DMICS
Disaster Management, Initiatives and Convergence Society
Envisioning a Disaster Resilient Future

Disaster Risk in India 2025: Key Lessons from a Year of Extremes

The year 2025 marked a defining chapter in India's disaster risk landscape. Extreme weather events occurred with unprecedented frequency and geographic spread, affecting nearly every region of the country. Floods, heatwaves, cloudbursts, cyclones, landslides, lightning, and urban inundation were no longer isolated incidents but part of a persistent and intensifying pattern of risk.

India's experience in 2025 offers critical lessons on the interplay between climate change, exposure, vulnerability, and preparedness, underscoring the urgent need to re-think disaster risk reduction (DRR) in the context of a warming world.

A Year Dominated by Extreme Weather

Data compiled by the Centre for Science and Environment (CSE) reveals that India experienced extreme weather events on 331 of 334 days in 2025 — nearly 99% of the year.[1] This relentless exposure affected agriculture, infrastructure, livelihoods, and public safety across states.

Extreme weather events resulted in over 4,400 reported fatalities nationwide, marking a nearly 50% increase compared to 2022, while crop damage escalated dramatically to about 17.4 million hectares, almost nine times higher than losses recorded just three years earlier.[1] These figures illustrate not only increasing hazard intensity but also growing systemic vulnerability. States such as Madhya Pradesh, Uttar Pradesh, Maharashtra, and Assam consistently reported the highest mortality and damage figures, reflecting both hazard intensity and population exposure.

The persistence of disasters throughout the year signals a clear shift away from seasonal risk toward year-round climate volatility, challenging traditional assumptions that disasters are confined to specific months or regions.

Major Disaster Patterns Observed in 2025

i. Floods and Cloudbursts in the Himalayan Region

Several Himalayan states witnessed repeated cloudbursts and flash floods, particularly in Jammu & Kashmir, Himachal Pradesh, and Uttarakhand. Districts such as Kishtwar (J&K), Kullu and Mandi (Himachal Pradesh), and Uttarkashi and Chamoli (Uttarakhand). These sudden-onset events triggered river surges and landslides, destroying settlements, roads, and pilgrimage routes, often with little warning.

Scientific assessments confirm that rising temperatures in the Himalayan region, combined with fragile geology, glacial melt, road widening projects, hydropower construction, and unregulated tourism infrastructure, have significantly increased disaster susceptibility.[2] The Himalayas, often referred to as India's "water tower," are emerging as one of the country's most climate-sensitive and disaster-prone regions.

ii. Large-Scale Flooding in the Plains

The plains of Punjab, Uttar Pradesh, Bihar, Assam, and parts of central India experienced extensive flooding driven by intense monsoon rainfall, river overflow, and dam-release pressures. Major rivers such as the Ganga, Brahmaputra, Yamuna, Ghaggar, and Godavari crossed danger levels multiple times during the monsoon season.

The monsoon season alone accounted for nearly three-quarters of disaster-related fatalities in 2025, highlighting its continued lethality.[1] Urban centres including Patna, Guwahati, Delhi, and parts of Ahmedabad experienced repeated urban flooding, disrupting transport, health services, and economic activity.

Agricultural losses were severe. Maharashtra alone recorded crop damage exceeding 8.4 million hectares, followed by Gujarat (4.4 million ha) and Karnataka (2.75 million ha), directly impacting food security, rural incomes, and supply chains.[1] These floods exposed the cumulative risk created by encroachment of floodplains, altered river regimes, and aging water-management infrastructure.[3]

iii. Cyclones and Coastal Vulnerability

The Bay of Bengal continued to witness heightened cyclonic activity in 2025. Cyclonic storms affected coastal districts of Odisha, Andhra Pradesh, West Bengal, and Tamil Nadu, leading to damage to housing, fisheries, power infrastructure, ports, and coastal roads.

While improved forecasting and evacuation planning helped reduce loss of life — particularly in Odisha's cyclone-prone districts — economic losses remained substantial, especially for small-scale fishers, coastal farmers, and informal workers.

India's 7,500-km coastline, home to rapidly expanding urban and industrial hubs such as Visakhapatnam, Chennai, Paradip, and Kandla, faces growing exposure to stronger cyclones, storm surges, coastal erosion, and sea-level rise, making coastal resilience a critical national priority.[4]

iv. Heatwaves, Lightning, and Localised Extremes

Heatwaves affected large parts of central and northern India, including Rajasthan, Madhya Pradesh, Uttar Pradesh, Telangana, and parts of Maharashtra, contributing to rising health risks, water stress, and productivity losses. Urban heat stress was particularly severe in cities such as Delhi, Nagpur, and Hyderabad, where high night-time temperatures compounded public health impacts.

At the same time, lightning and severe thunderstorms emerged as major killers, particularly in rural and agrarian regions of eastern Uttar Pradesh, Bihar, Jharkhand, Odisha, and Chhattisgarh.

Official data indicate that lightning alone accounted for more than 1,300 deaths in 2025, making it one of the deadliest weather-related hazards.[5] This reflects persistent gaps in last-mile early warning dissemination, public awareness, and access to safe shelters, despite advances in forecasting technology.

Why Disaster Risk Is Increasing

India's disaster losses in 2025 were driven not only by hazards but also by **rapidly increasing exposure and vulnerability**:

- Rapid urbanisation without climate-sensitive planning
- Encroachment of floodplains, wetlands, coastal zones, and hill slopes
- Infrastructure designed for historical climate conditions
- Socio-economic vulnerabilities among informal settlements, smallholder farmers, and rural communities

The World Meteorological Organization (WMO) has repeatedly warned that climate change is amplifying both the frequency and intensity of extreme events, with South Asia identified as a global hotspot of climate risk.[6] Notably, 2025 ranked among the warmest years on record in India, reinforcing long-term warming trends.

Key Lessons from 2025

a) Early Warning Must Reach the Last Mile

Forecast accuracy has improved, but timely communication and community response remain uneven. Warning systems must be people-centric, localised, and multilingual, particularly for sudden-onset hazards such as lightning and cloudbursts.

b) Infrastructure Must Be Climate-Resilient

Drainage systems, embankments, roads, housing, and power networks must be redesigned for future climate extremes — not past averages, especially in flood-prone cities and climate-sensitive regions.

c) Risk-Informed Development Is Non-Negotiable

Disaster risk reduction must be embedded in land-use planning, urban design, agriculture, and infrastructure investment decisions to avoid locking in future risk.

d) Community Capacity Saves Lives

Local institutions, trained volunteers, self-help groups, Panchayati Raj Institutions, and urban resident welfare associations consistently proved effective in reducing losses where they existed.

e) Financing Resilience Is Critical

Rising disaster losses underscore the need for risk-transfer mechanisms, including insurance, contingency funds, and climate-resilient public finance systems.[7]

Looking Ahead: From Response to Risk Reduction

The events of 2025 reinforce a central truth: disasters are no longer rare shocks — they are systemic risks. India's progress in disaster response must now be matched with equal commitment to prevention, preparedness, and resilience building, aligned with the Sendai Framework for Disaster Risk Reduction and national climate commitments.

A safer future depends not only on reacting faster, but on planning smarter, building safer, and empowering communities before the next extreme event strikes.

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