



Sphere India
National Coalition of Humanitarian Agencies in India

SUMMARY REPORT

NATIONAL CONSULTATION ON STRENGTHENING HEAT WAVE PREPAREDNESS AND RESILIENCE

09TH APRIL 2025

Supported By: **HCLFoundation**

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Background

In 2024, India experienced an unprecedented and prolonged heatwave, with temperatures soaring above 45°C across multiple states. This extreme event resulted in over 700 reported fatalities and thousands of heat-related hospitalizations¹. Delhi recorded a peak temperature of 49°C on May 29, which led to severe water shortages affecting approximately 75,000 households. Rajasthan reported 44 deaths and faced critical shortages of electricity and water across 40 districts. Bihar and Jharkhand were also significantly impacted, with over 89 and 40 suspected heat-related deaths, respectively, alongside widespread hospitalizations. Uttar Pradesh recorded more than 400 suspected fatalities due to heat, while Tamil Nadu, Andhra Pradesh, and Telangana endured severe heat stress, leading to substantial agricultural losses—particularly in Tamil Nadu’s Cauvery region.

The severity of the 2024 heatwave underscored the urgent need to strengthen heatwave preparedness and resilience across the country. In response, Sphere India organized the National Consultation on Strengthening Heat Wave Preparedness and Resilience on April 9, 2025. The consultation brought together representatives from government agencies, disaster management authorities, NGOs, academic institutions, and community-based organizations to deliberate on strategies, challenges, and best practices for mitigating the impact of extreme heat events.

The consultation facilitated knowledge exchange and multi-stakeholder collaboration to enhance national-level heatwave preparedness. Key objectives included strengthening coordination among stakeholders, deepening understanding of state-specific preparedness measures, identifying regional challenges, and developing policy recommendations to support comprehensive and climate-resilient heatwave response systems.

Objectives

- Facilitate knowledge exchange, collaboration, and concrete actions to enhance heat wave preparedness across India.
- Strengthen coordination among government agencies, NGOs, academic institutions, and community groups for improved response mechanisms.
- Enhance understanding of state-wise heat wave preparedness measures and promote awareness of their impacts.
- Identify challenges faced by different regions in managing heat waves and explore effective mitigation and adaptation strategies.
- Develop policy recommendations for strengthening heat wave resilience at national and regional levels.

Expected Outcomes

- Establishment of a multi-stakeholder network for collaborative action on heat wave preparedness.
- Improved capacity of stakeholders to anticipate, mitigate, and respond to extreme heat events.
- Identification of gaps in existing preparedness measures and sharing of best practices for improved heat wave management.
- Development of a roadmap for enhanced heat wave resilience through policy recommendations and action plans.

¹ [Climate change Article: Down to Earth](#)

Summary



Sphere India Academy  **Sphere India**
National Coalition of Humanitarian Agencies in India

National Consultation on Strengthening Heat Wave Preparedness and Resilience



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Vice-Chairperson, UNOCHA



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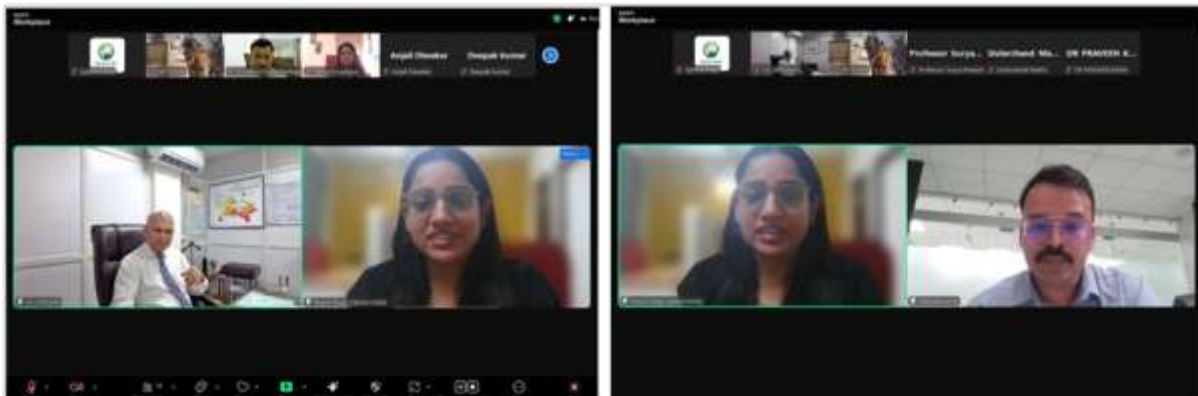


Mr. Praveen S
Manager, Disaster
Preparedness, Multi-Hazard
Warning System, India

09 April, 2025 | Wednesday
03:00PM - 04:30PM
http://tiny.cc/Heat_Wave_Preparedness



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The National Consultation on Strengthening Heat Wave Preparedness and Resilience was convened on 9th April 2025 by Sphere India, in response to the growing frequency, intensity, and impacts of extreme heat events across India. The session brought together a diverse group of stakeholders including representatives from disaster management authorities, public health departments, academic institutions, NGOs, and community-based organizations to discuss strategies, challenges, and best practices for mitigating the effects of heatwaves.

The consultation opened with a welcome address and context-setting by **Ms. Nupur Tyagi** of Sphere India, highlighting the unprecedented severity of the 2024 heatwave, which underscored the urgent need for comprehensive heatwave preparedness. **Lt. Gen. Yogendra Dimri (Retd.)**, Vice Chairperson

of UPSDMA, delivered the inaugural address emphasizing institutional leadership and collaborative governance as central pillars for building national heat resilience.

Key thematic presentations and discussions explored the historical trends and escalating impact of heatwaves, shared by **Shri Surya Prakash** (NIDM), followed by state-level experiences and learnings presented by **Shri Deepak Kumar** (Bihar SDMA), **Dr. Praveen Kumar Karn** (Dept. of Health, Jharkhand), and **Ms. Anjali Diwakar** (Delhi DDMA). These inputs provided critical insights into challenges on the ground, including health system overload, urban vulnerability, and gaps in adaptive infrastructure.

Ms. Richa Shrivastava (ICARS) provided a policy perspective on strengthening early warning systems and improving coordination between departments to ensure efficient response mechanisms. Community-level approaches were highlighted by **Ms. Divya Gupta** (SEEDS India), who spoke about grassroots-led preparedness and outreach in rural and vulnerable areas.

Mr. Praveen from Humane World for Animals India expanded the dialogue to include animal welfare during extreme heat, calling for policy inclusion and infrastructure solutions to safeguard livestock and stray animals. **Dr. Rohini** (DFY) addressed the health impacts of extreme heat, outlining medical preparedness measures, frontline health worker training, and public awareness initiatives to prevent heat-related illnesses. **Mr. Imran Majid** (ADRA India) spoke on the importance of scaling community-centric models and ensuring targeted outreach to marginalized populations.

The session concluded with an open discussion moderated by Sphere India, and closing reflections were offered by **Mr. Mihir Bhatt** (AIDMI), who emphasized the need for sustained multi-sectoral coordination, knowledge exchange, and institutional commitment to address the increasing threat of heatwaves.

The consultation reaffirmed the importance of integrating heatwave preparedness into broader disaster risk reduction frameworks, strengthening public systems, and building inclusive resilience through collaboration at all levels.

Key Discussion Points

I. General Context and Cross-Sector Reflections

- The consultation underscored the increasing intensity and early onset of heatwaves in 2025, positioning them as a critical component of the climate crisis in India.
- Heatwaves were recognized as complex emergencies with wide-ranging impacts on health, livelihoods, agriculture, infrastructure, and ecosystems.
- A call was made for shifting from reactive measures to anticipatory, resilience-driven approaches that are grounded in inclusive planning and community engagement.
- State-level experiences emphasized the growing need to integrate heat preparedness into broader disaster risk reduction frameworks through the operationalization of Heat Action Plans (HAPs) at state, district, and city levels.



II. Public Health Preparedness

- The health system's role in heatwave response emerged as a key focus. Participants highlighted the need for robust public health infrastructure equipped to handle heat-related illnesses.
- Recommendations included setting up dedicated wards for heat-related conditions in primary and secondary health facilities, standard treatment protocols, and real-time surveillance systems.
- The importance of training frontline health workers, improving referral mechanisms, and conducting awareness campaigns on recognizing symptoms of heat stress was widely stressed.
- Intersectoral coordination between health, disaster management, and urban departments was cited as essential to building systemic health resilience.
- Jharkhand's model—including Heat-Related Illness (HRI) surveillance and the establishment of an Environmental Health Cell under the State NHM—was presented as a best practice.



III. Animal Welfare and Livestock Protection

- Participants emphasized the need to formally integrate animal protection into heatwave planning. Heat stress in livestock and stray animals was recognized as a critical but often overlooked area.
- Proposed measures included the establishment of shaded shelters, provision of public water points, and access to veterinary care during heat emergencies.
- The role of animal welfare in safeguarding rural livelihoods was acknowledged, with examples such as Bihar's public animal hydration points and shaded zones cited as effective interventions.
- There was broad support for incorporating animal safety protocols into official HAPs and for promoting animal-friendly transport regulations.



IV. Vulnerable Populations and Equity in Planning

- The consultation highlighted the disproportionate burden of extreme heat on vulnerable populations including children, the elderly, people with chronic illnesses, outdoor laborers, and those living in informal settlements.
- Socioeconomic vulnerabilities were compounded by inadequate housing, lack of social safety nets, and limited access to public cooling resources.
- The need for inclusive and equity-based planning was emphasized, with targeted outreach strategies for marginalized groups.
- Participants reinforced the importance of localized data to identify at-risk populations and tailor interventions accordingly.



V. Technical and Policy Interventions

- The role of early warning systems, threshold-based alerts, and GIS-based heat mapping was discussed as essential tools for anticipatory planning.
- The establishment of cross-sectoral research and coordination platforms such as Jharkhand's **I-CLAN (Inter-sectoral Climate and Health Action Network)** was noted as an innovative governance model.
- Enhancing surveillance systems for real-time reporting of heat-related health cases was seen as critical to inform timely response.
- Policy recommendations included updating national and state HAPs, revising public health standards, and enabling convergence across technical institutions and line departments.



VI. Urban Heat and Infrastructure Adaptation

- Urban areas were identified as high-risk zones due to the urban heat island effect, dense population, and insufficient green cover.
- Participants emphasized the need to scale up **cool roof** initiatives, promote tree plantation drives, and encourage climate-responsive urban planning.
- The revision of urban building bye-laws to include climate-sensitive design and adherence to green building standards like **GRIHA** was discussed as a strategic way forward.
- Infrastructure adaptation was deemed most effective when informed by localized heat vulnerability assessments and community participation.



VII. Inter-Agency Coordination and Governance

- Strengthening inter-agency coordination was recognized as a backbone of effective heatwave response.
- The importance of collaborative governance between disaster management authorities, municipal bodies, public health institutions, and civil society organizations was emphasized.



- Jharkhand's **PHEDM capacity-building model**, involving multiple departments, was highlighted as a promising approach for state-wide coordination.
- Participants also discussed the role of institutional frameworks in enabling policy coherence, resource allocation, and accountability in heat preparedness planning.

VIII. Community Engagement and Local Governance

- Community-level involvement was repeatedly cited as essential for the effectiveness of heatwave preparedness plans.
- Participants shared successful models such as school-based heat preparedness activities, Village Health and Sanitation Committees (VHNSCs), and the deployment of **School Health Ambassadors**.
- Risk communication strategies that resonated culturally—such as **nukkad nataks (street plays)**, local radio jingles, and mobile awareness vans—were cited as effective tools for behavior change.
- Grassroots-driven early warning dissemination and hydration campaigns were recognized as vital for protecting lives at the last mile.
- The role of NGOs and civil society was reaffirmed in bridging institutional gaps, delivering localized support, and enhancing public education.



Conclusion

The 2024 heatwave served as a wake-up call, revealing critical gaps in preparedness, coordination, and resilience across systems and sectors. The national consultation held in April 2025 reflected a deliberate and thoughtful shift in the country's approach to managing extreme heat risks, drawing from past experiences to shape forward-looking strategies.

A major transition observed between 2024 and 2025 was the move from **reactive response to anticipatory action**. Recognizing that heatwaves are predictable yet deadly, stakeholders stressed the importance of pre-emptive planning through early warning systems, community readiness, and threshold-based response protocols.

Another key shift was from **sectoral integration to broad-based planning**. Participants emphasized that heatwave preparedness can no longer be limited to a few sectors like health or disaster management, but must be embedded across urban planning, agriculture, animal welfare, education, and water resource management. The conversation also moved beyond traditional health system strengthening toward **promoting overall well-being**. This included mental health support, improved working conditions for outdoor laborers, and infrastructure planning that enables safe and comfortable living environments, particularly for vulnerable populations.

Importantly, the scope of heatwave response expanded from a human-centric view to a **'whole-of-nature' approach**, recognizing the interconnectedness of human and animal health, ecosystem resilience, and environmental justice. Measures to protect animals—both livestock and stray—were recognized as vital to rural livelihoods and ethical governance.

There was a notable evolution from relying solely on **institutional leadership to fostering collaborative action**, particularly through state-level Inter Agency Groups (IAGs). These platforms were identified as enablers of convergence, knowledge exchange, and collective response at the ground level.

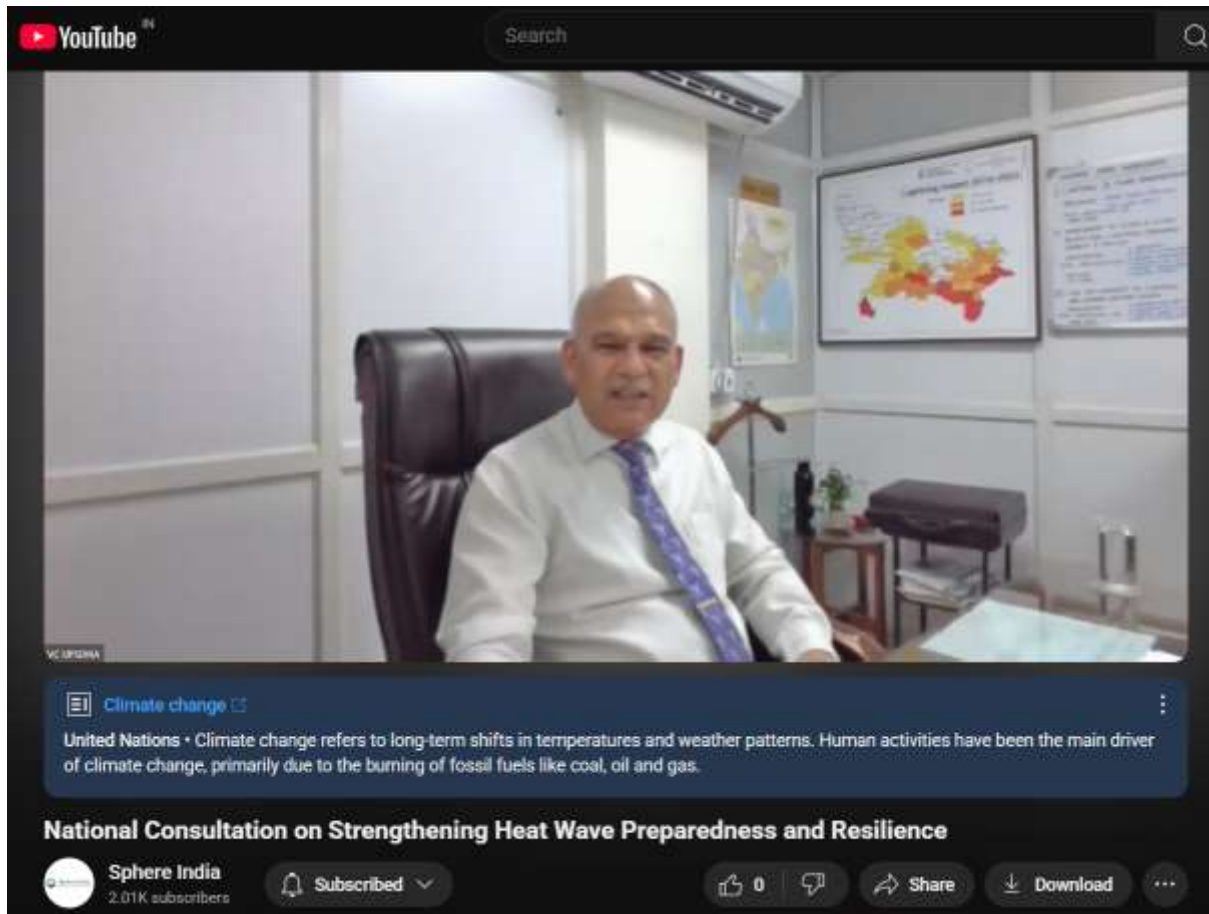
Lastly, the consultation emphasized moving from simply advocating for localization to **actively promoting community-led action**. Rather than being passive recipients of aid or information, communities were recognized as critical actors in planning, implementing, and monitoring heatwave preparedness efforts. Empowering local institutions, traditional knowledge systems, and frontline workers emerged as core components of building sustained resilience.

This convergence of technical knowledge, policy direction, and local wisdom signals a maturing national discourse on heatwave resilience—one that is inclusive, forward-looking, and rooted in collective responsibility.


Key Action Points

- Given the growing frequency and intensity of heatwaves across regions, establishing a *National Heat Resilience Platform* through collaboration between Sphere India and State IAGs is essential to facilitate structured knowledge exchange and strengthen coordinated efforts at multiple levels.
- With emerging climate patterns and region-specific vulnerabilities, there is a critical requirement for updated guidance from the NDMA and State Disaster Management Authorities to improve the design and operationalization of Heat Action Plans (HAPs) in preparation for the 2025 season.
- To provide better protection mechanisms for vulnerable populations, there is a need to explore innovative financial instruments, such as parametric heat insurance, in collaboration with development partners and financial institutions, with support from platforms like UNDP.
- Considering the significance of community-level awareness and localized action, it is important that State and District IAGs, along with NGOs, enhance their engagement in grassroots preparedness activities. This includes dissemination of heatwave information, training, and community-led early action.
- As extreme heat continues to pose public health challenges, improving the utilization and outreach of early warning systems in collaboration with the India Meteorological Department (IMD) and local partners is necessary to ensure timely and actionable communication at the last mile.
- To reduce urban heat risks, investment in resilient cooling infrastructure, such as cool roofs, green cover, and climate-responsive housing designs, is vital. Technical guidance from institutions like the Coalition for Disaster Resilient Infrastructure (CDRI) can support this transition.
- Recognizing the vulnerability of livestock and urban animals, there is a need to integrate animal protection protocols into heat action plans, with emphasis on water access, shaded spaces, community education, and heat stress mitigation measures.
- To ensure a future-ready response, all stakeholders need to contribute toward building a multi-sectoral, inclusive, and proactive framework for heatwave resilience. This includes aligning efforts with climate adaptation priorities and fostering collaboration across government, civil society, and technical institutions.

- [Annexure](#)
- [Registrations List](#)
- [Presentations](#)
- [Snap Shots](#)






The image shows a YouTube video player interface. At the top, there is a search bar with the text "Search" and a magnifying glass icon. The video content shows a man in a white shirt and purple tie sitting in a leather office chair in a conference room. Behind him are whiteboards with maps and charts. A small "VC LIVE" watermark is visible in the bottom left corner of the video frame.



Climate change 


United Nations • Climate change refers to long-term shifts in temperatures and weather patterns. Human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil and gas.


National Consultation on Strengthening Heat Wave Preparedness and Resilience

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