Lessons from Earthquake and Flood-Related Long-Term Recovery to Extreme Heat Action Planning

1. Introduction

Why most learning is hazard-specific? Why can we not learn lessons from one hazard for another hazard? In order to promote such across hazard learning and make use of excellent book titled "Resilient Recovery from Disasters: The Long-Term Outcomes of Post-Disaster Housing Reconstruction in India, Thailand and Japan" for the propose All India Disaster Mitigation Institute (AIDMI) and Royal Melbourne Institute of Technology (RMIT) University organized a virtual roundtable on "Lessons from Earthquake and Flood-Related Long-Term Recovery to Extreme Heat Action Planning" on May 27, 2026, from 2:00 PM to 3:30 PM IST. The session brought together 85 speakers and participants from disaster risk reduction, housing, infrastructure, urban planning, women-led community organisations, academia, and civil society.

The roundtable explored how lessons from long-term recovery efforts following the 2001 Gujarat earthquake, the 2008 Kosi floods in Bihar, and community-based recovery in Kutch can inform more practical and inclusive action on extreme heat.

2. Setting the Context

Mr. Vishal Pathak, AIDMI, opened the session and highlighted that extreme heat is affecting health, housing, infrastructure, livelihoods, small businesses, women workers, vulnerable workers, and at-risk communities in India. He asked panel members, "How can learning from past recovery help Heat Action Plans move beyond seasonal response towards long-term risk reduction?"

3. Key Insights from Speakers

Dr. Mittul Vahanvati, RMIT University, emphasised that recovery is not limited to housing reconstruction. Recovery is a long-term process that determines whether communities become safer or remain vulnerable to future hazards or stresses, there is limited research on long-term outcomes of post-disaster housing reconstruction. She framed housing as a system linked with rights, services, infrastructure, culture, livelihoods, safety, and climate-resilient development. Her presentation on learnings from long-term recovery in the Indian states of Gujarat and Bihar, which are applicable to extreme heat action planning, included:

- an owner-driven approach and decentralised governance are central to a collaborative approach,
- an assistance package that combined social support with financial support for the adaptation of existing buildings, and
- institutional capacity for continual learning (e.g. proactive planning, improvising building standards for thermal comfort and inclusion of traditional materials)

Mr. Ramraj Narasimhan, CDRI explained that extreme heat affects critical infrastructure, including buildings, roads, railways, airports, schools, hospitals, transport systems, power systems, and cooling centres. He underlined that power sector resilience is a critical missing link, as rising cooling demand can stress electricity grids and affect services for vulnerable groups.

Prof. Rajan Rawal, CEPT University, focused on housing design, humidity, indoor heat, and thermal comfort. He noted that temperature alone does not explain heat risk. Humidity, ventilation, building materials, sleep, heart rate, productivity, and human well-being also matter. His presentation called for practical design measures, retrofitting, shaded spaces, reflective roofs, and settlement-level cooling.

Ms. Lata Sachdev, KMVS, shared a women-led recovery experience from Kutch. She highlighted women's roles in assessment, relief, shelter, livelihood recovery, material distribution, and rehabilitation. Her experience showed that women and local communities must be recognised as decision-makers and leaders, not only as beneficiaries.

4. Key Themes Emerging from the Roundtable

The roundtable highlighted that long-term recovery is a valuable source of learning for extreme heat action planning. Housing is not only a structure; it is linked to health, work, culture, infrastructure, and future climate risk. Extreme heat is a multi-sector risk affecting health, housing, energy, transport, education, markets, workers, small businesses, and public spaces.

Participants also emphasised that cooling centres, schools, clinics, markets, bus stops, parks, shaded streets, and community spaces should be treated as public heat-resilience infrastructure. Heat planning must consider humidity, indoor heat, ventilation, sleep, productivity, and human well-being. Women, workers, caregivers, informal workers, and local groups should be recognised as planners and leaders.

5. Concluding Reflections and Way Ahead

In his concluding remarks, Mr. Mihir R. Bhatt, AIDMI, noted that long-term recovery from earthquakes and floods offers important lessons for extreme heat action planning. He stressed that this is not only a technical issue, but also a question of housing, health, infrastructure, livelihoods, women's leadership, local governance, equality, and inclusion.

Five follow-up directions emerged, as:

1. Heat Action Plans should move from a seasonal response to long-term heat risk reduction.
2. Cities and districts should map heat risk together with social vulnerability.
3. Public spaces such as cooling centres, schools, clinics, markets, bus stops, and shaded streets should be strengthened as heat resilience infrastructure.
4. Housing and settlement planning should promote passive strategies, local materials, nature-based solutions, and retrofitting.
5. Women's groups, panchayats, ASHA workers, self-help groups, and local organisations should be partners in early warning, safe work practices, hydration awareness, health monitoring, and recovery.

As a follow-up, AIDMI will initiate a dedicated issue of Southasiadisasters.net on this theme. Speakers and participants are invited to contribute short articles, case studies, field experiences, community voices, evidence notes, and practical lessons.

6. Conclusion

The roundtable showed that extreme heat must be understood as more than a health issue. It is also a housing, infrastructure, livelihood, gender, governance, and justice issue. Lessons from earthquake and flood recovery can help India and South Asia plan for extreme heat in ways that are more inclusive, practical, evidence-based, and focused on reducing future risk.

"Earthquake and flood recovery taught us that rebuilding must reduce future risk. Extreme heat action planning now asks us to apply the same principle before the disaster becomes more visible and more damaging."

Resources:

1. Vahanvati, M., Maly, L., & Sararit, T. (2025). *Resilient Recovery from Disasters: The Long-Term Outcomes of Post-Disaster Housing Reconstruction in India, Thailand and Japan*. Springer Nature Singapore. https://doi.org/10.1007/978-981-97-8047-1
   Note: This book is behind a paywall, but interested readers may request individual chapters through ResearchGate.
2. Gupta, R., Vahanvati, M., Häggström, J., & Halcomb, J. S. (2020). *A Practical Guide to Climate-Resilient Buildings & Communities*. UNEP. https://www.unep.org/resources/practical-guide-climate-resilient-buildings
   ISBN: 978-92-807-3871-1
3. UNEP. *A Practical Guide to Climate-Resilient Buildings & Communities* video. https://youtu.be/qVVwjHqWCl8