and an increase in the expenditure required to respond and recover.

This interaction is especially consequential in task-based platform work. Workers generally receive no income for time during which they are unable to work, wait for disrupted systems to resume or care for affected family members. As Chapter 2 showed, workers may also bear the costs of repairing vehicles, phones and other productive assets. Household expenditure must consequently accommodate work-related losses and household damage at the same time.

For workers supporting children, parents or relatives, these employment effects enter household budgets through reduced food expenditure, postponed treatment, disrupted schooling and lower remittances. Workers did not experience these consequences uniformly: some reported little household impact because other earners, savings or secure housing provided a buffer. The testimony nevertheless shows how limited income protection available during interruptions make household resources absorb climate-related loss.[86]

A. Climate events, declining household income and constrained expenditure

Climate-related earning disruptions affect households according to both the amount of income lost and the resources already available to withstand that loss. As Chapter 2 established, among workers reporting climate-related effects at work or at home, 91% described a resulting disruption to their earnings. Because platform workers are commonly paid by the task, even a relatively short interruption can reduce income available for food, rent, utilities, healthcare, education and other recurring expenses.

This relationship was especially direct in households dependent upon a single earner. A food delivery worker in Dhaka described himself as the sole income earner and explained that when weather conditions stopped or reduced his work, his family immediately faced financial hardship. His account indicates that the loss of a worker's task-based earnings cannot be treated as an individual loss where those earnings support an entire household.[87] Other Dhaka food delivery workers, however, reported no significant effect on their households, including some whose families had other earnings, stronger housing or fewer dependent members. These accounts suggest that household composition and pre-existing resources mediate the consequences of the same employment disruption.[88]

At the same time, climate-related events can create additional expenditure. Workers may need to purchase water, medicines or replacement household goods; pay for alternative transport or temporary accommodation; repair their homes; or support injured or displaced family members. The household impact is therefore not captured fully by measuring lost earnings alone. What matters is the relationship between declining resources and rising needs.

Comparative research conducted by PCI and ISET International documents the same interaction between declining income and rising household expenditure. Workers reported that heat-related illness and reduced productivity affected their earnings while expenditure on water, electricity, medicines and transport increased.[89] Although the research concerns informal workers and migrants more broadly rather than platform workers



specifically, it confirms the proposition that climate-related livelihood disruption enters household budgets in two directions, both by reducing the resources available and increasing the cost of meeting basic needs.

1. Reduced ability to buy food

25% of food delivery workers, 28% of ridesharing workers and 25% of home service workers reported that climate-related impacts reduced their ability to buy food.

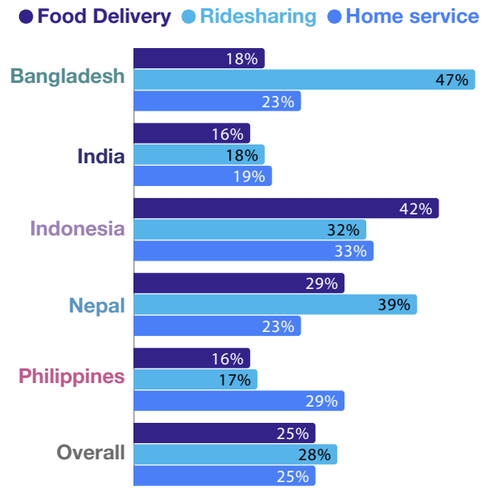
Reporting varied substantially by country and sector. Among ridesharing workers, the highest proportion of workers who reported that their food security was impacted were in Bangladesh (47%), followed by Nepal (39%) and Indonesia (32%). In food delivery, reporting was highest in Indonesia (42%), followed by Nepal (29%). Among home service workers, approximately one-third reported this effect in Indonesia and 29% in the Philippines. These findings show that among the workers surveyed, climate-related income disruption was sufficiently severe to affect an essential household expenditure. They also show that the effect was not confined to the sector with the greatest outdoor exposure. Approximately one-quarter of home service workers reported reduced capacity to purchase food, demonstrating that climate risk can reach household consumption even where the principal service is performed indoors.

Consequences may extend beyond the individual worker. Workers in the study supported an average of approximately three dependents. Where a household reduces food expenditure following a loss of platform income, the effect may therefore be distributed among children, partners, parents and other dependents. In the most acute accounts, climate-related disruption affected not only what households could purchase but whether they could eat at all. A food delivery worker in Dhaka described his family's experience of flooding:

> *Yes, my family faced a flood, and we suffered a lot. There were times when we had one meal a day and sometimes none at all. We were struggling like that. The house was flooded, and we faced difficulties with both drinking water and food.*

(Transcript ID: BAN_DHK_006)

Figure 27: Workers reporting a reduced ability to buy food following climate-related impacts, by sector and country



Less severe but related accounts appeared across the Dhaka interviews. Workers described food shortages, difficulty purchasing food and medicine and an inability to meet daily household needs when weather reduced their earnings.[90] These accounts indicate a continuum of effects, ranging from constrained expenditure to skipped meals and acute food deprivation. A home service worker in Metro Manila also described progression from interrupted work to food insecurity during a prolonged typhoon:

> *It's really hard when there's a super typhoon because we don't have jobs then, and it's also difficult to get to work because the roads are flooded and prone to accidents during a typhoon, so we don't earn anything either. When the storm continues, it's really difficult because it's different when there's work since we earn something no matter what. Maybe when that happens, our food is affected because sometimes we run short on the budget.*

(Transcript ID: 050825_MANILA_d298afb2-155b-494c-8439-18c5b60eba64reynaldo_phl_029)

In her account, food insecurity did not arise from the weather event in isolation. It emerged because the typhoon prevented work, the task-based payment system provided no income during the interruption, and the household had insufficient reserves to sustain its food budget for the duration of the disruption.

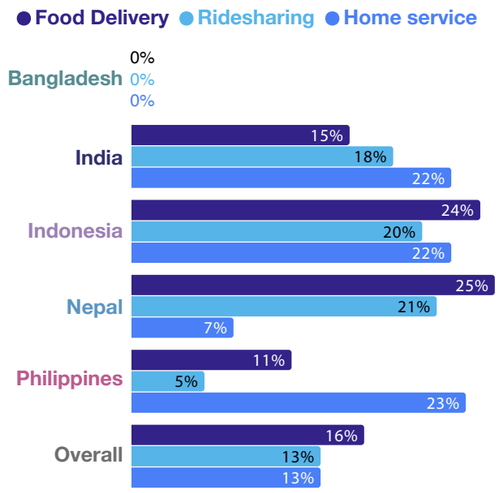
2. Reduced remittances and geographically dispersed household risk

For migrant workers, the household affected by climate-related earnings disruption may extend beyond the residence in which the worker currently lives. For instance, a food delivery worker in Dhaka explained that when disruption reduced his earnings, he could not send money to his family at the weekly or monthly intervals on which they ordinarily relied.[91] **Across the study, 16% of food delivery workers, 13% of ridesharing workers and 13% of home service workers reported reducing remittances in response to climate-related impacts.**

The pattern was most pronounced in Indonesia. Reduced remittances were reported by 24% of food delivery workers, 20% of ridesharing workers and 22% of home service workers. In Nepal, one-quarter of food delivery workers and 21% of ridesharing workers reported this response, compared with 7% of home service workers. In India, reporting ranged from 15% to 22% across the three sectors. The Philippines showed a different sectoral distribution: 23% of home service workers reported reduced remittances, compared with 11% of food delivery workers and 5% of ridesharing workers.

Research on migration and urban informality helps explain why remittance effects matter. Migrant workers may maintain active obligations in both destination

Figure 28: Workers reporting reduced remittances following climate-related impacts





cities and places of origin, with family members divided between locations. Research in Delhi NCR, for example, describes how insecure work, unstable housing and restricted access to social protection can interact across geographically dispersed migrant households.[92] The present data extends this concern to platform work: climate-related earnings disruption at a worker's destination can reduce the resources available to family members who were not directly exposed to the same local event. Reduced remittances should therefore not be understood only as an individual coping decision. It is a mechanism through which climate risk travels across locations and among household members. The worker absorbs the immediate income shock in the city, while relatives elsewhere absorb part of the resulting reduction in household resources.

Notably, a Kathmandu food delivery worker described a reciprocal form of household dependence. When unpredictable weather prevented him from working and caused a lost day's income, he sometimes borrowed from friends and explained that "money is coming from home," promising to repay once it arrived.[93] His account does not document a reduction in remittances sent by the worker; it shows instead how climate-related income loss can reverse the direction of household support, with family resources elsewhere helping the worker meet expenses in the destination city.

B. Housing conditions and damage to homes and household assets

1. Housing conditions

Housing conditions can determine whether workers and their families are able to recover between periods of exposure. Research with informal and migrant workers in five of the cities covered by this study identified densely built housing, heat-retaining roofs, inadequate ventilation and unreliable electricity as barriers to recovery from extreme heat. Elevated indoor and night-time temperatures could prevent workers and their families from cooling down and resting adequately, producing a "recovery deficit" before the following working day.[94] A home may therefore remain standing while providing inadequate protection from heat, polluted air, waterlogging or repeated interruptions to essential services.

This relationship also connects household and employment risk. Inadequate recovery can leave a worker more fatigued or unwell at the beginning of the next working day, potentially affecting their ability to travel, complete tasks safely and maintain earnings. Housing conditions consequently shape not only the consequences of climate exposure at home but also the worker's capacity to resume work.

2. Damage to homes and household assets

Workers also reported direct physical damage to their homes and household possessions. Heavy rainfall, flooding and typhoons can damage roofs, walls, floors, electricity systems, furniture, appliances, clothing, documents and other essential items. The significance of this damage depends on the severity of the event, the location and quality of the home, and the household's capacity to repair or replace what has been lost.

For instance, a food delivery worker in Kathmandu described damage to household and livelihood assets in his village during extreme weather. Heavy snowfall collapsed the roof of the family's cow barn, killing livestock and leaving the household struggling to access food and water. This account illustrates how climate-related damage can affect both the material resources on which a family depends and its capacity to recover.[95]

Within the study, reporting was highest in Jakarta, where more than one-third of workers reported damage both to household structures and to household assets. Workers in Mumbai, Dhaka, Metro Manila and Kathmandu also reported damage, although the proportions in these cities remained below one-fifth.

Comparative disaster research demonstrates the scale that household damage can reach. Typhoon Haiyan damaged or destroyed approximately 1.1 million homes in the Philippines in 2013, with some of the affected coastal areas experiencing destruction of most housing and infrastructure.[96] An assessment of the January 2013 river flood in Jakarta estimated average household losses of approximately USD 308 among the households studied. This included structural and content damage as well as expenditure or losses associated with cleaning, evacuation, temporary housing, illness and interrupted income.[97] These examples, concerning major disasters, show that "damage to the home" can generate several connected costs: repairing structures, replacing essential goods, cleaning contaminated rooms, relocating temporarily and forgoing work during the recovery process.

Loss of certain assets can impact both work productivity and household functions: a phone may be used to access the platform as well as for household communication; a motorcycle may generate income while also providing family transport; and tools used by a home service worker may be stored in the worker's home. Damage to one asset can therefore affect both household functioning and the worker's ability to resume earning.

Figures 29a and 29b: Workers reporting (a) damage or destruction of homes and (b) damage to household assets, by city

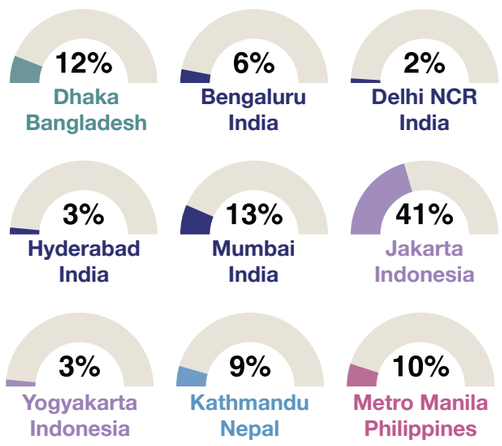


Figure 29a

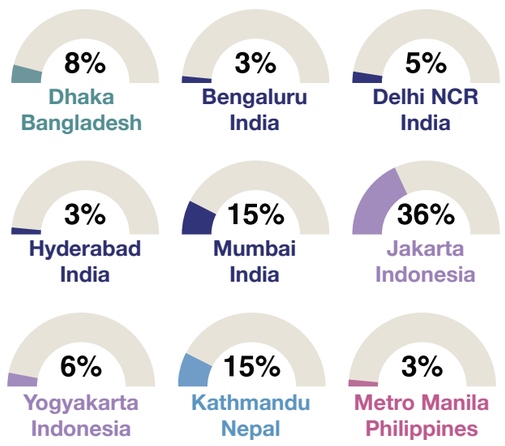
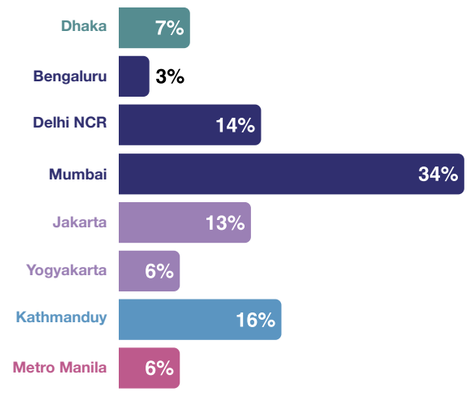


Figure 29a

C. Disruptions to essential services

Climate-related household risk also arose through infrastructure disruptions. Water and healthcare were particularly important because disruptions could occur at the same time that workers and their households needed these services most. Access depended not only on the formal availability of a service but also on functioning roads, transport, electricity, communications and household purchasing power.

Figure 30: Workers reporting loss of or damage to household water access during climate-related



1. Access to water

Climate change affects water security through several pathways. Drought and changing rainfall patterns can reduce or make water supplies less predictable, while flooding and heavy rainfall can contaminate water sources or damage treatment and distribution infrastructure. Extreme events – including rains, floods, droughts, and wildfires – can therefore produce water scarcity, unsafe water or both.[98]

Mumbai recorded the highest proportion of workers reporting lost or reduced access to water. These findings include underlying water insecurity and event-related disruption. Mumbai depends heavily on rainfall-fed reservoirs, while leakage, uneven distribution and infrastructural limitations contribute to recurring shortages. Periods of inadequate rainfall can reduce available supply, but intense rainfall and flooding do not necessarily resolve scarcity and may disrupt distribution or affect water quality.[99] Workers in Kathmandu, Delhi and Jakarta also reported water-access problems.

For households, loss of water affects drinking, cooking, washing and sanitation. It may require purchasing water, travelling further to collect it or storing it when supply becomes available. Each response entails either additional expenditure or additional time. Where a worker or another household member spends time securing water, that person may have less time available for paid work, rest or care.

A food delivery worker in Jakarta described water scarcity during the dry season:

> *During droughts, it becomes difficult to access clean water at home. The public water utility (PDAM) service is also not running properly. The clean water supply from PDAM is disrupted due to the drought.*
>
> *(Transcript ID: 42. 210425_Jakarta)*

A Kathmandu food delivery worker described the another pathway to water disruption during heavy rainfall:

> *During the rainy season, drinking water becomes murky in the pipes, and regular supply is disrupted. Heavy rain causes sewage to overflow in front of the house, and garbage is washed in with the water. It also becomes difficult to go outside or purchase essential items like food supplies.*
>
> *(Transcript ID: NEP_KAT_097)*

Here, rainfall produced both contamination and interruption of supply, while also restricting access to essential goods.

Water disruption can also interact with other risks documented in the chapter. Floodwater may contaminate household supplies at the same time that family members face injury or illness. Heat raises the need for hydration while drought or infrastructure failures constrain availability. Loss of earnings can simultaneously reduce the household's capacity to purchase water from alternative sources.

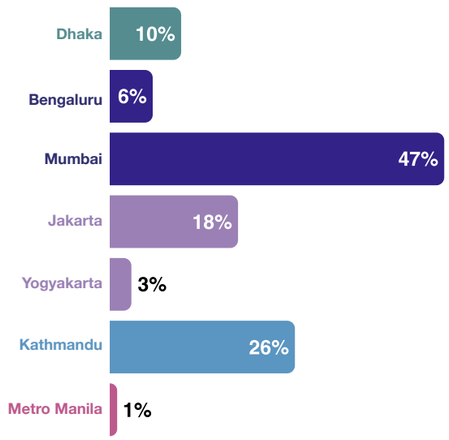
2. Access to health care services

Climate-related events can both increase the need for healthcare while making that care more difficult to obtain. Workers may require treatment for exposure-related illness or occupational injury, while family members may experience injuries, respiratory illness, waterborne disease, heat stress or the worsening of existing health conditions. At the same time, flooded roads, damaged facilities, transport disruption, electricity loss and increased demand can constrain access to health services.

Heatwaves increase ambulance dispatches, emergency-department attendance, hospitalisation and demand for primary care, placing additional pressure on health systems.[100] Workers in Mumbai, Kathmandu and Jakarta reported the greatest loss of access to healthcare. Smaller numbers reported this effect in Dhaka, Bengaluru, Yogyakarta and Metro Manila.



Figure 31: Lost access to healthcare services reported by workers during extreme weather events



A food delivery worker in Kathmandu explained:

> *This year, the area where I live was quite heavily impacted by the floods. Many schools were flooded and had to close, also the nearest health center or clinic. So, if you are sick and need medical services, you have to go to the hospital.*
>
> *(Transcript ID: NEP_KAT_097)*

In his account flooding removes the lower-level health facilities on which households ordinarily depend, forcing them to travel farther and potentially incur greater costs.

D. Injury, illness and household care burdens

A smaller number of respondents reported severe climate effects involving injury or death. 36 workers reported an injury to themselves or a family member associated with an extreme weather event, while 9 reported the death of a family member. These reports were concentrated in Jakarta, Mumbai, Kathmandu and Dhaka.

The household consequences of injury and illness extend beyond the number of people directly affected. Treatment may require expenditure on consultations, medicines and transport at the same time that illness reduces a worker's earning capacity. Family members may also need to accompany an injured or ill person, provide care during recovery or assume their usual household responsibilities. A food delivery worker in Kathmandu explained:



Figure 32: Workers reporting injuries to themselves or family members and deaths of family members during climate-related events, by city



> *If any family member gets sick, I have to go hospital with them and I have to take leave. Which means I'm not getting paid by my office and I have to spend earnings in the hospital.*
>
> *(Transcript ID: UID redacted. Contains respondent name)*

The account captures three linked effects: the worker loses income while accompanying a relative, incurs healthcare expenditure and must use earnings that would otherwise support the household. Task-based workers do not ordinarily earn while offline, and paid leave was almost entirely absent among the workers surveyed. Time spent obtaining treatment, recovering from illness or meeting a family member's care needs can therefore carry an immediate earnings cost.

Interviews with food delivery workers in Dhaka illustrate particularly clearly the interaction between interrupted earnings, family dependency and healthcare expenditure. Workers described meeting the medical expenses of parents and children, borrowing to obtain treatment and attempting to maintain household needs while their own earnings were reduced. One worker explained:

> *When the weather is bad, we usually don't work. At that time, my mother was sick. So, I had to borrow all the money needed for her treatment.*
>
> *(Transcript ID: BAN_DHK_128)*

His account shows that healthcare expenditure can create debt even where the worker is not the person receiving treatment.[101] The financial pressure arose because the need for treatment continued while adverse weather interrupted the earnings ordinarily used to meet household expenses. Other workers described responsibility for parents with serious continuing health conditions, sick parents, children affected by heat and family members requiring medicines or treatment. Where climate-related events have disrupted transport or healthcare services, obtaining treatment may become more difficult or expensive.

Comparative evidence from platform delivery workers underscores the double loss that can accompany injury or illness. Migrant riders interviewed in Saudi Arabia and the United Arab Emirates described paying medical expenses themselves, receiving no salary while recovering from accidents and finding that insurance did not cover particular injuries.[102] While employment and migration arrangements in Saudi Arabia and the UAE differ substantially from the five countries covered in this study, the comparison nevertheless demonstrates how inadequate healthcare and income protection can make a health event simultaneously a medical and household financial crisis.

E. Compounding household consequences

The findings in this chapter demonstrate that household consequences cannot be understood as a list of independent effects. A single climate-related event may prevent a worker from earning, damage the home, interrupt water or transport, and create medical or care needs. Each consequence can then intensify the others. Food expenditure or remittances may be reduced to make room for these competing needs.

These interactions create a household income-to-expenditure deficit rather than a single, short-lived loss. They can also extend the duration of climate-related harm. Floodwater may recede, for example, while repair expenses, medical needs, reduced remittances and lost work continue. Slow or recurrent hazards can produce a similar accumulation: repeated periods of heat-related illness, lower productivity and increased spending on water, electricity or medicine may progressively weaken the household's capacity to withstand the next event.

Research by PCI and ISET-International shows how such pressures can accumulate into longer-term financial vulnerability. The 2024 study documented widespread wage loss and wage cuts following





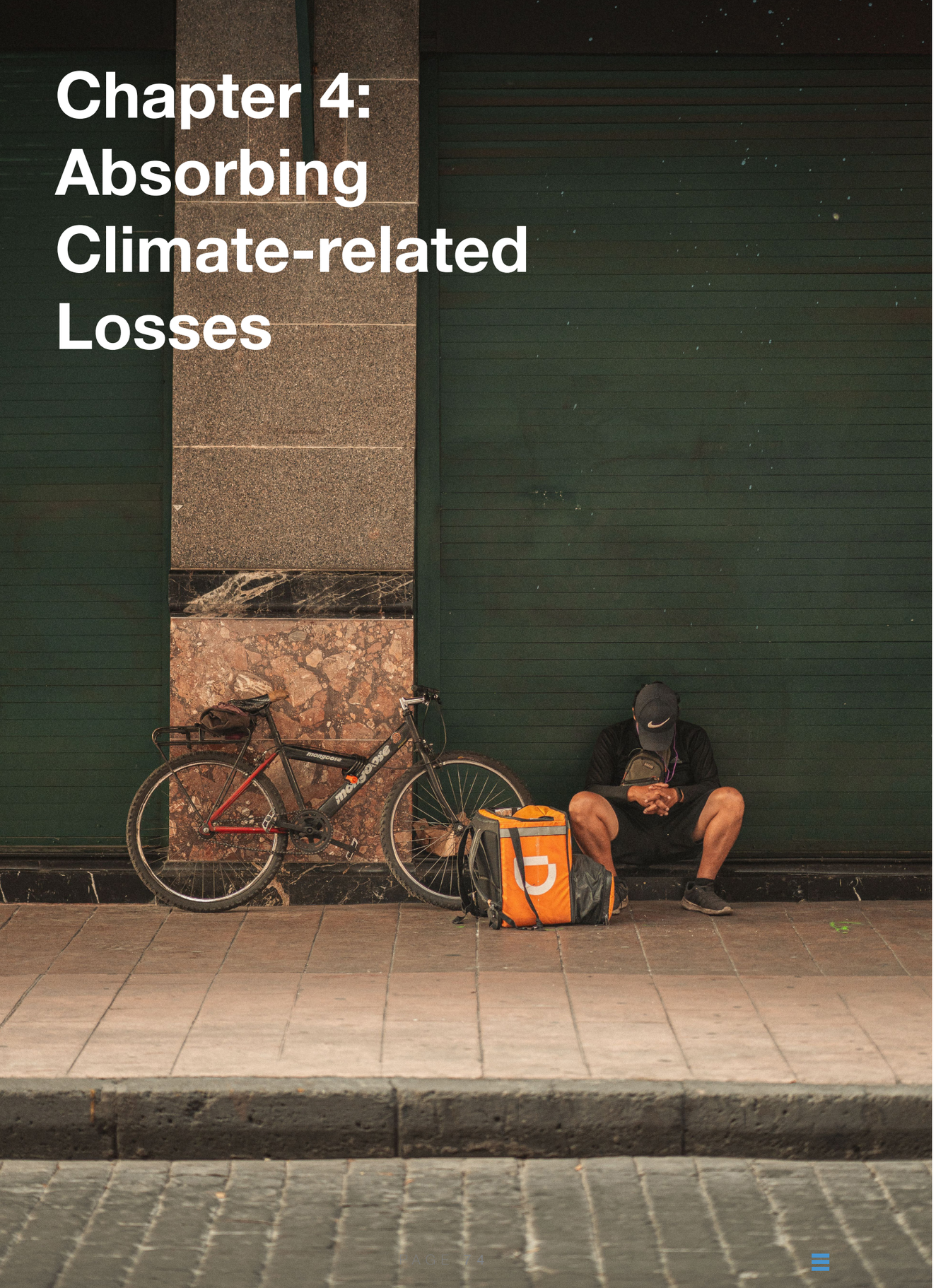
extreme weather events at both source and destination locations. Access to external assistance was limited: outside the Philippines, only small proportions of respondents reported receiving government or non-governmental emergency relief. Many instead relied on family resources, social networks and borrowing to meet the costs of disruption and recovery.[103] The study, focused on internal migrants and informal workers, confirms a wider regional pattern: when earnings fall and formal protection is limited, households absorb climate-related losses.

The capacity to absorb these consequences is unequally distributed. Workers with secure housing, savings, insurance, accessible public services or family support may be better able to recover. Workers living in poorly serviced neighbourhoods, supporting several dependants or maintaining obligations across multiple locations may have fewer resources available. Migrant status can further shape access to housing, local networks and social protection. Research in Delhi NCR, for instance, has demonstrated how insecure employment, unstable housing and exclusion from public entitlements can operate together, leaving migrant households exposed to cycles of income instability and debt.[104]

In response to climate disruptions, workers and their families use savings, borrow money, seek support from relatives or communities, take additional employment and attempt to access government, platform or civil-society assistance. These responses are examined in Chapter 4. Some provide meaningful protection; others transfer the cost into the future through depleted savings, debt, longer working hours or the entry of additional household members into paid work. A household may appear to have "recovered" because it repaired its home, continued purchasing food or met medical expenses. But if it did so by exhausting savings, taking a high-cost loan or increasing already excessive working hours, the underlying risk has not been absorbed. It has been deferred or converted into another form.

Climate-related employment and household risks are therefore connected. Platforms prescribe the organ-isation and remuneration of work, while workers and their households supply the labour, productive assets, housing, care and financial reserves required to keep that work possible. When coverage from platforms and public systems is limited, household resources become the final buffer against climate disruption. Chapter 4 examines how this process currently oper-ates and distinguishes between forms of support that reduce risk and coping practices that may deepen workers' future vulnerability.

Chapter 4: Absorbing Climate-related Losses



Across the study, access to external support was limited. Most workers reported receiving little or no assistance Across the study, access to external support was limited. Most workers reported receiving little or no assistance during or after climate-related events. Emergency relief provided by governments was the most commonly reported form of institutional support, but it reached only a minority of respondents and varied substantially among cities. Reported support from platform and civil society was even less frequent among surveyed workers. Workers and their households therefore remained responsible for absorbing much of the loss of earnings, additional expenditure, illness, asset damage and disruption documented in Chapters 2 and 3.

Households responded by drawing down savings, borrowing from relatives or friends, taking formal or informal loans and seeking additional employment. These responses helped some households meet immediate needs, but they should not automatically be interpreted as evidence of resilience or recovery. Using savings reduces the resources available for the next emergency; borrowing creates future repayment obligations; and taking on additional work can increase fatigue and climate exposure. A household may therefore preserve consumption or repair damage in the short term while becoming less able to withstand the next disruption.

The chapter, therefore, distinguishes institutional support from household coping. Institutional support introduces resources or protection from outside the affected household. Household coping, by contrast, frequently reallocates existing resources, labour and care or transfers present losses into the future. This distinction is central to understanding who ultimately bears climate-related risk in the platform economy, but they are not mutually exclusive.

A. Limited institutional support

Most workers surveyed reported receiving no support from governments, platforms or civil society organisations during or after climate-related events. This finding does not establish that no relevant programmes existed. Rather, it shows that if available, systems did not consistently translate into assistance received by the workers surveyed. Eligibility rules, limited coverage, registration requirements, lack of information and uneven implementation may all contribute to the gap between formal provision and effective access.

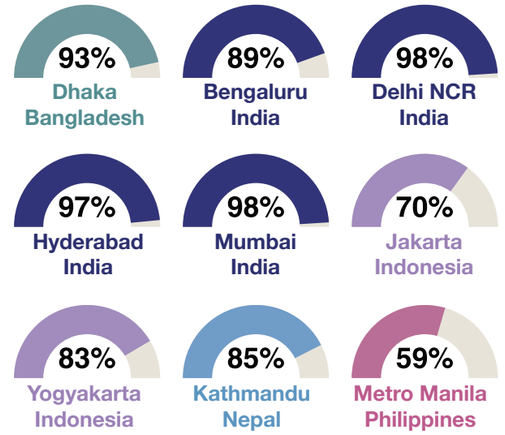


Figure 33: Platform workers reporting that they received no support during or after climate-related events, by city

The absence of support is significant because platform workers commonly lack employment-based protections that might otherwise compensate for interrupted work, injury or asset damage. When no institution replaces lost income or meets recovery costs, workers must rely on household resources precisely when those resources are also under pressure from food, housing, water, healthcare and care-related needs.

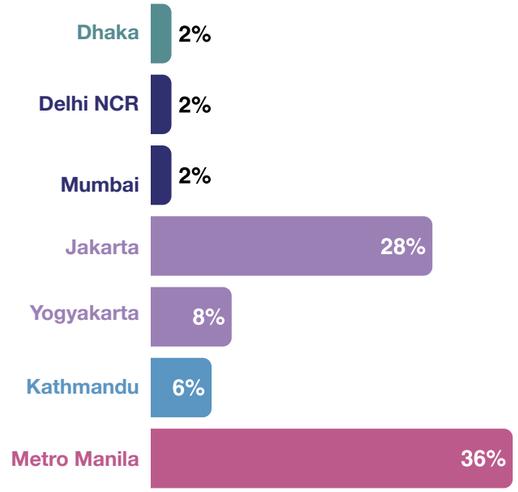
B. Government emergency relief

1. Relief received from governments

Emergency relief provided by governments was the most commonly reported form of institutional assistance, although it still reached only a minority of workers. Access varied markedly among the study locations. For instance, Bangladesh accounts identify several distinct forms of emergency provision: subsidised goods sold through government mobile trucks, government food aid distributed through local political and community structures and in-kind assistance delivered by unspecified organisations. These interventions helped meet immediate consumption needs, but fell short of systematically replacing earnings, covering repair of productive assets or continuing support after the immediate emergency.[105]

Reported receipt was highest in the Philippines, where 36% of workers said that they had received emergency relief. In Indonesia, 28% of workers in Jakarta reported receiving such assistance, compared with 8% in

Figure 34: Workers reporting receipt of government emergency relief during or after climate-related events, by city



Yogyakarta. The city-level difference within Indonesia cautions against treating national disaster-response systems as providing uniform coverage.

A food delivery worker in Dhaka described access to subsidized essential goods following floods or storms:

> *Right after storms or floods, government trucks arrive with essential goods. We can buy items there at prices lower than the market. We have received this benefit.*
>
> *(Transcript ID: BAN_DHK_171)*

Assistance reduced the price of essential goods rather than replacing lost earnings or providing cash compensation. It was also linked to recognised storms and floods, supporting distinction between disaster relief activated by sudden events and protection from recurrent heat, rainfall or waterlogging.

Previous PCI and ISET International research found a similar unevenness in access to emergency assistance. In that study, government relief reached relatively larger proportions of respondents in the Philippines, while most respondents in the other countries reported little or no governmental or civil-society assistance. Inspite of this, the study noted that these relief measures were only providing workers with temporary relief such as food packets and shelter, which could not sustain them long-term.[106]

The relatively higher reported receipt of relief in the Philippines and Jakarta may reflect the greater visibility and formal recognition of sudden-onset disasters such as typhoons and major floods. Such events can activate established disaster-response systems and the distribution of food, water or other emergency materials. Even where relief is provided, however, it is generally designed to meet immediate needs rather than replace earnings, repair productive assets or finance longer-term household recovery.

Slow-onset and recurrent hazards present a further gap. Extreme heat, prolonged rainfall, deteriorating air quality and repeated waterlogging may reduce earnings and increase household expenditure without producing a single officially recognised disaster or triggering emergency assistance. Workers can consequently experience substantial cumulative losses while remaining outside relief systems designed primarily around sudden and geographically bounded events.

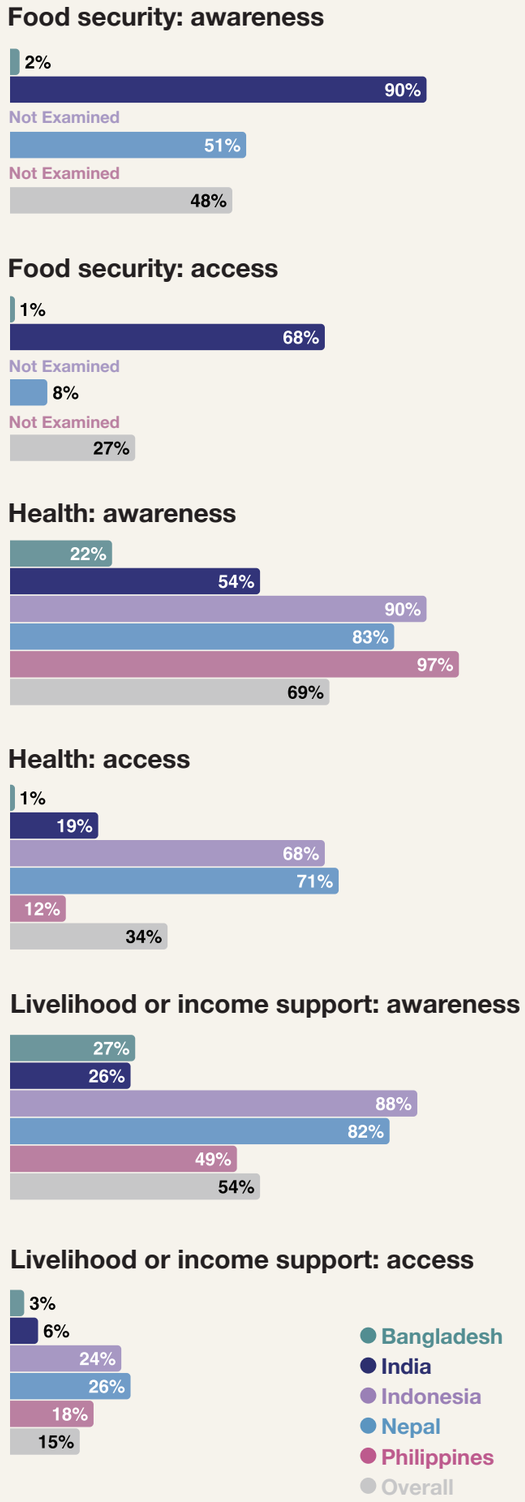
The findings therefore point to two distinct limitations: uneven access to assistance following recognised disasters and the absence of adequate protection for slower or recurring forms of climate disruption. In both circumstances, workers and their households absorb the remaining costs.

2. The gap between awareness and access

Emergency relief is only one component of the public protection available to workers and their households. Food security programmes, health insurance and livelihood support schemes could also help households absorb climate-related income loss and additional expenditure. The survey therefore asked workers whether they were aware of selected schemes and whether they had received or accessed their benefits.

The findings show that awareness was consistently higher than reported access. Across the sample, 69% of workers were aware of a health-related scheme, but only 34% reported access – a difference of 35 percentage points. A 39-point difference appeared in livelihood and income support: 54% were aware of a relevant scheme, while only 15% reported access. The overall difference was smaller for food security schemes, but this aggregate conceals substantial country variation and excludes Indonesia and the Philippines, where this category was not examined.

Figure 35: Worker awareness of and access to selected social protection schemes, by country



Note: In figure 35 "Not examined" means that the relevant scheme either did not exist in the country or was not included in the survey. Percentages describe the workers surveyed and should not be interpreted as population-level estimates. Respondents could report awareness of or access to more than one category of scheme.

The largest gaps appeared in countries where awareness of flagship programmes was particularly high. In the Philippines, 97% of workers were aware of a health-related scheme, but only 12% reported access, an 85 percentage-point difference. In Indonesia, awareness of livelihood or income support stood at 88%, while access was reported by 24%, a difference of 64 percentage points. In Nepal, 82% were aware of livelihood support, compared with 26% reporting access. These findings demonstrate that the visibility of a programme does not by itself ensure that workers receive its benefits.

Food security schemes

Food security schemes were examined in Bangladesh, India and Nepal. India recorded both the highest awareness and the highest access: 90% of workers were aware of a food security programme and 68% reported access. Even there, however, one-quarter of the workers surveyed fell into the gap between awareness and receipt of benefits.

In Nepal, 51% of workers were aware of a food security scheme but only 8% reported access. Bangladesh recorded very low awareness, at 2%, and 1% reported access. These comparisons must be interpreted in light of differences in scheme design. The programmes considered in Nepal and Bangladesh targeted narrower groups, including child nutrition or other vulnerability-based categories, whereas India's Public Distribution System has much broader public visibility. Low access may therefore reflect restricted eligibility as well as implementation barriers.

The data nevertheless matters in the context of the household effects documented in Chapter 3. Approximately one-quarter of workers across all three platform sectors reported a reduced ability to buy food following climate-related impacts. The existence of a food security programme cannot be treated as effective protection if affected workers are ineligible, unable to enrol or unable to obtain benefits when earnings are interrupted.

Health-related schemes

Health schemes had the highest overall awareness of the three categories. Awareness reached 97% in the Philippines, 90% in Indonesia, 83% in Nepal and 54% in India. Reported access was considerably lower, although the size of the gap differed sharply among countries.

Indonesia and Nepal recorded the highest access, at 68% and 71% respectively. These figures suggest that health schemes reached a substantial proportion of the workers surveyed in those countries, but they still left large groups without access. In India, only 19% reported access despite awareness of 54%. The Philippines presented the starkest contrast: almost universal awareness was accompanied by access of only 12%. In Bangladesh, 22% were aware of a health scheme, but only 1% respondents reported access.

These differences are consequential because climate-related events can increase workers' need for healthcare while simultaneously reducing the income available to pay for treatment, medicines and transport. As Chapters 2 and 3 showed, workers reported health effects associated with climate hazards as well as interruptions in access to healthcare. A scheme that is widely known but unavailable or unusable at the point of need does not provide effective protection against this combined health and income risk.

Livelihood and income-support schemes

Livelihood and income support schemes showed both substantial awareness in some countries and consistently limited access. Awareness reached 88% in Indonesia, 82% in Nepal and 49% in the Philippines, but access stood at 24%, 26% and 18% respectively. India and Bangladesh recorded lower awareness – 26% and 27% – and still lower access, at 6% and 3%.

This category is especially important for platform workers because food and health benefits do not replace earnings lost when weather conditions prevent work or reduce the number of paid tasks available. The data indicates that income support mechanisms were the least accessible of the three categories overall: only 15% of workers reported access. Consequently, even workers who could obtain food or healthcare benefits could remain without protection against the principal employment risk identified in Chapter 2 – loss of task-based earnings.

Interpreting the awareness-access gap

The survey establishes a consistent difference between knowledge of schemes and reported receipt of benefits, but it does not by itself identify the reason for every gap. Awareness, formal eligibility, enrolment and effective receipt are different stages of access. Workers may know that a programme exists but fall outside its eligibility rules, lack required documentation, be unable to complete registration, face contribution requirements or encounter uneven local implementation. Benefits may also be available but insufficient, delayed or poorly matched to the particular losses caused by climate-related disruption. The figures should therefore not be interpreted as measuring a single implementation failure. They show more fundamentally that formal programme visibility did not consistently translate into protection received by the workers surveyed. Effective protection depends on whether programmes cover platform workers, respond to both sudden and slow-onset hazards, provide benefits when the loss occurs and address the combination of interrupted earnings and increased household expenditure.

C. Platform support and employment protection

The survey found limited and uneven access to employment protections provided through platforms. Across the sample, health insurance was the most commonly reported protection, identified by 26% of workers. Life insurance was reported by 18% and accidental insurance by 17%. Only 1% reported access to paid leave. At the same time, 31% said that they received no benefits from their platforms, while a further 22% were unaware of any benefits available to them.

Table 4: Employment protections reportedly received by platform workers, by sector and country

Sector and country	Health insurance	Life insurance	Accidental insurance	Paid Leave	Unaware of any benefits	No benefits
Food Delivery						
Bangladesh	0%	0%	0%	0%	50%	49%
India	57%	11%	27%	0%	14%	4%
Indonesia	49%	44%	13%	0%	10%	15%
Nepal	19%	12%	42%	0%	15%	8%
Philippines	35%	26%	21%	0%	15%	29%
Food delivery Total	32%	19%	20%	0%	21%	21%
Ridesharing						
Bangladesh	0%	1%	0%	0%	54%	43%
India	15%	0%	3%	0%	36%	46%
Indonesia	44%	41%	16%	0%	5%	30%
Nepal	4%	8%	34%	0%	25%	32%
Philippines	39%	58%	23%	0%	12%	9%
Ridesharing Total	22%	24%	15%	0%	25%	31%
Home service						
Bangladesh	4%	2%	0%	4%	41%	51%
India	73%	14%	37%	10%	6%	2%
Indonesia	19%	11%	4%	0%	4%	74%
Nepal	14%	4%	24%	12%	16%	48%
Philippines	0%	0%	0%	0%	5%	95%
Home service Total	24%	6%	15%	6%	16%	49%
Overall	26%	18%	17%	1%	22%	31%

Note: The benefit categories are not mutually exclusive: a worker could report receiving more than one form of insurance. "Unaware of any benefits" and "no benefits" record different responses and should not be conflated. The data concern general protections reportedly provided through platforms; they do not establish whether those protections covered climate-related losses or resulted in successful claims.

1. Insurance coverage

Together, the accounts of platform workers surveyed and interviewed for this report indicate that worker-related insurance protection varies across sectors, countries or even workers performing similar forms of work. Across the sample, only 26% of workers reported health insurance, 18% life insurance and 17% accidental insurance. In each case, therefore, a substantial majority did not report receiving the protection. The relatively higher rates recorded in particular sectors or countries should be read against this overall absence of coverage.

The pattern was fragmented rather than sector wide. Food delivery workers reported the highest overall access to health insurance, at 32%, but this ranged from 57% in India and 49% in Indonesia to no reported health, life or accident insurance among food delivery workers in Bangladesh. Ridesharing workers in the Philippines reported comparatively high access to life insurance, at 58%, while 46% of ridesharing workers in India reported receiving no benefits and a further 36% were unaware of any. These contrasts show that exposure to similar occupational risks did not produce similar protection. Coverage depended on the particular country, sector and platform arrangement.

The sharpest illustration appears in home services. In India, 73% of home service workers reported health insurance and 37% accidental insurance. By contrast, 95% of home service workers in the Philippines, 74% in Indonesia and 48% in Nepal reported receiving no benefits. Home service workers were therefore not uniformly protected or excluded as a sector. Instead, workers undertaking broadly comparable platform-mediated services encountered entirely different protection regimes depending on where and through which arrangements they worked.

This unevenness matters because insurance was the principal form of platform protection reported in the survey. Where it was absent, workers and their households remained responsible for medical expenses and the financial consequences of injury, illness or death. Where it existed, its protective value also remained uncertain. Even where workers reports that insurance is available, we require further information on the terms of coverage, whether premiums or contributions were deducted from workers' earnings, which injuries or hazards were excluded, whether workers knew how to make a claim or whether claims were successfully paid. These remain critical areas for further research.

Moreover, conventional health, life and accident insurance addresses only part of the climate-related risk documented in this report. It may assist with specified medical costs or severe bodily harm, but it does not necessarily replace earnings lost during extreme heat, flooding or typhoons; compensate for reduced bookings or application outages; repair damaged vehicles and equipment; or meet increased household expenditure. The presence of an insurance benefit should therefore not be treated as evidence that the worker was protected against climate-related income loss.

The findings point to fragmented benefits rather than a portable and standardised protection framework across platform work. Workers exposed to comparable hazards could receive substantial insurance coverage, no coverage or no clear information about whether coverage existed.

2. Paid leave

The near-total absence of paid leave is particularly important in the context of climate-related risk. No food delivery or ridesharing workers reported access to paid leave. Among home service workers, access stood at 6% overall and was concentrated in Nepal and India.

Insurance, where available, may contribute towards particular medical expenses or compensate for specified accidents. It does not ordinarily replace the earnings workers lose when they cannot work due to climate impacts. Paid leave or an equivalent earnings guarantee would address this temporal dimension of climate risk by allowing workers to stop working without immediately forfeiting income. The data indicate that such protection was effectively unavailable across most of the platform economy covered by the study.

This absence reinforces the double bind identified in Chapter 2. Workers may formally retain the option to log off during dangerous conditions, but almost none have access to paid time away from work. The financial cost of acting on a climate warning, recovering from illness or caring for an affected family member therefore remains with the worker and household.

3. Inadequate information on platform benefits

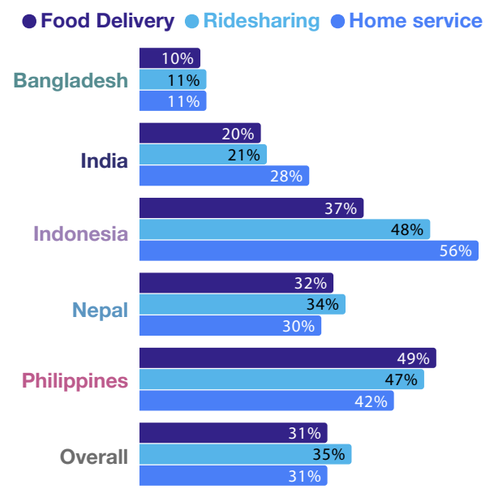
In addition to workers who reported receiving no benefits, substantial proportions said that they were unaware of any benefits available through their platforms. This was reported by 25% of ridesharing workers, 21% of food delivery workers and 16% of home service workers. Lack of awareness may reflect the absence of a benefit, but it may also indicate that platforms could have communicated eligibility, coverage and claims procedures in a better manner. This distinction matters because a nominal benefit offers little practical protection if workers do not know that it exists, whether they are enrolled or how to use it.

4. No climate-responsive support

Table 4, employment protections reportedly received by platform workers, identifies general employment protections that might help with some consequences of illness, accident or death. It does not demonstrate that platforms had climate responsive support.

This report argues that platform support should be evaluated at two levels. The first is the baseline protection available before a climate event, including health, life and accident insurance and paid leave. The second is climate-responsive support activated when a hazard occurs, such as emergency earnings guarantees, suspension of cancellation penalties, compensation for damaged equipment, accessible emergency assistance and clear safety protocols. The evidence shows limited and inconsistent baseline protection, alongside an almost complete absence of paid leave. The available data do not establish a systematic layer of climate-responsive platform support.

Figure 36: Workers reporting that they drew down savings following climate-related impacts, by sector and country



D. Households as the principal risk absorbers

1. Drawing down savings

Approximately one-third of workers in each sector reported drawing down savings in response to climate-related impacts: 31% of food delivery workers, 35% of ridesharing workers and 31% of home service workers.

Reliance on savings varied more by country than by sector. In the Philippines, between 42% and 49% of workers across the three sectors reported drawing down savings. In Indonesia, workers also reported drawing on savings, with home service workers, at 56%, and ridesharing workers, at 48%. By contrast, only approximately one in ten workers across the three sectors in Bangladesh reported using savings. Drawing down savings, however, requires savings to exist in the first place. A lower reported rate may indicate that workers experienced less need to use savings, but it may also mean that fewer workers possessed reserves they could draw upon.

A food delivery worker in Dhaka explained why his household used savings rather than credit:

> *When extreme weather causes my income to stop, I rely on the savings I have built up – my personal savings and my family's savings. I gradually use up these savings to get by during tough times. I don't want to take loans because they come with monthly installments and high interest.*
>
> *(Transcript ID: BAN_DHK_153. See also BAN_DHK_006, 041, 122, 125, 153, 194, 202)*

He then described the consequence of this approach:

> *Using the strategy of breaking into my savings has brought me many challenges and problems. When I started using up my savings, I no longer had any extra money left. But I had no other option, so I kept relying on those savings. As a result, my family's savings and my personal savings were completely exhausted, and I didn't have any additional funds available.*
>
> *(Transcript ID: BAN_DHK_153. See also BAN_DHK_006, 041, 122, 125, 153, 194, 202)*

Funds previously accumulated for emergencies, education, housing, productive investment or other future needs are redirected towards replacing income

and meeting recovery costs. The household may manage the present disruption while losing part of its capacity to withstand the next one. Savings should therefore be understood as a finite buffer. Repeated or prolonged climate-related disruptions can progressively exhaust that buffer, eventually pushing households towards borrowing, reduced consumption or additional work.

2. Borrowing and taking on debt

When savings were unavailable or insufficient, workers shifted climate-related losses into the future by borrowing. Across the sample, 35% of workers reported borrowing from family or friends, while 11% reported taking informal loans and 10% formal loans. In understanding these numbers, it is important to note that workers may have used more than one source of finance.

Borrowing from family and friends was the most commonly reported form of borrowing. Almost half of the workers surveyed in Nepal and Indonesia used this response, compared with approximately one-third in India, one-quarter in Bangladesh and one-fifth in the Philippines. Relatives and personal networks supplied resources when institutional support systems and platform protections fell short.

Support from family or friends may offer workers faster and more flexible access to money than a formal loan. It may also avoid interest charges or formal eligibility requirements. Nevertheless, it should not automatically be treated as cost-free assistance. Depending on the terms of the arrangement, the money may have to be repaid; even where repayment is not expected, the loss is redistributed among people who may themselves have limited resources. Repeated climate-related disruption can consequently strain the social networks on which workers rely.

A platform worker in Jakarta described how family assistance became insufficient after a windstorm damaged his parents' home. Friends and relatives provided food, clothing, temporary shelter and money, but the cost of replacing the roof remained substantial:

> *So I took a loan from a moneylender, to cover the shortfall. My father and I also found additional work to supplement the other costs.*
>
> *(Transcript ID: 36. 190425_Jakarta)*

The account shows how borrowing can follow both the exhaustion of informal support and the need to repair household assets after a climate-related event.

Formal and informal loans were less common but potentially more consequential. Indonesia recorded the highest reliance on these forms of credit, with almost one-third of workers reporting a formal or informal loan. In the Philippines, almost one-fifth reported using informal loans. Reported use was lower in the other countries, although the survey does not establish whether this reflected lower need, greater access to savings and family support, or barriers to obtaining credit. Previous PCI and ISET International research on extreme heat found similar instances of borrowing and loans emerge across these countries, usually to be able to deal with the depleting wages and rising expenditure cycles during the summer months.[107]

Debt differs from other forms of assistance because it does not transfer resources to the household without

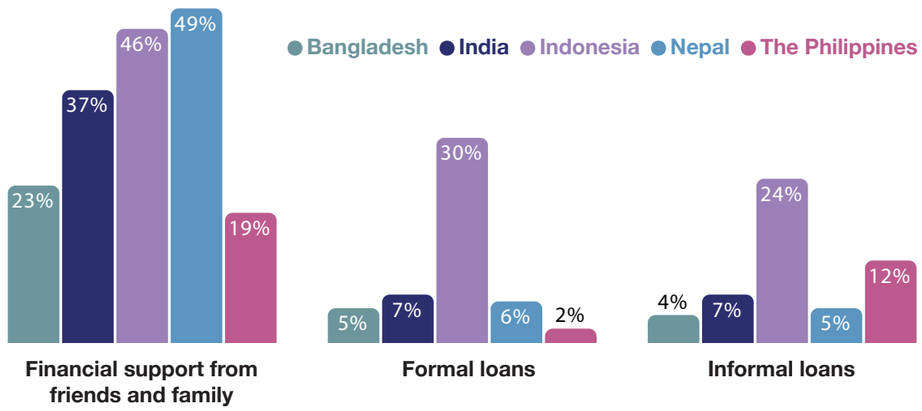


Figure 37: Workers reporting borrowing from family or friends and taking formal or informal loans following climate-related impacts, by country.

a corresponding obligation. It allows the household to meet immediate expenses by committing future income to repayment and, potentially, interest. For platform workers whose earnings are already variable, repayment obligations can intensify pressure to remain available for work, accept tasks or continue working during later periods of hazardous weather.

The survey does not provide sufficient information about loan amounts, interest rates, repayment periods, collateral or whether workers experience difficulty repaying. It therefore cannot measure the longer-term burden created by these loans. The findings nevertheless illustrate how climate-related losses are borne by households. These are important areas for further research.

3. Taking on additional employment

Workers and their households also responded to climate-related financial losses by increasing work. Respondents reported either taking additional employment themselves or relying on family members to take on additional work. This response was particularly prominent among workers surveyed in Indonesia and India.

A worker may seek another job, work through an additional platform or combine platform work with other income-generating activities. Alternatively, another household member may enter paid work or increase their existing work to compensate for the affected worker's reduced earnings. The survey identifies these broad responses but does not establish the type, duration or conditions of the additional employment. A food delivery worker in Dhaka described replacing work lost during bad weather by surrendering weekly rest and extending later working days:

> *I usually do not work in bad weather. I take one day off every week. If I cannot work on a day, I do not take a day off that week. Instead, I work that day later as a backup. Still, I usually work eight hours a day. When the weather is bad and I cannot work, I work 12 hours on a good day.*
>
> *(Transcript ID: BAN_DHK_203)*

His account shows that continuity of income depended upon redistributing the lost working time into a day previously reserved for rest and extending a later working day by four hours. A survey response recording little or no financial effect can therefore coexist with a substantial increase in labour.

This strategy may restore part of the household's income, but it can also intensify the risks that produced the loss. Many platform workers in the study already reported working 8 hours or more each day (Figure 39). Taking on another job may reduce time for rest and recovery, extend travel and exposure, and increase fatigue and accident risk. If the additional work is also informal, task-based or performed outdoors, it may expose the worker to the same climate-related hazards without providing greater income security.

Where family members take on additional employment, the effects of the climate-related shock spread beyond the original worker. The household compensates for the absence of institutional support by mobilising another person's labour. This may alter the distribution of paid work, care and domestic responsibilities within the household. While the present study did

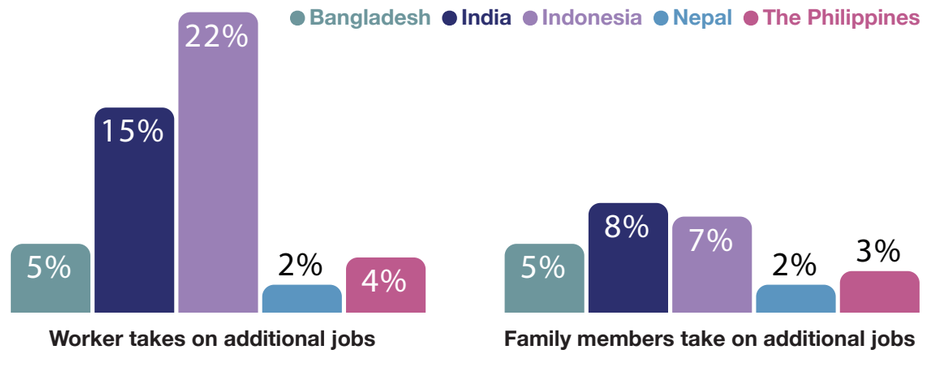


Figure 38: Workers and family members taking on additional employment following climate-related impacts, by country



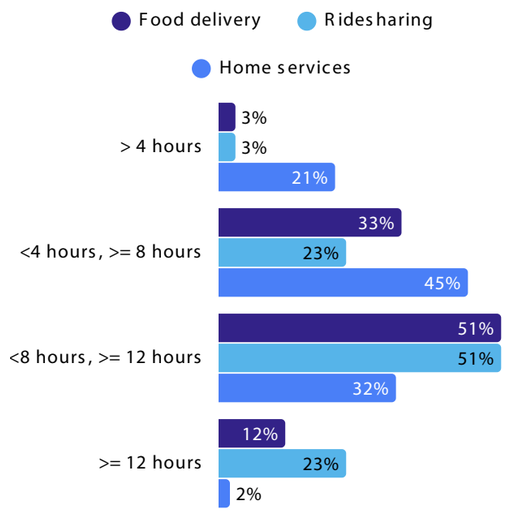


Figure 36: Workers reporting that they drew down savings following climate-related impacts, by sector and country

not identify which household members entered work, what responsibilities they previously performed or who assumed those responsibilities afterwards, this is a critical area of inquiry to establish the gendered or generational distribution of this additional burden.

Taking on more work should consequently not be treated as unqualified evidence of household resilience. It may demonstrate workers' agency in responding to an immediate crisis, but it also represents a further transfer of risk. Time that might otherwise have been used for rest, care, education or recovery is converted into additional paid labour. In cases where the platforms or public systems are unable to protect the income, the household compensates by increasing its own exposure and productive effort.

E. Coping, recovery and deferred vulnerability

The findings distinguish the ability to cope from the ability to recover. Workers and their households may continue buying food, obtain medical treatment or meet repair costs by using savings, borrowing or increasing paid work. These responses address an urgent need, but they do not replace the resources lost or remove the conditions that produced the loss. A Dhaka worker's account shows how several coping responses can operate simultaneously:

> *Usually, my brother works 13–14 hours. During that time, he had to work even longer hours and stay active constantly under mental pressure without any breaks. We had to use up some of our small savings. We also had to take out some loans from other people.*
>
> *(Transcript ID: BAN_DHK_041)*

The worker later explained:

> *Since my brother worked more, we had to support him from our side. We spent as little as possible. We had to break into our savings, and it took even more time to replenish that. We also faced both good and bad treatment from the relatives we borrowed money from. Overall, it was a very challenging situation for us in every way.*
>
> *(Transcript ID: BAN_DHK_041)*

This household did not rely on a single coping mechanism. It combined longer working hours, reduced consumption, depleted savings and borrowing from relatives. Each response addressed an immediate need, but each also carried a continuing cost or deferred vulnerability: exhaustion and mental pressure, foregone consumption, the slow rebuilding of savings and strain within personal relationships. This account explains how some coping strategies also create deferred vulnerability. Depleted savings reduce protection against the next emergency; debt commits future earnings to repayment; and additional employment can reduce rest and increase workers' exposure to occupational and climate-related hazards. Where climate disruptions are prolonged or recurrent, households may confront a new event before they have restored their income, assets or financial reserves.

The capacity to cope is also unequal. Workers without savings, access to credit, relatives able to help or opportunities for additional employment may be unable to use even these household-based responses. Apparent differences in the use of a coping mechanism may therefore reflect unequal access to resources rather than differences in need.

Household coping cannot substitute for institutional protection. Chapter 5 considers how governments, platforms and other actors can redistribute climate-related risk through wage protection, social security, insurance, infrastructure and workplace adaptation. It examines options which can prevent these losses and underlines frameworks and systems to allocate responsibility for protection.



Chapter 5: Redistributing Climate Risk in the Digital Platform Economy

The preceding chapters show that climate-related risks are not distributed according to the control that different actors exercise over platform work. Platforms influence payment, task allocation, performance evaluation and continued access to work, while governments regulate labour markets, social protection and urban infrastructure. Yet workers and their households absorb much of the resulting loss through unpaid time, damaged assets, medical expenditure, depleted savings, debt and additional labour.

Responding to this imbalance requires more than strengthening workers' capacity to cope. Climate resilience cannot mean enabling workers to endure increasingly unsafe conditions or finance their own recovery more effectively. It requires redistributing responsibility for preventing exposure, protecting earnings and meeting the costs that remain when disruption cannot be avoided.

This chapter considers four connected components of that redistribution: preventing and reducing exposure; protecting earnings during climate-related disruption; making social protection climate-responsive; and using insurance to finance defined residual losses. It concludes by clarifying how responsibility for these measures should be allocated among governments, platforms and supporting institutions. Across each area, protections must respond to differences among hazards, sectors and workers, and their organisations must participate in their design and evaluation.

Workers' proposals reflected the interaction among these components. Dhaka food delivery workers, for instance, requested safer roads, water and oral rehydration supplies, effective rainwear and waterproof bags, compensation for damaged bikes and illness, adjustments to targets during hazardous weather and income support when conditions prevented work.[108]

Best practices to support digital platform workers

The previous chapters established the risks that extreme weather events pose to platform workers and now we move towards understanding the support that the existing platform ecosystem can provide workers to cope with these risks. To ground this discussion, we first review what this ecosystem in different countries is already doing to support workers and assess how these practices could be replicated at different levels.

Physical adaptation measures:

- The labour department in Kerala, India is launching the initiative, 'GIGON'. This initiative will establish dedicated resting hubs for platform workers across 3 cities under their 100-day action plan. Each hub would include seats, drinking water, clean toilets, eating area, free Wi-Fi, and charging points. These hubs are supposed to be open from 8 am to 10 pm, with dedicated staff for assistance from the labour department.[109] During the summer months and rainy season, these could function as shaded or protection areas for workers.
- A food delivery platform in India tested wearable cooling vests for its delivery partners across 14 cities and with over 2500 delivery partners. This pilot aims to support workers in coping with heat stress.[110]

Protecting platform workers:

- India's National Disaster Management Authority (NDMA) has issued an advisory calling on states and companies to safeguard workers from extreme heat. The advisory recommends that platform workers be granted emergency leave during peak summer heatwaves without facing penalties or loss of income. It further directs platforms to equip workers with protective kits, ensure access to shaded rest areas, and establish hydration protocols to prevent heat-related illnesses. By adapting disaster risk management frameworks to platform work, the NDMA provides a blueprint for integrating occupational safety into the governance of digital labour.[111]

- Fees for weather impact are becoming prominent with platforms in different countries applying an increased fee on customer orders or bookings. An example of this is from Vietnam by a prominent platform which added a heatwave surcharge on its motorbike and delivery food services on July 2026. This fee is paid to the rider.[112]

Social protection and Insurance:

- In July 2025, post the devastation caused by the intensified southwest monsoon in regions in and around Luzon in Philippines, a prominent platform launched its comprehensive disaster relief and community support initiative. Support to platform workers was extended through calamity insurance assistance which provided a one-time financial grant to partners whose vehicles were damaged due to the typhoon or flooding. It also extended medial and hospitalisation support along with a loan repayment holiday to its workers.[113]
- A home services platform in India launched a protection fund for emergency support needs to their platform workers which were not covered under the insurance offered by the company. The fund can be used by workers for different needs such as hospitaliation or medical costs. They can also be used during the climate risks that they face, potentially acting as an aid to cover any financial distress faced by worker households.[114]
- A Chinese application which workers in multiple areas including food delivery, has provided its workers with free heatstroke insurance. In 2025, these benefits were provided to more than 3 million delivery riders associated with the platform. The insurance also covers medical costs associated with severe heat-related illness. The platform also provides cooling measures such as mobile cold-drink vans and heat-relief supplies.[115]

A. Preventing and reducing exposure

Climate-related harm cannot be addressed only after workers become ill, lose income or incur costs. The first priority must be to reduce avoidable exposure through changes to platform operations, protective infrastructure and the material conditions in which workers work and recover.

Recent pilots implemented by the Migrants Resilience Collaborative in India illustrate several possible interventions. During the 2026 summer season, cooling centres and hydration stations provided informal workers with shade, drinking water, oral rehydration supplies and first-aid support. Other pilots tested cooling equipment and improvements to migrant housing, including insulated roofing. These initiatives were not designed exclusively for platform workers, and their findings remain preliminary. They nevertheless provide a basis for considering how physical infrastructure, equipment and work organisation could operate together to reduce exposure.

1. Physical adaptation and the organisation of work

The first lesson is that physical adaptation must be connected to the organisation of work. Cooling centres and hydration points will provide limited protection if workers cannot use them without losing tasks or income. As earlier chapters showed, targets, time pressure, cancellation consequences and incentives can encourage workers to remain active during hazardous conditions.

Platforms should also establish response protocols linked to locally appropriate and publicly verifiable indicators of heat, rainfall, flooding, urban flooding, air quality and severe weather. When agreed thresholds are reached, platforms should extend journey and service times, suspend targets and time-based incentives, and remove penalties for rejecting, delaying or cancelling tasks. Where conditions present an immediate threat to life or health, affected services should be restricted or temporarily suspended. Workers who stop working or use a rest facility should not lose ratings, incentive eligibility or subsequent access to tasks.

2. Adaptation infrastructure

A second lesson concerns the location and design of adaptation infrastructure. Platform workers do not share a single, fixed workplace: they travel, wait and perform tasks across large urban areas. Shaded rest areas, drinking-water points, toilets, cooling facilities and emergency shelters must therefore be located along workers' actual routes and near places where they wait for tasks. They should remain accessible regardless of which platform a worker uses.

Public authorities should incorporate these facilities into urban heat, transport and disaster-management planning, while platforms should use their knowledge of task distribution to help identify appropriate locations and contribute to their financing. Companies can also consider contributing to setting up and running adaptation infrastructure, this could be individually for their workers or forming a consortium with other platform companies or governments. A recent pre and post survey on pilots conducted by Migrants Resilience Collaborative to address heat (April to July 2026) found that when the proportion of workers reporting distance as one of the challenges in accessing cooling centres reduced, usage also increased.



Linking public infrastructure to both safety and earning capacity, workers also identified road conditions as a determinant of whether work could continue safely. One worker in Dhaka explained:

> *If the roads were better, we could work more and earn more money. The development of roads is necessary.*
>
> *(Transcript ID: BAN_DHK_175. See also BAN_DHK_110, 124, 153, 170, 173, 175, 194 and 198)*

Resilient housing interventions also demonstrate the important role of prevention that extends beyond the period during which a worker is logged onto an application. Insulated housing and other household-level adaptations can contribute to occupational health as well as household resilience. Findings from Migrants Resilience Collaborative pilots in this area, conducted among construction workers, documented improved health and wellbeing outcomes and reduced symptoms including fatigue, dehydration and dizziness.

3. Personal protective equipment

A third lesson is that adaptation should not create another expense for workers. Invisible Control, Visible Risk, which analysed the same survey sample used for this study, found that 34% of workers reported paying charges for a bundled category comprising uniforms, bags, equipment and products used in home services. This included 55% of food delivery workers, 17% of ridesharing workers and 31% of home-service workers.[116] These figures do not measure the provision or purchase of protective equipment specifically. They do, however, show that many workers already finance items required to enter and perform platform work. Platforms should provide climate-protective equipment without charge and replace it when it is damaged or no longer effective. Depending on the hazard and sector, this may include rainwear, waterproof bags and phone protection, helmets and visibility equipment, drinking water, oral rehydration supplies, sun protection, masks and cooling equipment.

A Dhaka worker identified basic equipment suited to the hazards encountered during delivery:

It would be good to give us good-quality clothes for the sun. For rain, a good raincoat would be helpful. A waterproof bag to keep food safe and dry would be nice too.

(Transcript ID: BAN_DHK_125)

Equipment must also be appropriate to the work being performed. Cooling gear tested with construction workers cannot be assumed to be suitable for riders travelling for long periods or home-service workers carrying equipment on public transport. Protective measures should be selected with workers and tested under actual working conditions for comfort, durability, mobility and effectiveness.

Across these interventions, adaptation must respond to the range of hazards and forms of work documented in this study. Facilities established for extreme heat could potentially function as sheltered rest and information points during heavy rainfall, flooding or periods of dangerous air quality, but such conversion would require appropriate drainage, ventilation, communications and activation protocols. Food delivery and ridesharing workers need safe routing, realistic journey times and facilities accessible from the road. Home service workers need the right to postpone appointments when travel is dangerous and minimum safety standards for customer premises. Protections must also be accessible to women and migrant workers and communicated in relevant languages and formats.

Pilots can test these approaches and generate evidence about worker uptake, location and design. Lasting protection, however, requires enforceable systems. Governments should establish minimum standards governing hazard protocols, operational restrictions, protective equipment and access to basic facilities. Platforms should finance and implement protections within their operations and contribute to shared infrastructure serving their workforces. Civil society organisations can support experimentation, outreach and independent evaluation, but should not substitute for public provision or platform responsibility. Workers and their organisations should participate in defining thresholds, selecting sites, testing equipment and assessing whether interventions can be used without sacrificing income.

Recommendations

Governments:

- Invest in climate-resilient urban infrastructure along workers' actual routes and waiting locations, including shaded rest areas, drinking water, toilets, cooling facilities, emergency shelters, effective drainage, reliable transport and safer roads.
- Strengthen climate-resilient housing and essential services in neighbourhoods where migrant and low-income platform workers live, recognising that safe recovery between working days is part of occupational health.
- Recognise climate-related exposure as an occupational health and safety issue for platform workers, regardless of whether workers are classified as employees, contractors or self-employed.
- Establish enforceable, multi-hazard standards governing platform operations during extreme heat, heavy rainfall, flooding, typhoons, dangerous air quality and other locally relevant conditions.
- Require platforms to adopt publicly verifiable activation thresholds and protocols specifying when journey times, targets, incentives and cancellation rules must be modified and when affected services must be restricted or suspended.
- Protect workers against retaliation, reduced ratings, loss of incentives or restricted access to future tasks when they reject, delay or cancel work because conditions are unsafe.

Platform companies:

- **Protective equipment and practices**
  - Provide climate-protective equipment without charge, including equipment appropriate to each sector and hazard, and repair or replace it when it becomes damaged or ineffective.
  - Consult workers when selecting and testing protective equipment to ensure that it is usable, durable and compatible with the mobility and physical requirements of the work.
  - Finance or contribute to rest, water, sanitation, cooling and emergency facilities located along workers' routes and near areas where workers wait for tasks. Shared facilities should remain accessible to workers from different platforms.
  - Engage workers and their organisations in defining hazardous thresholds, designing operational protocols, selecting infrastructure sites, testing equipment and evaluating whether protections are effective.
- **Climate induced safety-risk mitigation**
  - Assess climate-related risks across the cities, sectors and tasks in which they operate and develop protocols covering both sudden disasters and slow-onset or recurrent hazards.
  - Provide workers with accurate, timely and locally relevant warnings through the application and through alternative channels that remain accessible during electricity, network or platform disruption.
  - Adjust estimated journey and service times during hazardous conditions and identify flooded, inaccessible or otherwise unsafe routes and customer locations.
  - Suspend targets, time-based incentives and penalties for rejecting, delaying or cancelling tasks when climatic thresholds are reached. Incentive mechanisms should automatically pause during severe weather events to prevent creating unintended financial pressure on workers to operate in unsafe conditions.
  - Restrict or suspend affected services where conditions present an immediate risk to health or life and communicate these restrictions to customers so that responsibility for delays is not transferred to workers.

Funders, civil society organisations and research institutions:

- Continue to pilot and independently evaluate adaptation measures such as cooling centres, hydration facilities, protective equipment, resilient housing and multi-hazard community facilities.
- Design pilots with workers and evaluate whether facilities are appropriately located, practically accessible and usable without workers losing tasks or income.
- Monitor whether protections reach women, migrants, workers using multiple platforms and workers in less visible sectors such as home services.
- Evaluate whether interventions reduce workers' reliance on depleted savings, debt, reduced consumption and additional labour rather than measuring outputs alone.
- Support worker organisations to collect evidence, articulate sector-specific priorities and participate in negotiations with governments, platforms and insurers.
- Preserve the distinction between testing an intervention and demonstrating its effectiveness.
- Preliminary programme-monitoring results should be clearly identified, and pilots involving informal workers should not automatically be treated as evidence of effectiveness for platform workers.
- Use pilot evidence to support enforceable public and platform systems rather than allowing temporary projects to become substitutes for continuing institutional responsibility.

Worker organisations

- Collect workers' accounts of unsafe routes, inaccessible facilities, unpaid disruption, equipment damage and failures of platform or public support.
- Monitor how hazard protocols are implemented across sectors and cities and challenge discriminatory or inconsistent access to protection.
- Participate in the design and review of climate-risk assessments and operational thresholds.

B. Protecting earnings during climate-related disruptions

The evidence presented in this report establishes a substantial mismatch between the frequency of climate-related earnings disruption and the protection available when it occurs. Among workers who reported that climate-related hazards affected their work or households, 91% experienced disruption to their earnings. Yet only 1% of workers across the full sample reported access to paid leave through a platform. No food delivery or ridesharing workers reported paid leave, while access among home service workers stood at 6% and was concentrated in India and Nepal. Only 8 respondents reported receiving compensation or relief from a platform during an extreme weather event. Public livelihood and income support schemes provided little alternative protection: although 54% of workers were aware of a relevant scheme, only 15% reported access.

The first lesson is that the right to stop working safely depends on income protection. Workers may formally be free to log off or reject a task, but that choice is constrained when every hour away from the platform produces an immediate loss of earnings. The operational measures proposed in Section A — removing cancellation penalties, suspending targets and restricting services - must therefore be accompanied by an earnings guarantee. Otherwise, measures intended to protect workers may leave them choosing between exposure to danger and the loss of income required to meet household needs.

A food delivery worker in Dhaka distinguished payment for completing work in rain from support when no work could be performed:

> *During this time, they give a bonus when work is done and do not pay when there is no work. But they could have helped me better when there was no work. If there were some kind of arrangement for when we cannot work, that would have been better for us.*
>
> *(Transcript ID: BAN_DHK_048)*

Another Bangladeshi food delivery worker reinforced this position:

> *Every company gives a fixed salary and paid leave. But in our work, if we don't work, we don't earn money. Many times, due to different problems, we cannot work and lose income. If the company gives us some money for those days, it would be very helpful. We don't get any health care benefits. It would be great if the platform could provide such benefits.*
>
> *(Transcript ID: BAN_DHK_125)*

Platforms should provide paid climate leave or an equivalent earnings guarantee when hazardous conditions prevent or substantially restrict work. Eligibility should not depend on whether a worker is formally classified as an employee. The rationale for protection is that the platforms govern the terms of task allocation, pricing, and service continuity, giving them the operational capacity to manage hazard protocols across the network. Operational suspension for safety reasons should be restructured in a manner that the resulting financial cost is not absorbed solely by workers. Governments and platforms could take lead from the legislation passed by the Ministry of Labour in Spain in 2025 for employees to be able to take up to 4 days of paid leave during extreme weather events, with the provision for extensions.[117]

A second lesson is that earnings protection must cover the different ways in which climate disruption occurs. Workers did not lose income only when platforms formally shut down. Earnings were also affected when workers could not leave home or reach customers, platform applications or communications stopped functioning, bookings declined, and tasks took longer to complete. Protection tied exclusively to an official disaster declaration or a platform-wide shutdown would therefore exclude many of the losses documented in this study, particularly those associated with recurrent heat, prolonged rainfall, localised flooding and poor air quality.

Earnings guarantees should combine automatic and individual pathways. Payments could be activated automatically when publicly verifiable hazard thresholds are reached or when a platform restricts operations in an affected area. Workers should also be able to claim protection where local conditions prevent safe work even if a city-wide threshold has not been crossed. This is important for localised flooding, infrastructure failure and hazards affecting particular routes, neighbourhoods or customer locations. Claims mechanisms should accept worker-reported evidence, provide timely human review and protect workers from retaliation or adverse changes to ratings and task allocation.



A third lesson concerns how replacement earnings should be calculated. Invisible Control, Visible Risk found that payment was calculated by task for 73% of food delivery workers, 70% of ridesharing and 61% of home service workers. It also documented substantial variation in weekly earnings within sectors and countries, linked to unpredictable task availability, incentive eligibility, algorithmic allocation and customer demand. Incentives were themselves a significant component of remuneration: across the sample, 35% of workers reported incentives for working particular hours or shifts, 70% for completing more tasks and 12% for extending their working hours. Workers could also remain available through the application without receiving a paid task.[118]

These findings mean that replacement earnings cannot be calculated solely from tasks cancelled after acceptance. Such an approach would exclude workers who remained available but received fewer bookings, could not access the application or stopped logging on because conditions were unsafe. A more appropriate mechanism would calculate payments from the worker's earnings over a defined preceding period, including incentives that regularly formed part of their income. Governments, platforms and worker organisations would need to determine an appropriate reference period and an adequate minimum floor so that workers with low or irregular recent earnings are not left without meaningful protection.

Workers using more than one platform should not be required to navigate incompatible systems or prove that one platform was their exclusive source of income. Governments should establish common standards for calculating covered earnings, coordinating payments and preventing gaps or duplicate deductions. Registration and payment systems should be portable across platforms and accessible to migrant workers whose identity documents, place of registration or residence may differ from the city in which they work.

Payments must also arrive while the disruption is affecting household expenditure. Delayed reimbursement cannot prevent workers from reducing food consumption, borrowing money or depleting savings to meet immediate needs. Wherever possible, earnings guarantees should be activated automatically through the payment systems platforms already use. Workers should receive clear information about the amount, period and basis of payment, together with an accessible process for correcting missing or inaccurate payments.

The cost of this protection should not be placed principally on workers through premiums or deductions from already unstable earnings. Platforms should finance earnings guarantees as a cost of organising climate-exposed work. Governments should establish and enforce minimum requirements, coordinate hazard information and provide public income support where climate disruption extends beyond a particular employment relationship. Public support may be especially important during prolonged or large-scale disasters, but it should not replace platform responsibility for earnings lost through platform operating decisions or the organisation of work.

Insurance may help finance part of this obligation, particularly where payments must be made rapidly across a large, affected workforce. It should not, however, define the worker's underlying entitlement or limit payment to the circumstances covered by an insurance contract. The primary requirement is a reliable right to earnings protection; the question of how insurance can supplement the financing of residual losses is considered separately below.

Recommendations

Governments:

- Require paid climate leave or equivalent earnings guarantees when hazards prevent or substantially restrict work. Establish common rules for calculating replacement earnings from workers' prior earnings histories, including regularly earned incentives and an adequate minimum floor.
- Ensure that earnings protection covers localised and recurrent disruption as well as officially declared disasters or platform-wide shutdowns. Provide an individual pathway for workers affected when a general threshold has not been activated.
- Require platforms to compensate workers for climate-related damage to vehicles, phones, tools and other productive assets where that damage arises during or as a consequence of platform work.
- Establish accessible inspection, complaints and enforcement mechanisms and publish information on compliance, activation of hazard protocols, payments and workers excluded from protection.

Platform companies:

- Provide paid climate leave or an equivalent earnings guarantee whenever workers cannot safely work or platform operations are restricted. Payments should cover more than tasks already accepted and should account for periods of lost access, reduced bookings and unsafe availability.
- Use transparent and consistent methods to calculate replacement earnings, explain the calculation to workers and provide timely human review of missing or inaccurate payments.
- Compensate workers for climate-related damage to vehicles, phones, tools and other productive assets used to perform platform work.

Worker organisations:

- Participate in the design and review of earnings guarantees, social-protection systems and insurance products.
- Bargain collectively over working time, climate leave, replacement earnings, protective equipment, platform contributions and the suspension of harmful targets and incentives.
- Represent workers in complaints, payment reviews and appeals concerning platform penalties, public benefits and insurance exclusions.
- Ensure that the experiences of women, migrants, workers with care responsibilities and workers operating across multiple platforms shape collective demands and institutional responses.

C. Making social protection climate-responsive

Climate-responsive social protection should enable workers and their households to anticipate, absorb and recover from climate-related shocks without having to reduce essential consumption, take on harmful debt, deplete productive assets or increase exposure to unsafe work. . The findings in Chapter 4 show, however, that the existence and visibility of a scheme does not consistently translate into protection received by workers. Across the sample, 69% of workers were aware of a health-related scheme but only 34% reported access. For livelihood and income support, awareness stood at 54% and access at only 15%. Food security programmes achieved comparatively greater reach in India, where 90% of workers were aware of a scheme and 68% reported access, but access was far lower among the workers surveyed in Bangladesh and Nepal.

1. Access and enrolment

The first lesson is that expanding awareness alone will not close these gaps. Awareness, eligibility, enrolment, payment or receipt, adequacy and recovery of benefits are distinct stages. Platform workers may know that a programme exists but they remain excluded by employment classifications, contribution requirements, residence rules or documentation requirements. Others may be eligible but unable to complete registration or obtain assistance when it is needed. They also may even receive a benefit, however it may not necessarily mean that it is timely, adequate or relevant to the actual loss being faced. The survey does not establish the particular cause of each gap, but it demonstrates that programme visibility cannot be used as a proxy for effective coverage.

Governments should therefore review eligibility and enrolment requirements to ensure that platform workers are expressly included, regardless of whether they are classified as employees or self-employed. Registration should accommodate variable earnings, work across multiple platforms and movement between cities. Benefits should be portable across administrative boundaries so that migrant workers do not lose coverage because their identity documents or permanent registration are associated with a source location rather than the city in which they currently live and work. Contribution requirements should be calibrated to irregular earnings and should not make protection least accessible to workers with the lowest or most volatile incomes. They should also ensure these supports are timely, and ensure they are adequate and relevant to address the loss workers are facing.

Platforms can help close administrative gaps because they already hold information about worker identity, earnings and participation in platform work. Subject to worker consent and strong data-protection safeguards, this information could support simplified or automatic enrolment, verification of interrupted earnings and rapid payment. Governments should specify what information may be shared, for what purpose and for how long it may be retained. Access to social protection should not require workers to accept unrelated surveillance or allow platforms to determine eligibility for public benefits.

2. Coordinated responses to climate-related shocks

A second lesson is that climate-related shocks generate several needs simultaneously. Workers may lose income while also requiring food, healthcare, medicines, transport, shelter or repairs to their homes and productive assets. Existing programmes may address some of these existing concerns by workers but need to incorporate climate triggers which can activate these when an extreme weather event takes place. However, as we showed in Chapter 4, even workers with access to food or health benefits remained largely unprotected against interrupted earnings, while only 15% reported access to livelihood or income support. Climate responsive systems need to cover four stages in the life cycle of a platform worker in order to adequately address the losses they face – (1) anticipatory support before the event; (2) shock-responsive which is immediately once the event occurs; (3) adaptive support which results in temporary expansion of existing programs; and (4) recovery support which continues even after the immediate shock.

Climate-responsive systems should therefore coordinate food, health and livelihood protection rather than require workers to apply separately for each form of assistance. A climate-related trigger could open access to a package of support appropriate to the event and household, including food assistance, healthcare, temporary income support and emergency

housing or transport where necessary. Benefits should account for dependents and care responsibilities because the consequences of lost platform earnings are distributed across households rather than confined to the individual worker. A study by Migrants Resilience Collaborate, examining national and state schemes in Bengaluru, India found that while currently none of the schemes had climate-related triggers they still provided support to informal workers and their families when faced with an event. According to this research, integration of climate triggers within the existing scheme design could be extremely beneficial, more so than creating completely new schemes.[119]

3. Anticipatory and adaptive social protection

A third lesson concerns timing and scalability. An Asian Development Bank brief describes adaptive social protection as integrating climate-risk information into programme design so that systems can anticipate shocks, enable an effective response and expand support during periods of heightened vulnerability.[120] Governments should link social-protection registries with early-warning and disaster-management systems, establish pre-agreed activation rules and ensure that payment mechanisms continue functioning during electricity, communications or transport disruption. Workers should be told in advance what support will become available, what triggers its activation and how they can challenge exclusion or non-payment.

Related World Bank research indicates that adaptive social protection systems can cushion income loss and reduce reliance on coping responses that preserve immediate consumption by depleting savings, increasing debt or disposing of productive assets.[121] For vulnerable workers and their households, social protection can thereby prevent a temporary climate-related disruption from producing deeper and more enduring poverty.[122] In practice, this could involve temporarily extending coverage to workers who fall outside ordinary eligibility rules, increasing the value or duration of an existing benefit, or making advance payments where forecasts indicate a high probability of severe disruption.

Support must respond to both sudden and slow-onset hazards. Floods and typhoons may justify rapid expansion of emergency benefits in a defined area. Extreme heat, deteriorating air quality and prolonged rainfall may disrupt work repeatedly without producing a formal disaster declaration. Eligibility should therefore be connected to transparent climatic and occupational indicators rather than only disaster declarations as most slow onset hazards are not covered under disaster lists. Many of the risks experienced by platform workers are localised, recurrent or occupational. Systems should also permit individual claims where a worker or neighbourhood is affected even though a wider administrative threshold has not been reached.

The experiences of workers who received barangay-level relief in Metro Manila, discussed in Chapter 4, show the value of rapid and locally accessible delivery. Food delivered directly to affected households could meet immediate needs without requiring workers to travel or queue during hazardous conditions. Such relief was nevertheless temporary and depended on local implementation. Local delivery systems should therefore be connected to national entitlements, interoperable registration and predictable financing so that assistance does not depend solely on where a worker lives or the discretionary capacity of a particular locality.

Financing responsibilities should reflect the roles of different actors. Governments remain responsible for establishing inclusive social protection floors and financing protection against risks extending across the population. Platforms could be required to make contributions which reflects the climate exposure involved in the nature of work. These contributions should supplement public financing rather than be deducted from workers' earnings or used to replace platform obligations for paid leave and earnings protection. Civil society organisations can assist workers with enrolment, document barriers and test delivery mechanisms, but they should not become permanent substitutes for adequately financed public systems.

Workers and their organisations should participate in deciding activation thresholds, benefit packages, enrolment procedures and payment channels. Monitoring should distinguish among formal eligibility, enrolment, successful claims and benefits actually received, with results disaggregated by sector, gender and migration status. A climate-responsive system should ultimately be evaluated by whether support reaches affected workers in sufficient time and at sufficient scale to prevent hunger, untreated illness, debt and the depletion of household resources.

Recommendations

Governments:

- Integrate platform workers into national occupational health, disaster-management and social-protection frameworks without making coverage contingent on a particular employment classification.
- Simplify social-protection enrolment, accommodate variable earnings and work across multiple platforms, and make benefits portable between cities and administrative jurisdictions.
- Coordinate food, health, livelihood, housing and emergency assistance so that workers do not have to navigate separate systems for losses arising from the same climate-related event.
- Make social protection anticipatory and scalable by linking programmes to early-warning information, establishing pre-agreed activation rules and allowing coverage, benefit value and duration to expand during periods of heightened vulnerability.
- Ensure that recurrent heat, prolonged rainfall and dangerous air quality can activate support even in the absence of a formally declared disaster
- Require platforms to contribute to the financing of worker protection, shared infrastructure and portable social-security systems. These contributions should not be passed to workers through deductions or reduced rates of pay.
- Develop a clearer institutional architecture defining complementary responsibilities of government, platforms, insurers, civil society and worker organisations across the protection cycle.

Platform companies:

- Facilitate access to public social protection through simplified enrolment and verification, subject to worker consent and data protection requirements.

Funders, civil society organisations and research institutions:

- Assist workers in understanding and accessing social-protection programmes, insurance coverage and complaints mechanisms while documenting the administrative and eligibility barriers they encounter.

D. Insurance as supplementary risk financing

1. Platform-based insurance

Insurance was the most commonly reported form of platform protection in the study, but coverage was fragmented and its relevance to climate-related losses was uncertain. Across the sample, 26% of workers reported health insurance, 18% life insurance and 17% accident insurance. Coverage varied substantially among countries, sectors and platform arrangements. The survey did not establish the terms of these policies, whether workers contributed to their cost, which hazards were excluded or whether claims were successfully paid. Nor did the reported availability of health, life or accident insurance demonstrate that workers were protected against interrupted earnings, reduced bookings, damaged equipment or increased household expenditure. Further, it must be noted that 22% of workers were unaware of these benefits offered by platform companies while 31% reported not receiving any benefits. This could also be translated as lack of information leading to limited knowledge about products provided by platforms.

Further, workers' accounts show that insurance may be unavailable in practice when workers must pay for it themselves. A food delivery worker in Jakarta explained that the platform offered health and accident insurance, but workers had to pay for it themselves:

> *Considering that my job is prone to illness and accidents, I want to have insurance too. But because my income is uncertain, it's very hard for me.*
>
> *(Transcript ID: 34. 190425_Jakarta)*

The account illustrates the tension between offering insurance and making it financially accessible to workers whose earnings are already variable and climate exposed.

2. Parametric insurance for climate-exposed workers

Experience with parametric insurance for other climate-exposed workers illustrates how insurance might respond more directly to some of these losses. The Migrants Resilience Collaborative has implemented single- and multi-peril parametric insurance for more than 11,000 construction and outdoor workers across four Indian states and 12 districts. The multi-peril model covers hazards including extreme heat and rainfall. Unlike conventional indemnity insurance, payments are activated when predetermined climatic thresholds are crossed rather than after each worker proves an individual loss.

The findings from this study and the MRC pilot, together, generate several lessons for the design of climate-risk insurance for platform workers. The lesson here is that insurance must be designed around the losses workers actually experience.

3. Cash benefits and facilitates financial allocation among urgent needs

Among climate-impacted platform workers, this study documented interrupted earnings, health expenditure, damage to productive assets and additional household costs as distinct but interacting consequences of climate-related disruption. The Migrants Resilience Collaborative parametric insurance monitoring data from locations in which payments were triggered indicate that workers used the money to address additional household expenditure, healthcare costs and income lost during the summer, as well as to reduce financial stress. Among recipients who reported using the payment for additional household expenses, more than 90% used it to purchase food or rations. Among those who used it to meet healthcare costs, 91% spent it on medicines. These percentages describe particular groups of payment recipients rather than all workers covered by the programme, and the findings concern informal construction and outdoor workers rather than platform workers specifically. They nevertheless show that a rapid cash payment can be used flexibly across the overlapping needs produced by a climate-related shock. These findings support the use of cash benefits that workers can allocate among urgent needs rather than benefits restricted to a single predefined expense.

The value and duration of payments must nevertheless be assessed against the losses they are intended to address. A payment may enable a household to purchase food or medicines without replacing a substantial period of lost earnings or meeting the cost of repairing a vehicle. Insurance products at the pilot stage should therefore state which losses they are designed to finance; and report and document whether the payments provided were sufficient to address them. Where hazards are repeated or prolonged, the design should also specify whether workers can receive more than one payment during the coverage period.

4. Multi-peril models

Insurance must reflect the diversity of hazards and exposure documented in this research. Workers experienced sudden events such as floods and typhoons as well as recurrent and slow-onset conditions including extreme heat, prolonged rainfall and deteriorating air quality through out the year. Their exposure also varied among sectors, routes and neighbourhoods. A threshold suitable for measuring heat across a city may not identify localised flooding along a worker's route, while a product designed around a single severe event may not respond to smaller but repeated losses of income. Across the cycle of the year, a work may face multiple peril, sometimes one after the other leading to their vulnerability further increasing. The need for multi-hazard protection is visible in workers' accounts. Respondents distinguished rain-related payments from the absence of comparable assistance during extreme heat, while others described interconnected losses arising from flooding, illness, road damage and equipment failure.[123]

The Migrants Resilience Collaborative multi-peril model demonstrates one approach to covering more than one hazard along the span of the year through predetermined climatic thresholds. Its application to platform work would require further testing. Thresholds would need to use sufficiently local and reliable data and be assessed against workers' reported experience of disruption. Programme evaluations of insurance pilots should record not only how many workers were enrolled or paid, but also whether workers who experienced losses were excluded because a trigger was not activated.

5. Supplementary support

Insurance should supplement rather than replace prevention, earnings protection and public social protection. Expanding insurance coverage without addressing these underlying gaps would leave much of the risk with workers. Insurance should therefore finance defined residual losses after platforms have taken reasonable measures to prevent exposure and fulfilled their obligations to protect earnings.

6. Accessibility and portability

The study included migrant workers, workers with irregular earnings and workers operating under different sectoral and platform arrangements. Coverage tied to continuous activity on one application could exclude workers precisely when hazardous conditions have reduced their ability to work. Protection should therefore accommodate movement between platforms and cities, interruptions in platform activity and differences between workers' place of registration and current residence. Workers should receive clear information about their enrolment, the hazards and periods covered, the thresholds used and the procedure for challenging an exclusion or missing payment.

7. Data protection and privacy

Climate, location and work-history data collected for insurance should not be repurposed for performance monitoring, task allocation or disciplinary action. Workers and their organisations should participate in selecting triggers, benefit levels and payment channels and in evaluating whether coverage reaches women, migrants and workers across sectors.

Recommendations

Governments:

- Encourage self-regulation or industry best practices and establish minimum standards for platform-provided insurance, including clear coverage, exclusions, contribution arrangements, benefit levels, payment procedures and accessible avenues for review in scenarios where self-regulation may not work.
- Regulate the use of worker identity, earnings, location and climate-exposure data. Information collected for social protection or insurance should not be repurposed for surveillance, performance evaluation, task allocation or disciplinary action.

Platform companies:

- Finance health, accident and climate-risk insurance as a supplement to preventive measures and earnings protection. Coverage should not depend on continuous activity, task-completion thresholds or deductions from workers' earnings.
- Make protection portable where workers use multiple applications or move between cities and provide clear information about eligibility, coverage, exclusions, triggers and payment procedures.

Insurers and insurance intermediaries:

- Design climate-risk products around the losses documented by workers, including interrupted earnings, health expenditure, productive-asset damage and additional household costs.
- Design coverage around workers' mobility, irregular earnings and use of multiple platforms rather than requiring continuous activity on a single application.
- Explain enrolment, covered hazards, activation thresholds, exclusions and payment processes in accessible languages and formats.
- Development partners should work with insurers and insurance intermediaries to publish evidence on enrolment, activation, payment timing, benefit adequacy, exclusions and losses remaining uncovered. Pilot success should not be measured solely by the number of policies issued or payments made.

E. Redistributing responsibility for climate-related risk

The measures proposed in this chapter perform different but connected functions. Changes to platform operations and urban infrastructure can prevent or reduce exposure. Paid climate leave and earnings guarantees can allow workers to stop working without immediately losing the income on which their households depend. Climate-responsive social protection can address needs extending beyond a particular task or platform. Insurance can finance defined residual losses, but only as a supplement to these prior protections.

Responsibilities within this system are shared but not interchangeable. Governments must establish enforceable minimum standards, provide climate-resilient infrastructure and maintain inclusive social-protection systems. Platforms have a crucial role in preventing risks arising through the organisation of work, protecting earnings when work becomes unsafe or impossible and contributing to coverage for remaining losses. Insurers and civil society organisations can contribute technical expertise, experimentation, outreach and independent assessment without displacing these primary obligations. Workers and their organisations must be involved wherever a measure depends on assumptions about how, where and under what conditions platform work is performed. Their participation is necessary to determine whether climatic thresholds correspond to experienced conditions, facilities can be reached, equipment can be used during work and payments arrive in time and at sufficient value.





Conclusion



This report examines how climate-related hazards enter the digital platform economy and how the resulting risks are distributed among platforms, workers, households and public institutions. Across nine cities in South and Southeast Asia, workers experience extreme heat, heavy rainfall, flooding, typhoons, air pollution and, in some locations, cold conditions. These hazards are intensified by urban heat, inadequate drainage, unsafe roads, limited public facilities and unequal access to secure housing and essential services.

Climate-related disruptions do not operate outside the organisation of platform work. Task-based payment, unpaid availability, algorithmic allocation, performance targets, cancellation consequences and worker responsibility for productive assets shape both workers' exposure and the consequences of withdrawing from work. Workers can also lose income because they cannot leave their home, access the application or reach a customer; because bookings decline; or because tasks take longer to complete. At other times, incentives and performance requirements encourage them to continue working under dangerous conditions. Climate hazards consequently intensify an existing imbalance: platforms exercise substantial influence over the allocation and evaluation of work, while workers commonly tend to bear a significant share of the physical and financial cost.

These effects extend into workers' households. Interrupted earnings constrain expenditure on food, healthcare and other necessities and reduce the remittances on which geographically dispersed family members depend. Climate-related events also damage homes and household assets, interrupted access to water and healthcare and increase care responsibilities. Because platform workers generally receive no income for time spent waiting, recovering from illness or caring for affected family members, these household consequences can generate further losses of paid work.

Meanwhile, the institutions that can absorb these risks currently provide limited and uneven protection. Government emergency relief reaches only a minority of workers and is more likely to be activated by sudden disasters than by recurrent heat, rainfall or deteriorating air quality. Awareness of social protection programmes is consistently higher than reported access. Platform provided insurance varies sharply among countries and sectors, while paid leave is almost entirely absent. The available evidence does not establish a systematic layer of climate-responsive support from platforms.

Workers and their households consequently become the principal absorbers of climate-related loss. They draw down savings, borrow from family and friends, take formal or informal loans and increase their own labour or that of other household members. These responses may enable households to meet immediate needs, but they do not necessarily produce recovery. Savings are depleted, debts enter future budgets and additional work increases exhaustion and exposure. What appears to be resilience at the moment of crisis can therefore defer vulnerability into the future.

The central conclusion of this report is that climate resilience in the platform economy cannot be measured by workers' capacity to endure or privately finance repeated disruption. The institutions that organise work, regulate labour markets and control the resources are required to prevent and absorb loss. This redistribution should follow a sequence of prevention, protection and compensation. Avoidable exposure should first be reduced; workers should then be protected against the loss of earnings required to remain safe; and public provision and supplementary insurance should meet the losses that cannot be prevented.

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