

Trapped by the Heat:

How India's Slum Dwellers Face a Hidden
Crisis Indoors

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Every day since summer began, Manju Kadam walks through the narrow lanes from her tiny home made out of corrugated tin sheets in Mangalwar Peth, an urban slum in Pune city. She carries her youngest child in her lap, sweating in the scorching afternoon heat, fatigue clearly visible on her face. She braves the indoor heat for most of the day, completing her daily chores, something that she can't escape even for a day. She says,

“It's the humidity that makes this summer worse, and that staying out in the heat is a better option than staying home.”



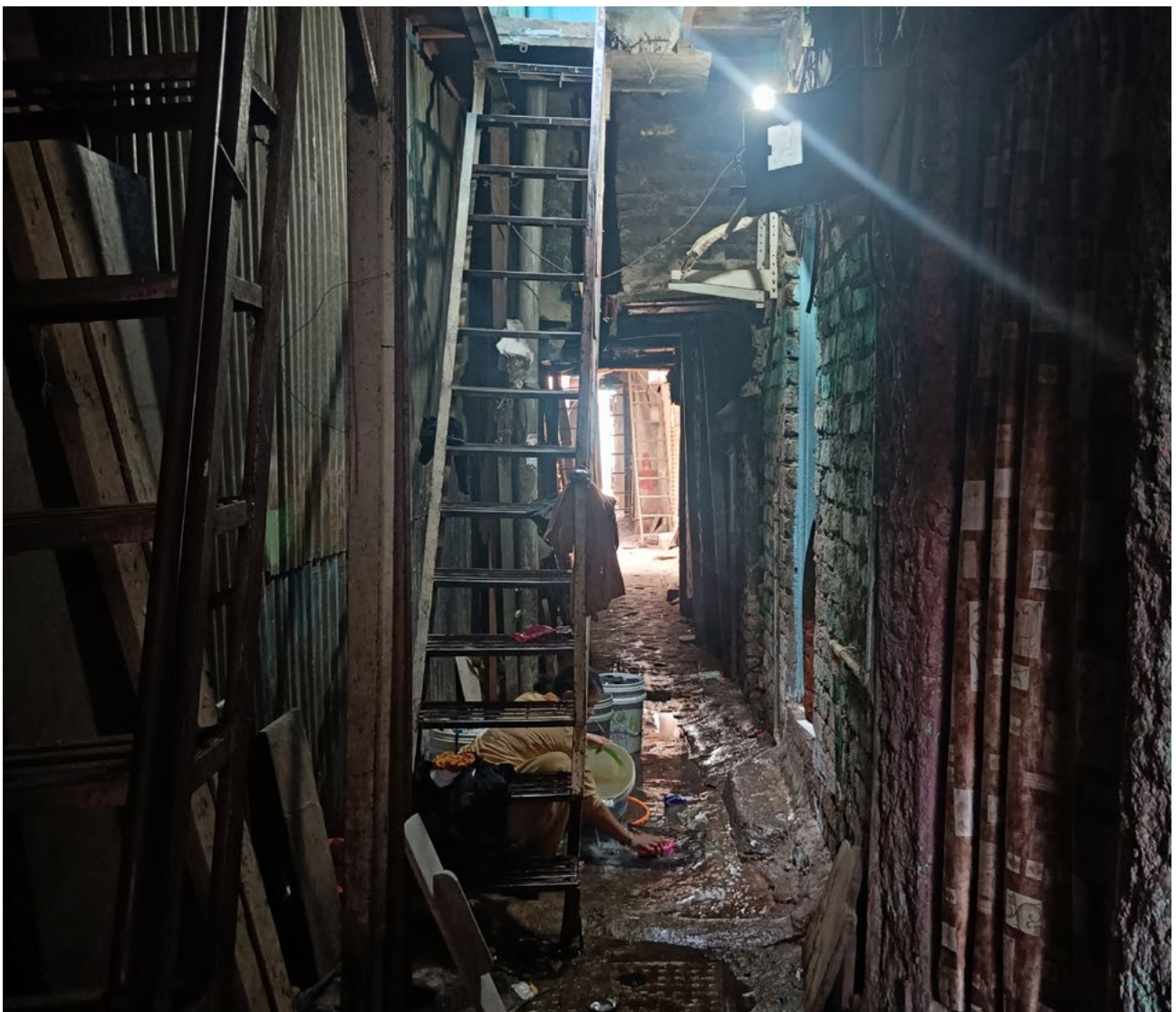
Manju's experience is far from unique. During visits to two slum settlements in May, indoor temperature and humidity were collected from 50 households between noon and 3 pm, the hottest part of the day. Most homes recorded indoor temperatures above 35 degrees Celsius, while relative humidity remained between 30% and 70%. Together, these conditions made the apparent temperature (feels-like temperature) substantially higher, causing residents to experience greater heat stress than the measured air temperature and humidity would suggest.

The physical structure of these settlements is a core issue, says Sunny Yadav. Many homes are built entirely of corrugated tin sheets for roofs and walls, trapping heat throughout the day and creating a thermal risk, especially for elders and children. Houses also stood less than a foot apart, severely restricting airflow and limiting natural ventilation, even during the daytime.

Nearly half of the surveyed households had no windows, with many relying solely on the front door for ventilation, which had to be closed at night. As a cooling device, most families rely on a single ceiling fan due to limited financial means. Even though electricity is available throughout the day, many residents reported that ceiling fans offered little relief during the afternoon because they merely circulated hot indoor air.

Figure 01

Houses built with less than 4 feet of distance between each other



During conversations with several slum dwellers, an old lady, Madhuri Koli, showed her room upstairs in a partially durable home, whose roof was covered with corrugated tin sheets. The temperature at her home was 35.6 degrees Celsius, with a relative humidity of 43%, making the flooring feel much hotter to the touch. She showed us some rotis she had prepared 2 hours ago, and said, “Touch and see how hard it has become, and it is difficult to break. This is the situation daily”. Rizwana Khatoon, a mother of two young children, added, “Due to this heat, there is no respite during the night as well, and we are forced to stay outdoors till 2 am. We then come back home to try and sleep for a few hours”.

Rising temperatures and humidity pose a critical and growing threat to more than 100 million slum dwellers in India, who face dangerous indoor and outdoor heat and lack effective means to mitigate its impact. This points to heat poverty across urban areas and an overlooked dimension of urban vulnerability. Despite growing awareness, the conversation remains focused on outdoor heat, sidelining the challenges posed by unsafe indoor conditions that put vulnerable residents at risk every summer, including 2026.

Figure 02

Heat & humidity changing the texture of roti



In April and May, India recorded the world's 10 hottest cities, experiencing 25 heatwave days across meteorological subdivisions in April and over 95 in May. This resulted in at least 26 deaths and frequent advisories from the Indian Meteorological Department to stay indoors. However, these advisories miss the central point that indoor heat is as perilous as outdoor exposure for millions of citizens, making one of the core protective measures ineffective for slum residents.

Household realities directly shape how people interpret these advisories to stay indoors during heatwaves. It also reflects on India's progress on SDG 11, Sustainable Cities and Communities. India has reduced the share of partially durable (semi-pucca) houses from 26.17% in 1993 to 13.32% in 2021 and sustained an increase in the number of toilets, but these gains do not capture the full picture.

Missing data on SDG target 11.1, which covers adequate, safe, and affordable housing, access to basic services, and slum upgradation in India, raises questions about how uniform the improvement is. Maharashtra, one of the most urbanised states, receives the highest number of migrants and holds over 18% of the national slum population. The state faces a severe deficit of 10 lakh homes for the economically weaker sections (EWS) and low- and middle-income groups. This problem forces people to seek shelter in urban and suburban slums.

Figure 03

Slum dwellers living in closely packed partially durable (semi-pucca) housing



This lack of affordable housing has also started to affect cooler cities like Pune, once known for escaping the summer heat. The temperature data for May show pockets of urban heat islands, with some areas recording night-time minimum temperatures up to 4 degrees above normal. The impact of these temperature increases is not uniform across the city, with urban slum dwellers disproportionately exposed due to poor housing quality and limited cooling options.

Figure 04**A family using a ceiling fan and a table fan during peak summer heat**

As per the Pradhan Mantri Awas Yojana, the government has built 98 lakh homes with an investment of ₹8.79 lakh crore. The scheme has emphasised the need to ensure affordability and accessibility for the growing population, especially in urban areas already experiencing large-scale migration. The data also reveals a fact that only 13% of homes have been built under AHP (Affordable Housing in Partnership) and ISSR (In-Situ Slum Redevelopment). This shows the gap in which people in urban areas who don't own the land or have legal rights to it are left behind, facing challenges posed by indoor heat, leaving these residents in urban slums exposed to unlivable conditions.

Overall, India's heat poverty response cannot continue to focus solely on outdoor temperature; it also needs to address indoor heat stress. Heat action plans, housing policies and urban planning need to include data on indoor heat exposure, particularly in informal settlements where housing conditions amplify thermal stress. One of the Eco Niwas Samhita frameworks aims to understand how much unwanted outdoor heat enters the house through the walls and windows. Its Residential Envelope Transmittance Value (RETV) for residential homes should also be expanded to include slum settlements, which are more prone to thermal stress, so that policy can better account for indoor heat risks.

The Maharashtra government plans to develop a roof-cooling policy, while Hyderabad and Ahmedabad have already experimented with it, showing promising results. Furthermore, the use of heat-resistant materials and techniques to enhance thermal comfort has also been prompted in the Pradhan Mantri Awas Yojana scheme for urban areas; while these action points are in the right direction, they do not fully address the needs of slum dwellers, for whom investing in cooling or heat-resistant materials is not an option due to limited space, lack of ownership of the houses they live in, and financial constraints.

City-level Climate Action Plans, already in place in several states, should incorporate public–private partnerships funded through Corporate Social Responsibility (CSR) initiatives to support slum rehabilitation. Considering the substantial affordable housing deficit in many major cities and the time required to complete rehabilitation projects due to procedural requirements, the government should encourage companies to supply heat-resistant building materials to households in urban slums as an interim intervention to reduce indoor heat exposure.

Indoor heat must also be understood through a gendered lens. Women often spend hours cooking, cleaning, and caring for children in heat-retaining homes, with no excuse for taking the day off. Most women respondents shared concerns about the difficulty of spending time cooking, as it made their homes hotter. Slum dwellers in India continue to face challenges, such as the 24-hour availability of water, placing a burden on women to collect water even on days when their sleep is disturbed by indoor heat.

For many households, escaping the heat does not mean staying indoors; it means finding a cooler place anywhere outside.



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