

National Alliance for Climate & Ecological Justice (NACEJ - NAPM)

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Between 1992 and 2015, heatwaves caused over **24,000 deaths** in India. In 2024 alone, **over 733 heatstroke deaths** have been recorded by HeatWatch, surpassing official figures. Informal workers are at severe risk of facing **dual impact** of heat stress – on their **health** and on their **livelihood**.



There were 554 declared Heatwave days in India in 2024.

Rising temperatures and heatwaves pose serious health risks, including heat exhaustion, heatstroke, dehydration, and long-term health complications. Heat also impacts their ability to work, productivity, work opportunities, and thereby earnings. Despite causing least carbon emission which is worsening climate change, informal workers are among those bearing worst impacts. This **climate injustice** needs to be fought at every level, in policy and at the ground level. These guidelines aim to provide an advocacy framework and practical measures to help informal workers protect themselves from heat stress impact.



a. High heat index or wet bulb temperature can affect people even when there is no declared heatwave: In order to understand the impact of heat, it is important to pay attention to heat index / wet bulb temperature - a combined indicator of temperature (also called dry bulb temperature) as well as relative humidity. Usually, human body can naturally fight excessive heating by sweating. As sweat evaporates, body cools down. But when relative humidity is also high along with temperature, the air already has a lot of water vapour, making it difficult for sweat to evaporate easily. This hampers human body's ability to cool down naturally. Though the body sweats excessively, the sweat does not evaporate and cooling does not happen. Thus, it is this KILLER COMBINATION OF HIGH TEMPERATURE AND RELATIVE HUMIDITY which can have disastrous effect on people, including heat rashes, heat cramps, heat exhaustion, heat stroke, and even death if correct measures are not taken in time.



b. Wet-bulb temperature of 35°C is also very dangerous: Usually heat comes in news when dry bulb temperature reaches 40°C. However, workers should be alarmed when wet bulb temperature, that is a combined indicator of temperature and relative humidity, crosses 31°C. When the wet bulb temperature reaches 35°C, human body loses all capability to fight heat and can collapse within hours.

Relative Humidity %	Temperature °C																
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
40	27	28	29	30	31	32	34	35	37	39	41	43	46	48	51	-54	57
45	27	28	29	30	32	33	35	37	39	41	43	46	49	51	54	57	
50	27	28	30	31	33	35	36	38	41	43	46	49	52	55	58		
55	28	29	30	32	34	36	38	40	43	46	48	52	54	58			
60	28	29	31	33	35	37	40	42	45	48	51	55	59				
65	28	30	32	34	36	39	41	44	48	51	55	59					
70	29	31	33	35	38	40	43	47	50	54	58						
75	29	31	34	36	39	42	46	49	53	58							
80	30	32	35	38	41	44	48	52	57								
85	30	33	36	39	43	47	51	55									
90	31	34	37	41	45	49	54										
95	31	35	38	42	47	51	57										
100	32	36	40	44	49	56											

Source: Calculated °F to °C from NOAA's National Weather Service

Heat Index warning chart



c. Local monitoring is needed because government warnings come too late too little: Please note, India Meteorological Department (IMD) of government declares heatwave much later than actual worsening of conditions for outdoor workers. Also, it considers only dry bulb temperature to declare heatwaves. According to IMD, it is a heatwave when – a) dry bulb temperature at plains touches 40°C, or 37°C in coastal regions, or 30°C at hilly regions, OR b) dry bulb temperature increases by 4.5°C or more than the normal temperature of a region, OR c) dry bulb temperature touches 45°C. Also, IMD, that is the government will declare heatwave only when the above temperature conditions have lasted for at least two days. By this time, it is too late for people having high exposure to heat and they already start facing heat related issues. Another major drawback in IMD warnings is that they are based on the data recorded by their stations which are usually located in coolest and greenest parts of cities. Thus, IMD data is always underreported temperature as compared to the felt temperature by people in busiest and hottest areas of cities.



d. Urban Heat Island effect makes heat conditions worse in cities: In certain urban areas, local environment gets overheated as compared to surrounding areas due to excessive human activities, carbon emission, low vegetation, presence of excessive impervious constructed surfaces, and poor flow of air. Such small pockets of overheated urban regions are called Urban Heat Islands. Informal and outdoor workers in urban areas usually have to work in such dense urban areas, therefore being exposed to more heat on a regular basis. Also, since IMD weather stations are usually located in greener and more open areas, the temperature isome cases in India, urban heat island temperatures have been found to be as high as 9°C more than the IMD recorded temperatures. Thus, workers are also much vulnerable to heat impact to the microenvironment at their place of work, which is why regular local monitoring is needed.



e. **Heat Stress at Home Matters Too:** Most heat stress advisories focus on workplace risks, but informal workers also face severe discomfort at home. Many live in small, crowded, and poorly ventilated houses that trap heat, making it difficult to rest and recover after work. Simple, low-cost improvements can help white or reflective roof paint, top-wall ventilation, and cloth curtains or sheets at doors and windows to block sunlight. Creating shaded outdoor rest areas, where possible, can also provide relief. Community efforts—like buying cooling materials in bulk or advocating for better housing support—can make a big difference. Supporting workers at home is just as important as protecting them at work during extreme heat.

2. What needs to be changed in policy?

- a. Recognition of Informal Workers as the most impacted and vulnerable during heatwaves: Informal workers are among the most affected during heatwaves due to the nature of their work, limited access to shaded or ventilated spaces, and prolonged exposure to sun and extreme temperatures. And this is further aggravated by inadequate infrastructure, lack of access to cooling facilities, poor housing conditions, and absence of social protection measures. Recognizing their vulnerability in Heat Action Plans and policies of Heat waves should be the first step in the right direction.
- **b.** Ensure a separate section for informal workers in Heat Action Plans / guidelines for heat waves at all governance levels: Ensure explicit inclusion of informal workers in national, state, and city-level HAPs. Push for mandates ensuring sectoral guidelines within HAPs for informal workers and dedicated sections, and specific implementation roadmaps with accountability mechanisms. Budget outlays for their needs and provisions be also planned. In any case, over 30-40% of the city's population is engaged in some form of informal work and needs to be given policy and budgetary allocation.

3. What to ask from Urban Local Bodies and other Government bodies?

a. Implement flexible working hours during extreme heat:

- Encourage early morning or late evening work shifts for outdoor workers such as construction workers, street vendors, waste pickers, and rickshaw pullers to avoid extreme afternoon temperatures.
- Advocate for split shifts where workers can take extended **breaks during the hottest hours (12 PM 4 PM)** and resume work when temperatures drop.

b. Identify and Map High-Risk Work Areas & Develop Sector Specific Measures:

- Work with ULBs and worker collectives to **map heat-vulnerable locations**, including construction sites, open markets, traffic junctions, waste dumping grounds, and industrial areas.
- Improve **infrastructure** of these zones by creating public water points, shade structures, and designated rest areas for workers.
- Advocate for **sector-specific safety measures** for specific workers including cooling gear, water breaks, and protective clothing (PPE).

c. Implement Early Warning Systems:

- Ensure workers receive **timely alerts** about heatwaves through SMS, WhatsApp groups, or community radio announcements. Leverage **local languages** for better accessibility. Use existing government databases to send direct safety advisories.
- Promote localized warning systems using worker leaders, unions, cooperative networks, and employers.

4. How to prepare informal workers to fight heat?

a. Establish & Train Worker-Led Heatwave Task Forces:

- Form sector-wise **support groups** among construction workers, waste pickers, street vendors, sanitation workers, and other informal workers.
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- **Train** members to identify and assist workers facing heat exhaustion or heatstroke and provide first aid if needed.
- Encourage a **buddy system**, where workers check on each other and offer immediate support if someone shows signs of heat stress.

b. Increase Awareness and Training on Heat Protection:

- Organize **training** sessions on staying hydrated, managing work schedules, and recognizing heatstroke symptoms.
- Integrate heatwave safety **awareness** with ongoing skill development programs, such as food safety training for vendors, occupational health workshops for construction workers, and safety briefings for sanitation workers.
- Promote healthy **habits**, including drinking water frequently, avoiding sugary/ caffeinated drinks, eating light meals, and wearing loose, breathable clothing. Encourage the use of cloth head coverings or hats for added sun protection.

• Among informal and outdoor workers, **women and elderly persons** are further more at risk of heatrelated impacts on health and life. Special attention and safety provisions should be given to women and elderly workers.

c. Promote these general precautions for informal workers:

- **Stay Hydrated:** Drink plenty of water frequently, even if not thirsty. Carry a reusable water bottle and refill it whenever possible.
- Avoid Sugary & Caffeinated Drinks: Reduce intake of tea, coffee, and aerated drinks, as they can contribute to dehydration. Instead, ORS or buttermilk to stay cool and maintain energy levels.
- Wear Light Clothing: Use loose-fitting, breathable, light-coloured cotton clothes to stay cool.
- Use Head and Body Protection: Wear caps, scarves, or wet towels around the head and neck to prevent direct heat exposure.
- **Rest in Shade and Take Frequent Breaks:** Take frequent breaks under trees, temporary shelters, or shaded structures. If you work in open spaces (like construction sites, markets, or roads), plan short breaks every 20-30 minutes to prevent overheating and avoid peak sun exposure.

d. Train workers in recognizing these Heat-Related Illnesses:

- Heat Exhaustion Symptoms: Heavy sweating, weakness or fatigue, dizziness, nausea, and headaches.
- **Heat Stroke Symptoms:** High body temperature (above 103°F), confusion, rapid pulse, fainting, or unconsciousness.

e. Promote these First Aid Measures:

- Move the affected person to a cool, shaded area.
- Provide drinking water and loosen tight clothing and remove access layers.
- Apply cold water to the face, body (with a wet cloth or sponge bath).
- Seek medical help immediately if symptoms persist.
- Always keep emergency helpline numbers accessible in workplaces

5. What can be done during heat waves?

a. Access to Drinking Water & Hydration:

- Ensure all informal workers have access to safe **drinking water at their workplaces**.
- Install water dispensers or hydration stations in high-traffic work areas, such as markets, construction sites, industrial zones, and public transport hubs.
- Encourage employers, local authorities, and worker cooperatives to mandate **water breaks** and provide refillable bottles at work sites (such as RWA office for DW, building sites for construction workers etc)

b. Provision of Shade:

- Provide adequate **shade structures** such as tents, umbrellas, or awnings in workplaces like construction sites, outdoor markets, and other worker congregation points.
- Advocate for **tree plantations** and permanent shaded zones in public work areas and markets to create long-term cooling solutions.
- Encourage city planners to incorporate **shaded pedestrian pathways** and covered bus stops to support workers in transit.

c. Distribution of Heat Protection Kits

- Facilitate the distribution of Oral Rehydration Solution (ORS), glucose packets, cooling towels, caps, and lightweight breathable clothing to protect workers from heat stress.
- Employers, unions, worker collectives and local authorities should organize **heatwave relief drives** to distribute these essential supplies at major work hubs/ or through welfare boards.

d. Develop or Identify Cooling Centres for Rest & Relief

- Establish temporary **cooling centers** near high-footfall work public areas such as transport terminals, and markets where workers and the wider public can take short breaks to cool down.
- Open public buildings, community halls, and existing infrastructure to provide shaded rest areas for workers, ensuring they are accessible to all.
- Ensure **public parks** are open during afternoon hours (12 4 pm) for workers to rest under shade.

• Identify and map public spaces where cooling infrastructure (such as public parks, green zones, water misting stations and shaded rest zones) can be integrated into city planning.

6. What can be done after heatwaves?

a. Post-Heatwave Impact Assessment and Analysis

- Conduct post-heatwave impact assessments to evaluate the effectiveness of interventions, including emergency response systems, hydration facilities, and workplace modifications.
- Collect data on hospital admissions, mortality rates, and conduct worker surveys to identify gaps in policy and implementation.
- Ensure that the findings from post-heatwave assessment are shared transparently with worker communities and integrated into future city planning frameworks.
- Develop long-term policies for informal workers' climate resilience, including social protection measures, climate insurance schemes, and urban design improvements to mitigate future heat risks.
- b. Social Security Mechanisms for Informal Workers Affected by Heatwaves
- Health Insurance & Medical Support: Expand state-supported health insurance coverage for informal workers, ensuring cashless treatment for heat-related illnesses under existing schemes like Ayushman Bharat or state health programs.
- **Income Protection & Compensation**: Establish compensation schemes for workers who suffer income loss due to extreme heat conditions, including heat stroke-related absenteeism or reduced work hours.
- Emergency Relief Funds: Create dedicated funds within local governments and municipal bodies to provide immediate financial assistance to workers affected by heatwaves, covering medical costs, lost wages, and livelihood restoration.
- Social Protection for Extreme Weather Events: Develop weather-linked income security programs that provide temporary unemployment support to informal workers when heatwaves, floods, or other extreme climate events disrupt their work.
- Worker-led Welfare Boards: Strengthen existing Welfare Boards for informal workers to integrate heatwave preparedness into their benefits, including access to emergency aid, health check-ups, and financial support.

NACEJ (National Alliance for Climate & Ecological Justice - NAPM) strongly advocates for the protection of informal and outdoor workers from climate change and excessive heat, and for upholding their right to climate justice. Through their manual labour, they subsidize the cost of living for urban dwellers while keeping the carbon footprint to bare minimum. It is about time that their right to life and workplace safety get honoured and ensured in context of climate change, which is getting worse every year. We call upon all civil society groups and activists as well as the government to prioritise informal workers, one of the most vulnerable population groups, and ensure all preventive measures for their protection and safety this summer.

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