

From Coastlines to Communities: Addressing Extreme Heat as a Coastal Hazard in South Asia

Overview

Responding to wide-scale demand from local initiatives in coastal areas, the All India Disaster Mitigation Institute (AIDMI) organised a roundtable on “**Coastal Disasters with a Focus on Extreme Heat: Perspectives from South Asia**” on Thursday, August 7, 2025. The virtual roundtable explored the growing intersection of coastal disasters and extreme heat in South Asia. This compound risk—driven by rising sea levels, intensifying cyclones, and unprecedented heatwaves—poses escalating threats to human health, ecosystems, and the livelihoods of an estimated ten million coastal community members in the region.

The event coincided with the launch of a special issue of *Southasiadisasters.net* titled “**Coastal Disasters with a Focus on Extreme Heat: Perspectives from South Asia**”, co-edited by Muhammad Taher, a leading coastal development consultant, and Mihir R. Bhatt, who has worked on coastal hazards since 1998 and extreme heat since 2014. The special issue captures multi-disciplinary perspectives on these urgent challenges.

A total of **95 participants** attended the roundtable, representing a diverse spectrum of stakeholders from across South Asia and beyond. The gathering included senior officials from national and state disaster management authorities, representatives from coastal and urban local bodies, climate scientists, marine researchers, humanitarian practitioners, coastal youth leaders, gender equality advocates, and members of grassroots coastal community networks. Also present were journalists covering climate and disaster issues, private sector representatives exploring resilience investments in coastal areas, and leading development partners from UN environment agencies and international NGOs.

The wide-ranging expertise and lived experiences of these attendees enriched the dialogue, ensuring that the discussions captured both policy-level insights and coastal community-grounded perspectives on tackling the compound risks of coastal disasters and extreme heat. The session was moderated by Spandan Pandya from LMU of Munich.

Key Highlights

1. Regional Climate Vulnerabilities

Muhammad Taher (Coastal Resilience Expert) presented South Asia as a climate hotspot where coastal and heat risks intersect, calling for shared research platforms and coordinated action. *“We cannot address coastal resilience without factoring in extreme heat—these hazards now collide, creating a new urgency for integrated solutions.”*

2. Gendered Impacts

Ms. Ishrat Shamim (Centre for Women and Children Studies) documented how women and children in coastal Bangladesh face heightened risks from extreme heat due to inadequate cooling, exclusion from decision-making, and socio-economic inequalities. *“Women and children are not just vulnerable groups; they are frontline actors. Our policies must recognise and empower women’s leadership in adaptation.”*

3. Marine Heatwaves

Dr. M. Krishnaveni (Institute for Ocean Management, Anna University) examined the science of marine heatwaves and their cascading effects on biodiversity and livelihoods, stressing integrated science-policy approaches. *“Marine heatwaves are silent disasters—eroding livelihoods, biodiversity, and resilience without the visible drama of storms or floods.”*

4. Technology and Planning

On behalf of Dr (Cdr) Arnab Das, Ms. Cathrine J (Maritime Research Center) introduced Underwater Domain Awareness (UDA) as a tool to improve monitoring, early warning, and marine spatial planning for climate resilience. *“With UDA, we can move from reacting to disasters to anticipating and preventing their worst impacts on our coasts.”*

5. Youth Engagement

Mr. Spandan Pandya highlighted the role of young scientists and communicators in merging cultural understanding with climate science to create impactful local adaptation solutions. *“Science needs culture, and culture needs science—youth can bridge the two to create adaptation strategies that truly resonate with communities.”*

Concluding Remarks and Way Ahead

Delivering the closing remarks, and drawing from his discussion with Mr. Mihir R. Bhatt, Mr. Vishal Pathak, with experience in the coastal tsunami of 2005 and recent extreme heat work in coastal Kerala, emphasised that this roundtable was more than an exchange of ideas—it was the beginning of a shared regional agenda to tackle a pressing compound risk. He highlighted three priorities for moving forward:

1. Translating today’s discussions into actionable pilot projects that directly benefit coastal communities in South Asia.
2. Ensuring that local voices, particularly women and youth, remain central in adaptation design and decision-making for regional authority.
3. Committing to cross-border learning and collaboration so that South Asia’s coastal resilience is strengthened as a collective effort rather than isolated national responses by local and international civil society.

He further stressed that the cooperative **connectedness between science and civil society is essential for building resilient coastal communities**. Strengthening this relationship ensures that scientific knowledge is translated into locally relevant action, while community insights inform and enrich scientific approaches, creating a cycle of shared learning and adaptive capacity.

“This is not the end of our coastal conversation, but the start of coordinated action. We leave today with a shared responsibility to turn coastal resilience insights into impact, as Mihirbhai has said.”

Key Takeaways

1. Extreme heat must be recognised as a coastal hazard in national and regional disaster frameworks.
2. Gender-responsive and inclusive adaptation strategies are critical for equitable climate action.
3. Marine heatwaves require urgent monitoring and mitigation due to their ecological and economic impacts.
4. Technological tools such as the Underwater Domain Awareness (UDA) framework can enhance situational awareness and early warning systems.
5. Youth involvement strengthens both scientific innovation and community engagement in adaptation efforts.

Next Steps

1. **Policy Integration:** Work with NDMA, SDMAs, and coastal state governments to embed extreme heat considerations into coastal disaster management plans through coastal dialogues.
2. **Knowledge Dissemination:** Share the *Southasiadisasters.net* special issue widely among policymakers, practitioners, and community networks through further issues of *Southasiadisasters.net*.
3. **Pilot Projects:** Launch at least three community-led pilot adaptation projects in vulnerable coastal districts, such as those in place by the UN, national authorities, and communities.
4. **Research Collaboration:** Establish a South Asian research consortium focusing on marine heatwaves and compound hazards with direct impact on affected coastal communities.
5. **Capacity Development:** Deliver targeted training for women’s groups, youth leaders, and local officials on heat and coastal risk management through a regional training of trainers by the UN and foundations.

The roundtable was supported by the Coastal Development Planning Center (CDPC).