Supported by:

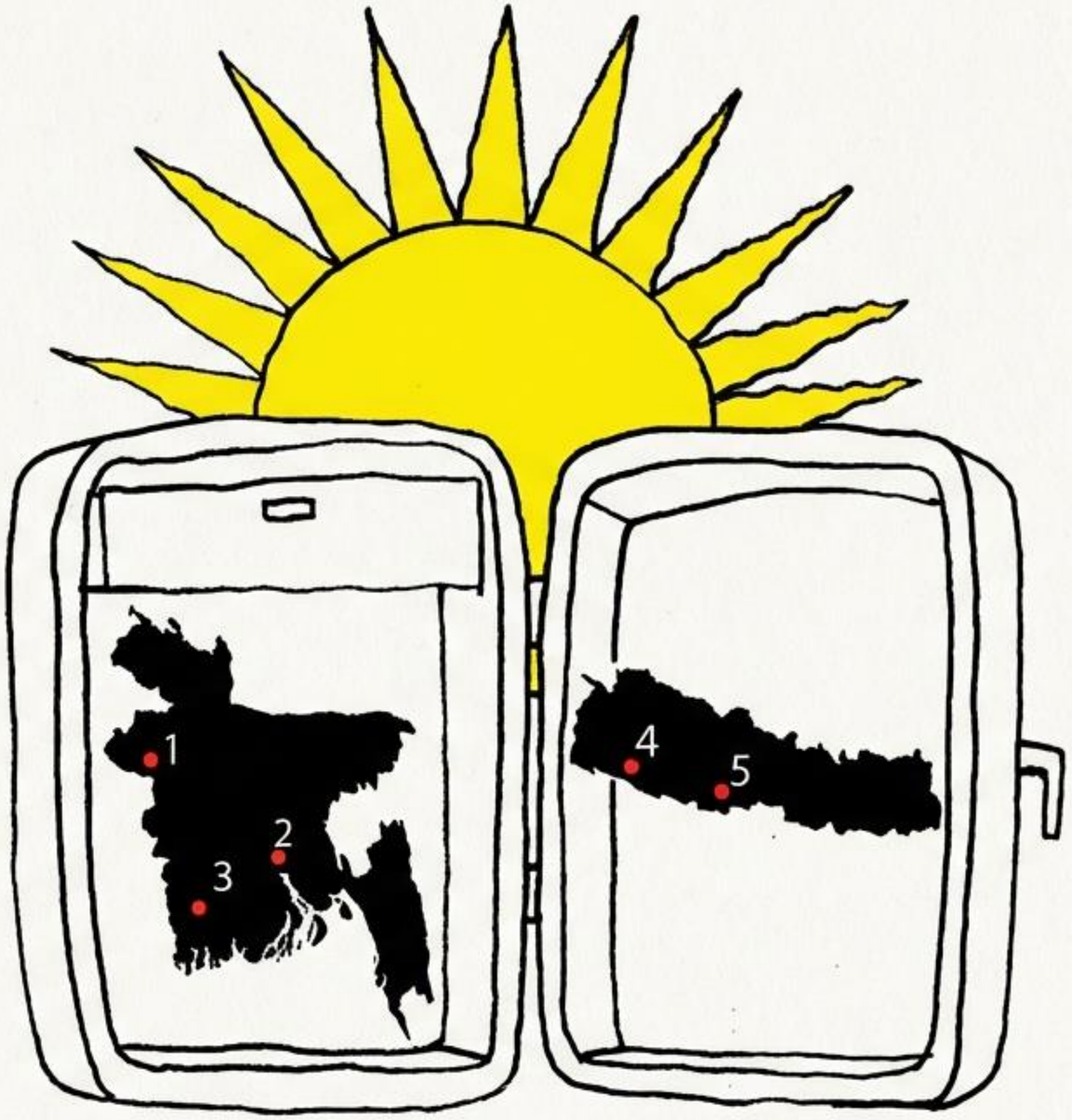
REGIONAL WORKSHOP ON IMPACT-BASED FORECASTING

Training-of-Trainers and National Demonstration Planning for Temperature-Related Hazards

Heat Risk Perception

LIVING UNDER THE SUN

Seven lessons on health, livelihoods, and resilience from urban populations in Nepal and Bangladesh.



Based on the RCCC Knowledge Brief. Surveys conducted in Rajshahi, Dhaka South, Bagerhat, Nepalgunj, and Siddharthanagar.

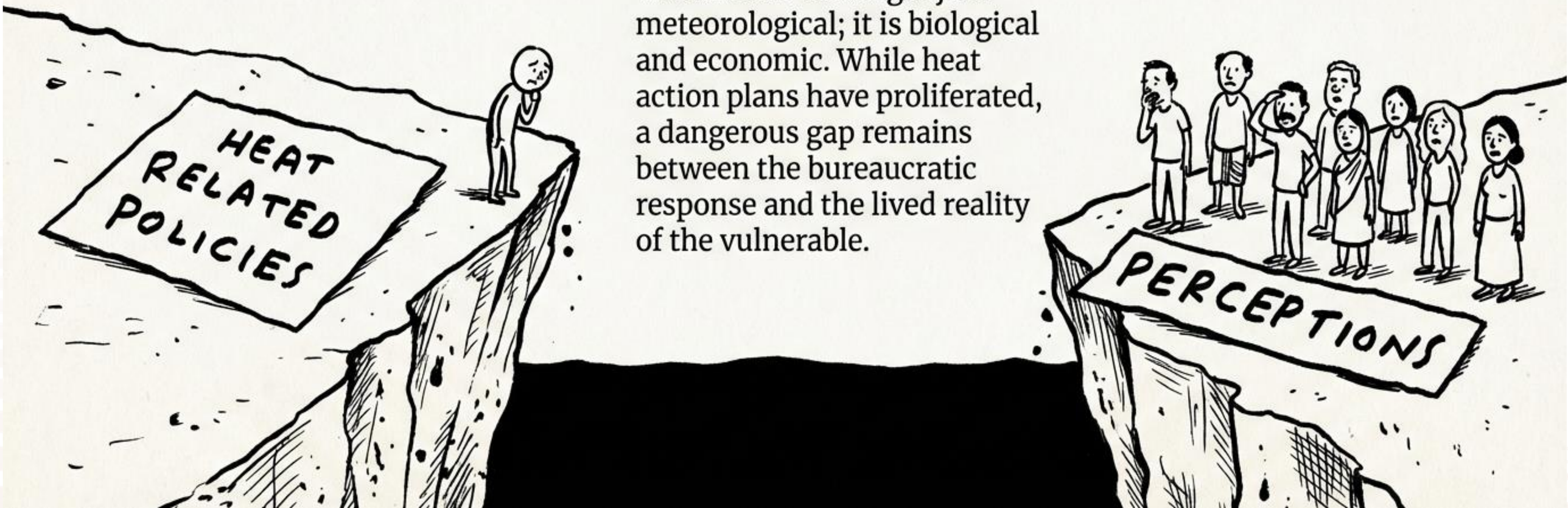
The Rockefeller Foundation | Climate Centre

EXTREME HEAT IS ACCELERATING FASTER THAN ADAPTATION

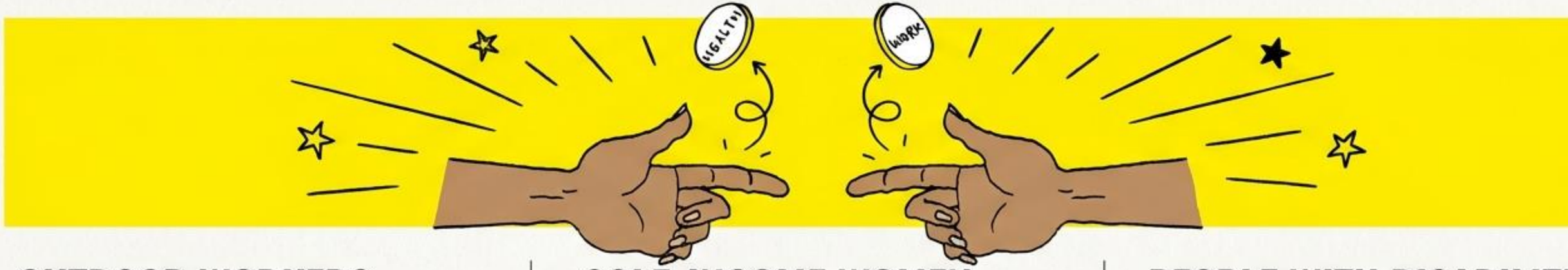
94%

of respondents report experiencing dangerous heat.

The crisis is no longer just meteorological; it is biological and economic. While heat action plans have proliferated, a dangerous gap remains between the bureaucratic response and the lived reality of the vulnerable.



WHO BEARS THE BRUNT?



OUTDOOR WORKERS

Exposed to direct sun.
Facing physical exhaustion and drastic drops in productivity.

SOLE-INCOME WOMEN

The 'Double Burden': **64%** of sole-earner women in Bangladesh must choose between health and daily caretaking duties.

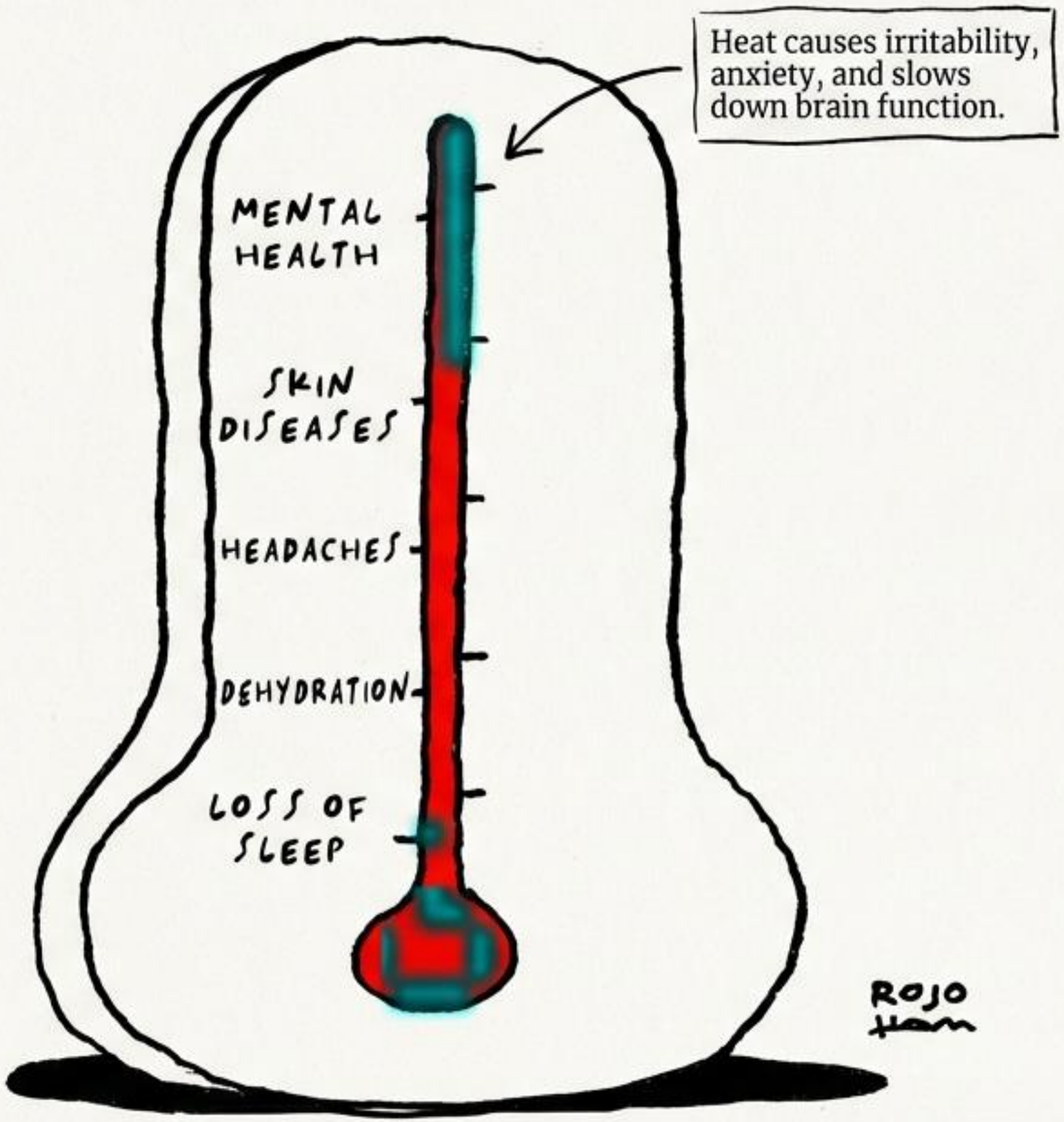
PEOPLE WITH DISABILITIES

54% of households with disabled members in Nepal face increased physical exhaustion and stress.

"Five to six years ago... I used to play cricket every day... nowadays, I find myself exhausted after just a few minutes."

— User Testimonial

MORE THAN UNCOMFORTABLE: A PUBLIC HEALTH EMERGENCY



76% of respondents in Bangladesh reported heat-related illness.

51% of respondents in Nepal reported heat-related illness.

The Healthcare Gap:
Communities in **Bangladesh require medical care at a rate 55% higher than Nepal.** However, high costs drive people to **self-medication** or ignoring symptoms until they are severe.

THE VICIOUS CYCLE: HEAT, INCOME LOSS, AND DEBT

>50% of households were prevented from working due to heat

Reduced Working Hours → Lower Income

Lower Income → Gap in Budget

Rising Costs (Water/Meds) → Gap in Budget

Gap in Budget → High Interest Loans

"On very hot days our income goes down substantially, but expenses and loan payments don't stop... We can't afford to skip work because our families depend on it."
— Outdoor worker, Rajshahi

THE DANGER OF 'GETTING USED TO IT'

LACK OF KNOWLEDGE

THE BEHAVIORAL GAP

Why the gap? The primary barrier is the belief of being 'accustomed' to heat. People perceive heat as a 'general' risk, but not a 'personal' one, leading to inaction.

EVIDENCE THAT AWARENESS DRIVES ACTION

NEPALGUNJ

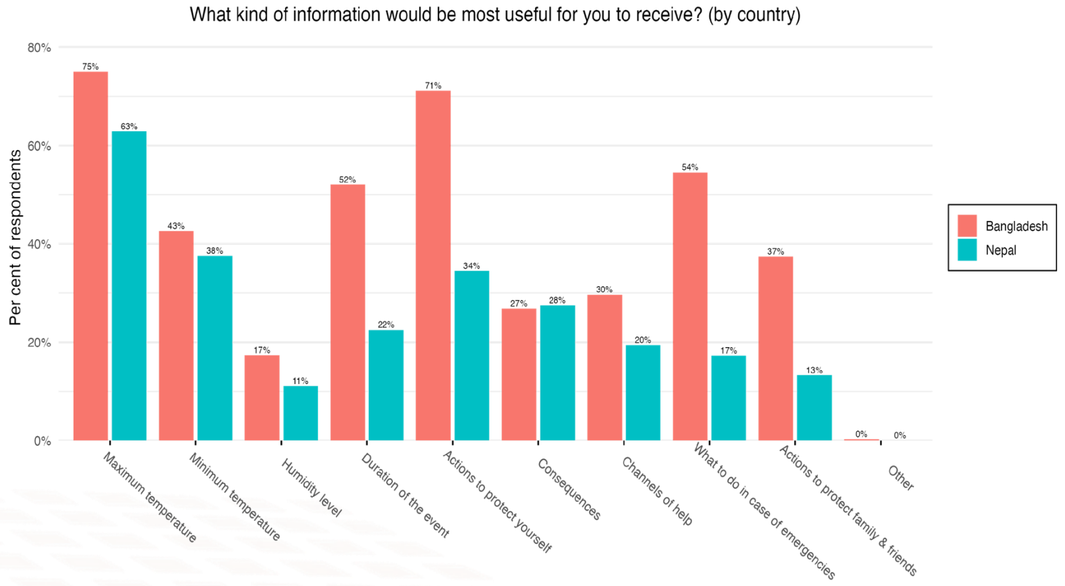
87% of respondents changed behavior.

Insight: Targeted awareness campaigns since 2022 have led to significantly higher uptake in safety measures compared to larger metros like Dhaka.

> "Awareness is increasing... people stay indoors, drink **more water**... But **infrastructure gaps remain**." — Yadav Sapkota, Disaster Focal Person.

Making heat warnings more effective

Peter Kuper / CartoonCollections.com



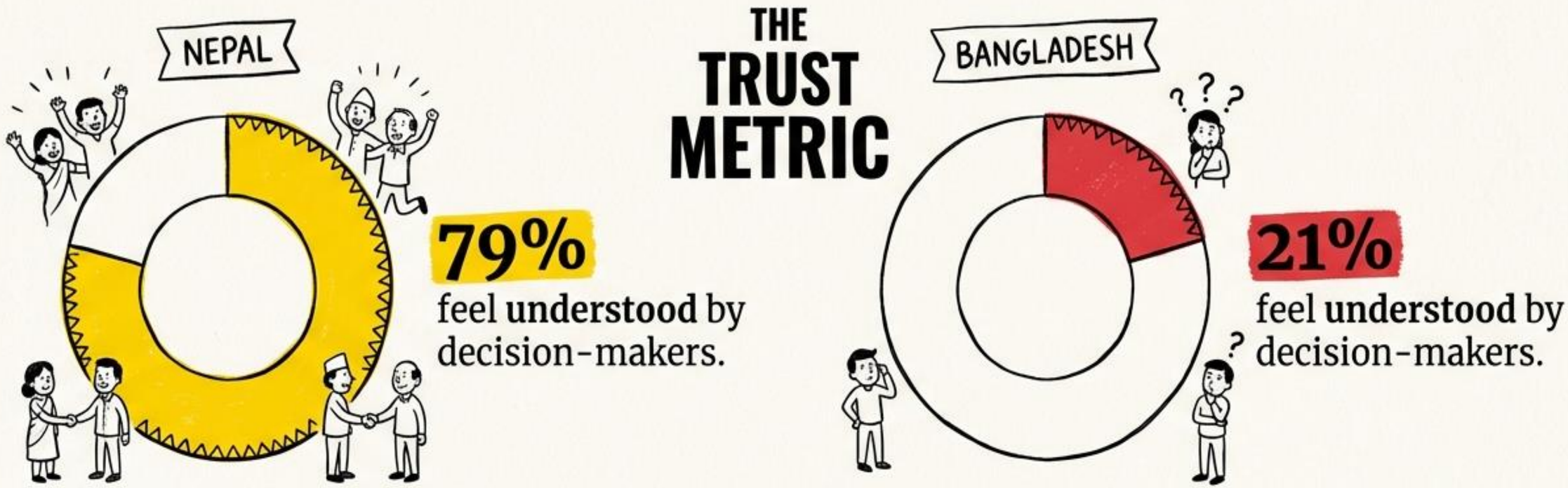
INFORMATION VS. UNDERSTANDING

THE CHANNEL MISMATCH

Technical warnings on websites do not reach the 'last mile'. Outdoor workers are frequently left out of the loop entirely.

BANGLADESH	NEPAL
83% prefer word-of-mouth.	TV and social media top the list.

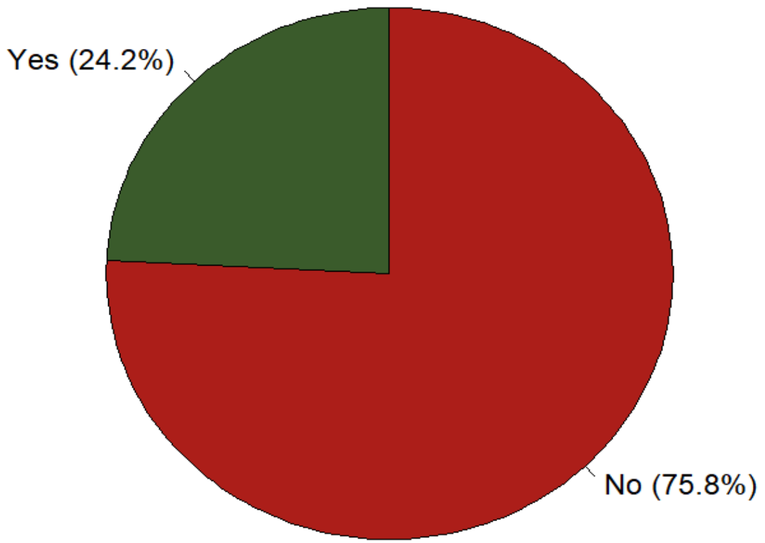
Heat as a policy priority?



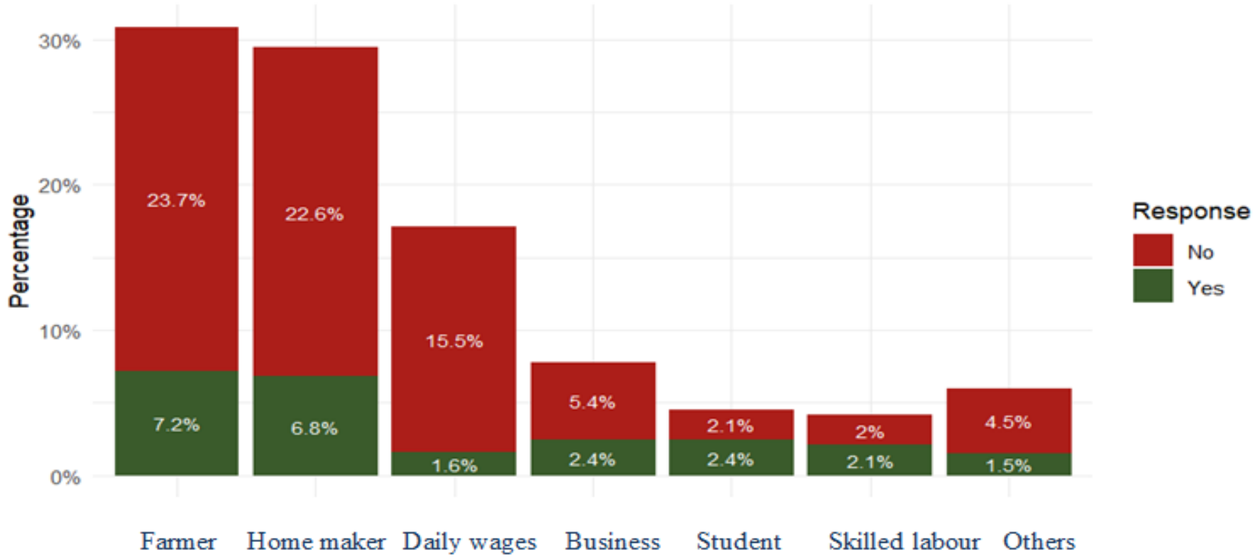
This **'participation gap'** directly correlates to the lower adoption of safety measures in Bangladesh.

> **"Public miking is happening, but information should also be shared through community meetings... not just miking."**
>
> — Representative from a mother's group, Siddharthanagar

Have you received any heat alert messages or warnings?



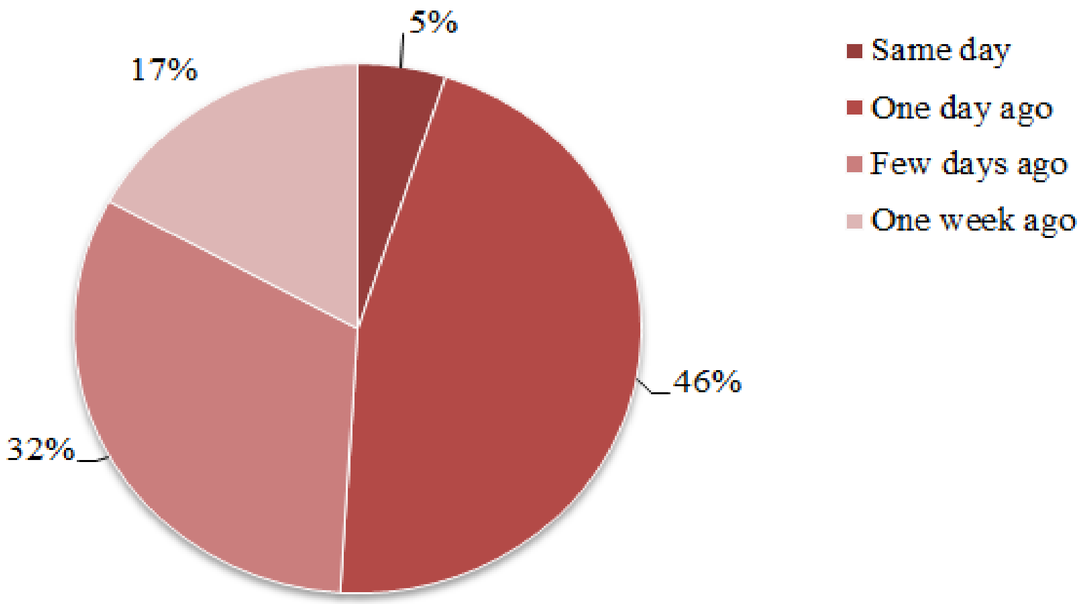
(Overall perceptions of the community)



(Perceptions based on occupations)

- 75.8% of respondents reported not receiving any heat forecast or alert messages
- This gap persists across education levels, gender, and occupations
- The city's heat alert communication system is inconsistent and has limited coverage
- Heat alerts are issued by DHM, but dissemination is not optimal
- Some residents receive alerts, while others do not; these gaps reduce preparedness and effective response
- Most vulnerable groups—including farmers, homemakers, and daily wage earners—reported not receiving heat alerts

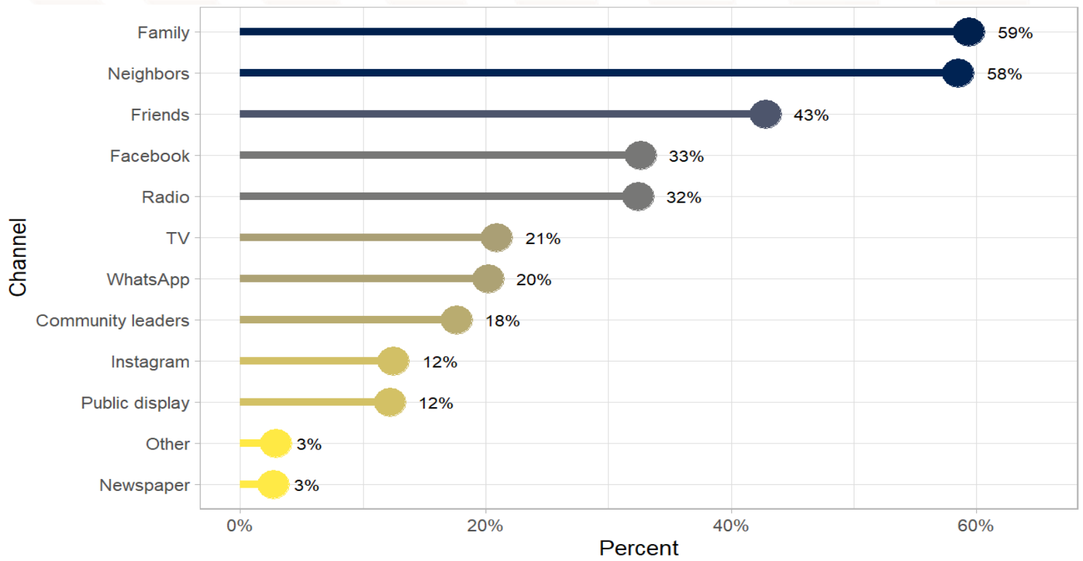
What is the lead time for receiving a heat alert?



Of the 24.2% respondents who receive heat alerts:

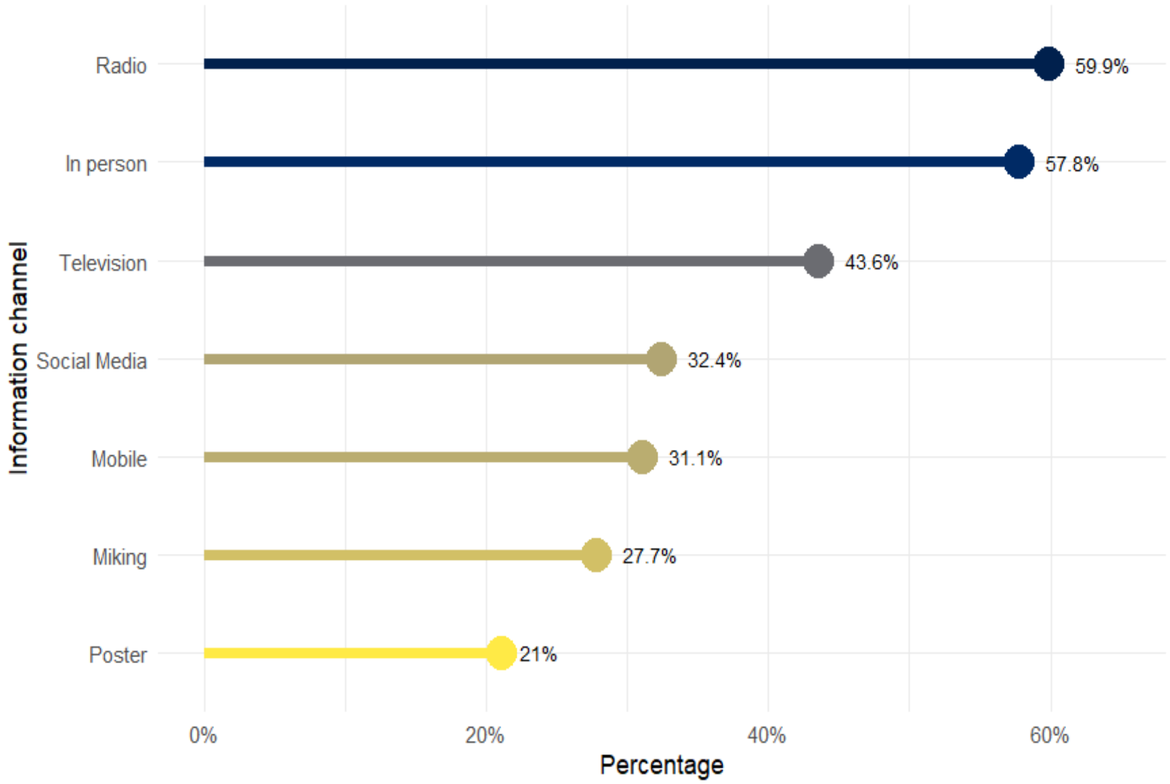
- More than 50% receive alerts on the same day or just one day in advance
- Limited lead time restricts the ability of communities to take preparedness actions

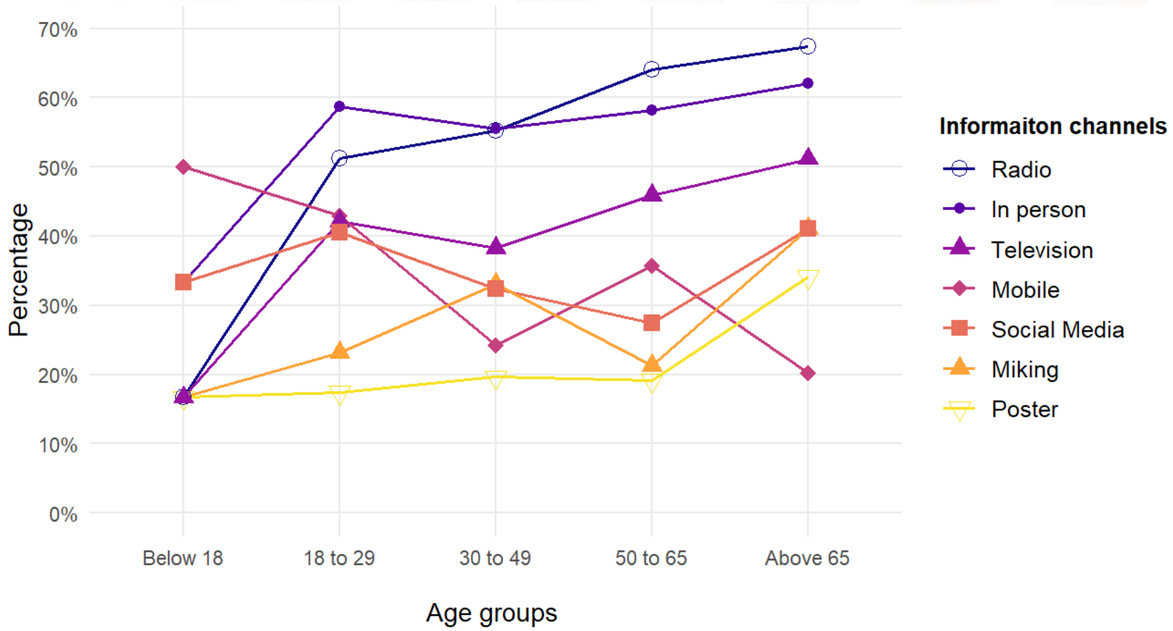
What are the channels you usually receive the heat alerts?



- Nearly 75% of respondents receive heat or weather information from family and neighbours
- This highlights one-to-one communication as an effective and trusted channel for heat alert dissemination

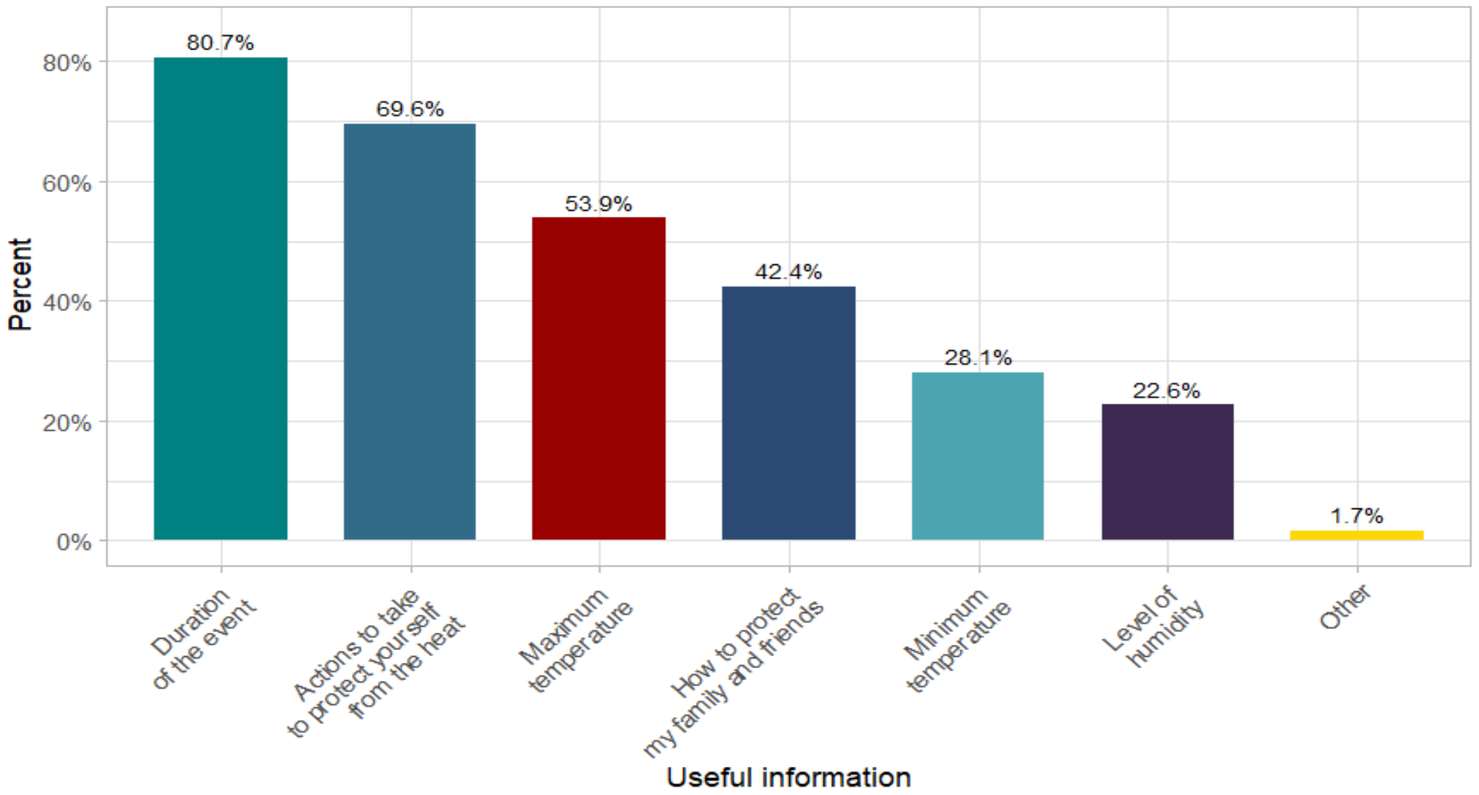
What are the preferred communication channels to receive heatwave-related messages?





- Radio, in person communication and television are the most recommended channels to strengthen the heat alert communication system in the city

What type of alert messages or information would you like to receive to help reduce heatwave risks?



- Duration of the heatwave event is the most preferred information for designing heat alerts followed by the suggested actions to protect themselves from the adverse effects of a heatwave, and information on the maximum temperature

- Communities seem less concerned about humidity, among the least prioritized aspects of heat alert communication.

- This suggests a lower awareness of the combined risks of heat and humidity, which can exacerbate heat-related health impacts.

POLICY REC 1: PROTECT LIVELIHOODS

Financial insecurity forces people to work in deadly conditions.

01. **Targeted Assistance:** Implement rapid-response cash or voucher programs triggered by specific.
02. **Stop Predatory Lending:** Enforce caps on interest rates for emergency loans during heatwaves to prevent intergenerational debt cycles.

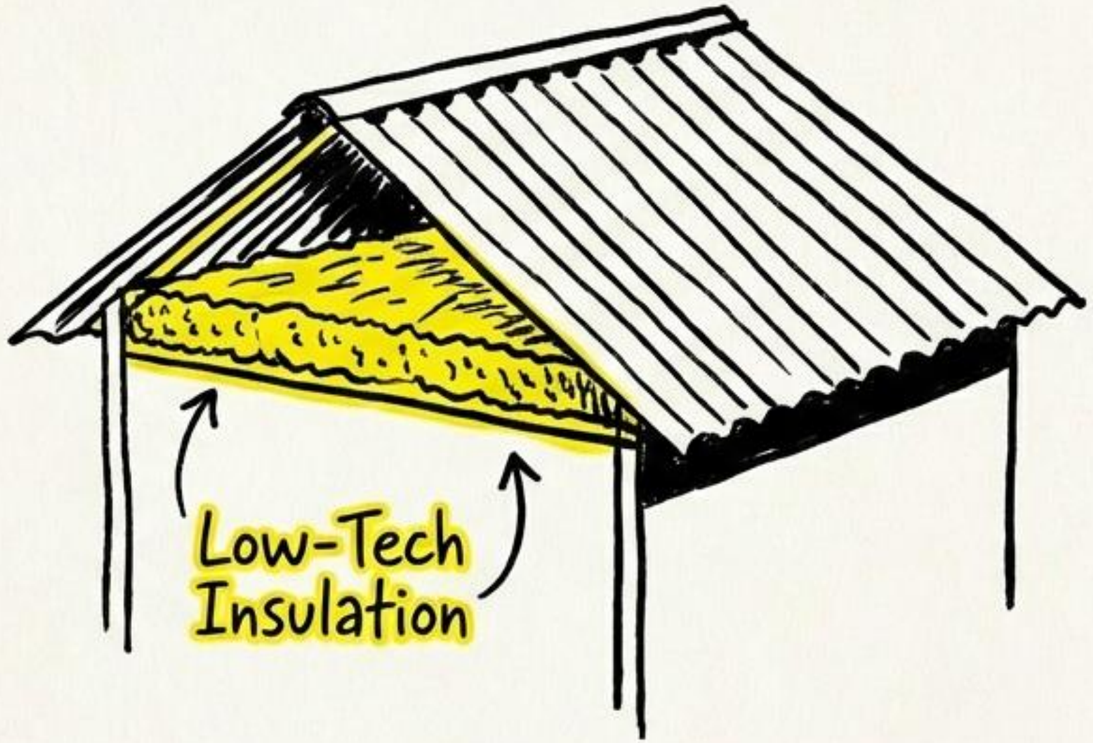
03. **Worker Mandates:** Enforce employer requirements for shaded rest areas, water, and mandatory breaks during peak sun hours.

POLICY REC 2: COOL THE CITYSCAPE

Infrastructure is currently insufficient to handle rising temperatures.

01. **Public Cooling:** Expand access to shaded public spaces, water points, and community cooling centers in high-traffic markets and transport hubs.

02. **Resilience Budgeting:** Set minimum budget allocations for heat resilience within municipal budgets; move away from ad-hoc funding.



Low-Tech Insulation

03. **Housing Upgrades:** Institutionalize low-tech, high-impact solutions, such as the Nepali practice of placing straw **or** cartons under tin roofs.

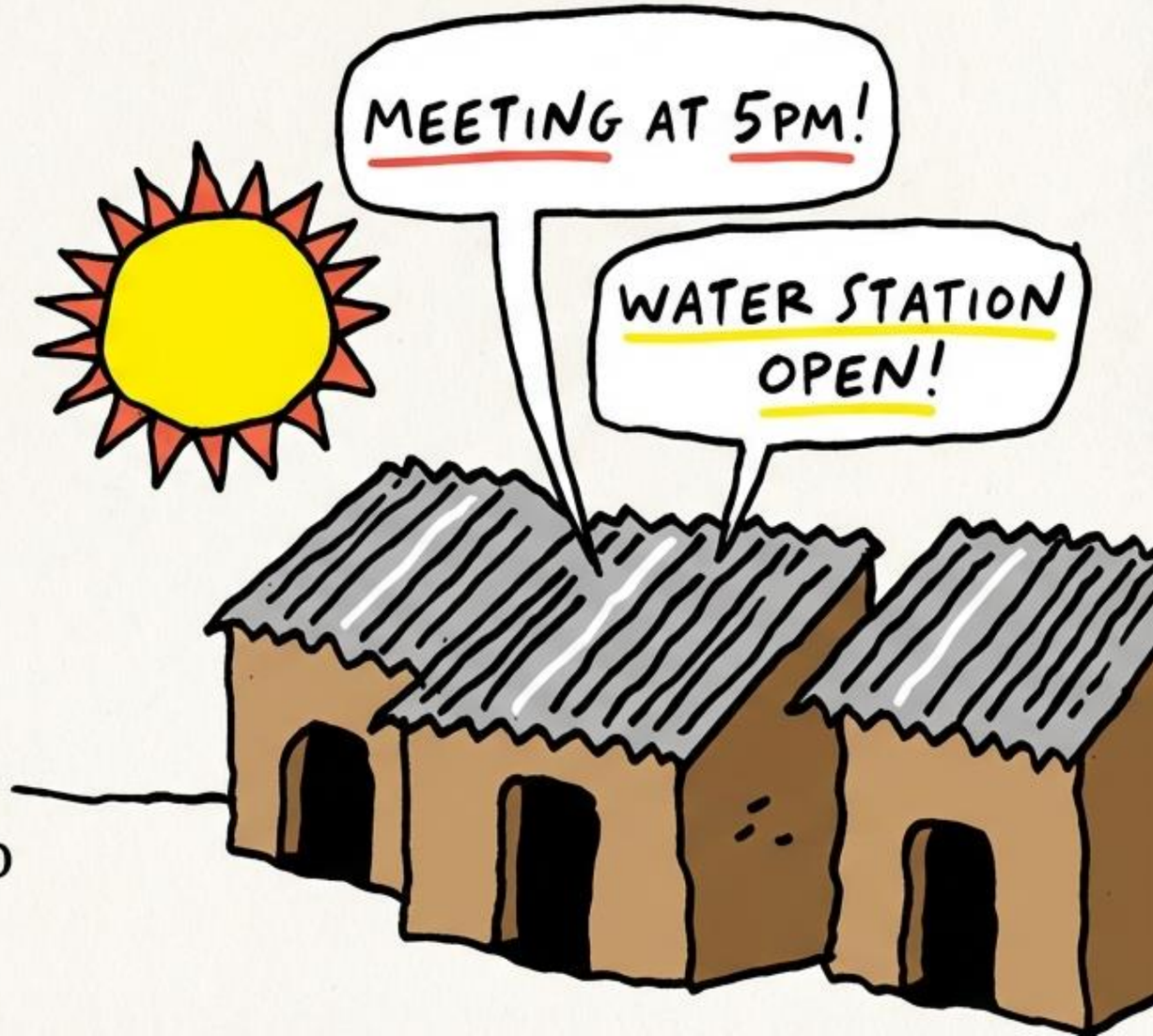
POLICY REC 3: REACH THE LAST MILE

Current alerts are not reaching the most vulnerable 20%.

01. LOW-LITERACY FIRST: Prioritize accessible channels (visuals, radio, word-of-mouth) over text-heavy websites.

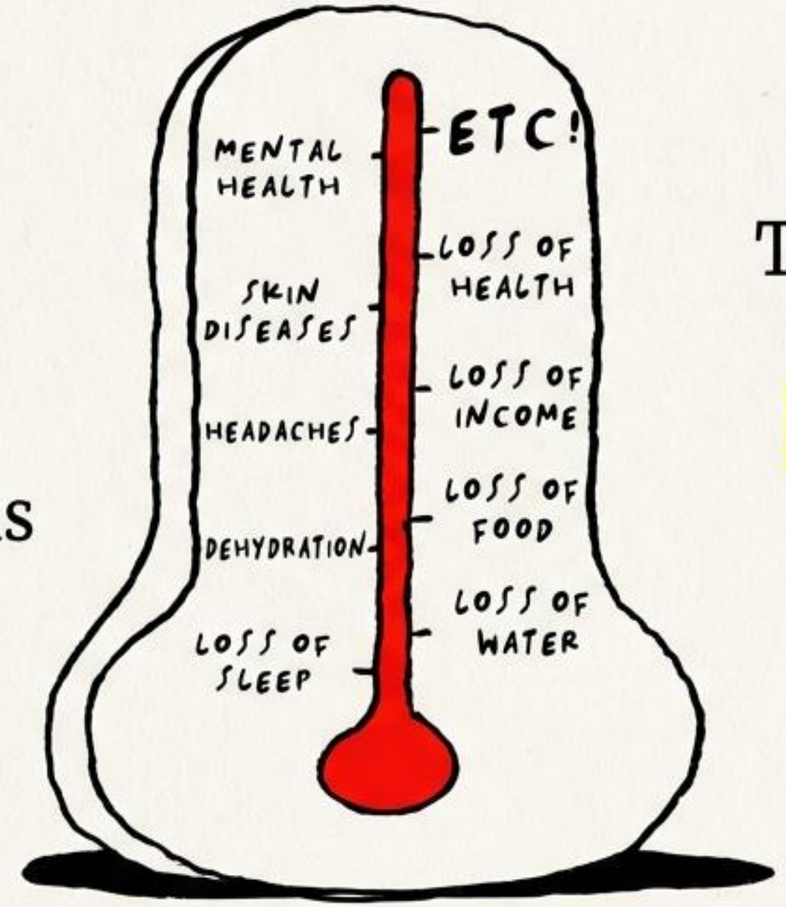
02. COMMUNITY AMBASSADORS: Utilize locally trusted networks and community meetings rather than just loudspeakers ('miking').

03. TIME & TARGET: Deliver messages directly to workplaces and time them to match the daily routines of outdoor workers.



FROM REACTION TO PROACTIVE RESILIENCE

Extreme heat is accelerating faster than infrastructure. Delaying action deepens **humanitarian costs**.



The focus must shift from 'getting used to it' to **proactive planning** that **integrates housing, health, and livelihoods.**

"The urgency of the situation is now clearly on the radar."
— Syed Mahmud-ul-Islam, Rajshahi City Corporation