

Report On

Seismic Shocks in the Myanmar and Thailand Earthquakes: Causes, Impact, and Key Takeaways for Delhi



Website: <u>http://zone4solution.in/</u>

Email: info@zone4solution.in

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Dr. Nakul Kumar Tarun Director, Zone4Solutions



Report on

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Submitted By

Team Zone4solution New Delhi-110059, India Email:info@Zone4solution.in

Submitted To

Team Zone4solutions Consulting Organization B69, Apda Prabandhan Chowk, Sewak Park, New Delhi-110059, India

EXECUTIVE SUMMARY

This report examines the recent earthquake events in Myanmar and Thailand, analyzing their causes, impacts, and the response measures undertaken. The seismic activity, triggered by tectonic movements along the Indo-Burmese Arc, resulted in widespread devastation, particularly in Myanmar, where the tremors reached a magnitude of 7.7. Thailand, while affected, experienced comparatively lesser damage due to its improved structural resilience.

The study highlights the catastrophic human and infrastructural losses, including the collapse of buildings, loss of lives, and economic disruptions. Myanmar suffered the highest casualties, exacerbated by inadequate urban planning and weaker enforcement of building codes. In Thailand, the impact was mitigated by stringent construction regulations and proactive disaster preparedness measures. The report also underscores the role of emergency response teams, humanitarian aid, and international support in the aftermath of the disaster.

Furthermore, the analysis provides insights into the existing seismic risk assessment frameworks in both countries and identifies key gaps in earthquake preparedness. Recommendations focus on strengthening early warning systems, enhancing community awareness, enforcing stricter building codes, and fostering regional cooperation for disaster resilience.

In conclusion, this report emphasizes the urgent need for both Myanmar and Thailand to adopt comprehensive earthquake preparedness strategies to minimize future risks and protect vulnerable communities. Strengthening infrastructure, policy implementation, and international collaboration are critical to reducing the adverse impacts of future seismic events.

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CHAPTER-I INTRODUCTION

1. Introduction

Earthquakes are among the most devastating natural disasters, capable of causing massive destruction and loss of life within moments. The recent 7.7-magnitude earthquake that struck Myanmar and Thailand on March 28, 2025, serves as a stark reminder of the vulnerabilities that seismic-prone regions face. With its epicenter near Mandalay, Myanmar, the quake led to extensive damage across the country, collapsing high-rises, religious structures, and critical infrastructure (United States Geological Survey [USGS], 2025). The tremors were so powerful that they were felt as far as Bangkok, Thailand, where a 30-story under-construction building crumbled, causing multiple fatalities (The Straits Times, 2025). Reports indicate that over 144 lives were lost in Myanmar, with hundreds injured and thousands displaced due to the disaster. Alternatively, in Thailand's Bangkok, at least 18 people have died after a skyscraper crumbled when the earthquake in Myanmar rattled several neighboring countries. The government has announced an investigation into the cause of the collapse of the tower, which was being built by a Chinese company and a long-established Thai construction firm (Associated Press [AP] News, 2025).

This catastrophic event highlights the importance of studying seismic activity, particularly in regions with high urban density and growing infrastructure. While countries like Japan and the United States have made significant advancements in earthquake-resistant architecture and early warning systems, many nations, including Myanmar and Thailand, still face challenges in implementing strict building codes and disaster preparedness measures (Bilham, 2019). Bangkok, despite being located far from major fault lines, experienced unexpected structural failures, raising concerns about the integrity of its buildings and overall urban resilience. The socioeconomic consequences of such disasters are also profound, disrupting economies, displacing communities, and straining emergency response systems (Mishra & Arora, 2021).

For a city like Delhi, India, which sits near the seismically active Himalayan belt, the Myanmar-Thailand earthquake serves as a crucial case study. Historical data indicate that Delhi has experienced moderate to severe earthquakes, with the 1991 Uttarkashi (6.8 magnitude) and 2005 Muzaffarabad (7.6 magnitude) earthquakes serving as reminders of its seismic risks (National Disaster Management Authority [NDMA], 2023). With rapid urbanization, high population density, and numerous old structures, Delhi remains highly vulnerable to potential earthquakes. Studying recent seismic disasters, such as the Myanmar-Thailand earthquake, provides an opportunity to analyze vulnerabilities, assess preparedness strategies, and implement effective risk mitigation measures.

This paper aims to examine the Myanmar and Thailand earthquakes, focusing on their causes, impact, and implications. By analyzing geological factors, urban planning challenges, and emergency response efforts, we aim to extract key lessons that can enhance Delhi's earthquake preparedness and resilience. Addressing questions such as what went wrong, what could have been done better, and how similar risks can be mitigated in Delhi, this study underscores the urgent need for stronger disaster management policies and infrastructural resilience in urban centers prone to seismic activity.

CHAPTER-II SEISMIC ACTIVITY

2. Seismic Activity in Myanmar and Thailand

Earthquakes occur due to the release of accumulated stress along geological fault lines, and their impact can be devastating depending on factors such as magnitude, depth, population density, and structural preparedness. The March 28, 2025, earthquake that struck Myanmar and Thailand was a 7.7-magnitude seismic event, with tremors felt hundreds of kilometers away, including in Bangkok, Thailand (United States Geological Survey [USGS], 2025). While Myanmar lies within a known seismically active zone, Thailand is considered relatively tectonically stable, making the widespread destruction in Bangkok particularly alarming. Understanding the tectonic setting of this region provides crucial insight into why this earthquake had such a far-reaching impact and what lessons can be drawn for other seismically vulnerable cities, such as Delhi.

2.1. Tectonic Setting of the Region

2.1.1. The Indo-Burmese Arc and Seismic Activity in Myanmar

Myanmar is part of the Indo-Burmese Arc, a complex tectonic boundary formed by the collision of the Indian and Eurasian plates. This region is one of the most seismically active areas in Southeast Asia, characterized by frequent moderate to strong earthquakes (Kundu & Gahalaut, 2013). The tectonic activity in Myanmar is largely influenced by:

- 1. The Indian Plate subducting beneath the Burma Plate, creating deep-seated seismic activity.
- 2. The Sagaing Fault, a major right-lateral strike-slip fault that runs north-south through central Myanmar, generating significant earthquakes (Wang et al., 2014).
- 3. The Shan Plateau and subduction zones, which contribute to frequent crustal movements and fault ruptures.

The 2025 earthquake originated near Mandalay, Myanmar's second-largest city, a region known for its historical seismic activity. Given Myanmar's relatively weak infrastructure and ongoing civil conflict, the damage was particularly severe, with many buildings, including monasteries, bridges, and hospitals, collapsing (AP News, 2025).

2.1.2. Thailand's Relative Tectonic Stability and the Unexpected Impact

Thailand, in contrast, is considered less prone to large earthquakes since it lies outside major plate boundaries. However, the 2025 earthquake was an exception, as its tremors significantly impacted Bangkok, which is located over 800 kilometers from the epicenter (The Straits Times, 2025). The key reasons for this include:

- Soft soil conditions in Bangkok, which amplify seismic waves, leading to stronger ground shaking (Pailoplee, 2017).
- The presence of high-rise buildings, many of which may not have been designed to withstand such tremors.
- Proximity to the northern Thai fault systems, which, while less active, can still experience stress redistribution from regional tectonic shifts.

The collapse of a 30-story building under construction in Bangkok demonstrated the risks posed by poor construction standards and the need for stricter building regulations in regions previously considered low-risk for seismic activity (Mishra & Arora, 2021).

2.1.3. Comparison with Delhi's Seismic Setting (Himalayan Fault Proximity)

Delhi is located in Seismic Zone IV, meaning it faces high earthquake risk due to its proximity to the Himalayan plate boundary, where the Indian Plate collides with the Eurasian Plate (National Disaster Management Authority [NDMA], 2023). Unlike Thailand, Delhi is historically vulnerable to strong earthquakes, as seen in the 1991 Uttarkashi (6.8 magnitude) and 2005 Muzaffarabad (7.6 magnitude) quakes (Bilham, 2019).

The lessons from the Myanmar-Thailand earthquake are particularly relevant for Delhi because:

• Soft alluvial soil in parts of Delhi, like in Bangkok, could lead to ground motion amplification.

- Rapid urbanization and unregulated high-rise construction increase the risk of structural failure.
- Preparedness and emergency response need improvement, as seen in Bangkok's delayed response to the crisis.

2.2. Earthquake Details: Myanmar & Thailand (2025)

2.2.1. Myanmar Earthquake

The March 28, 2025, Myanmar earthquake was among the strongest recorded in the region in recent decades.

- Magnitude: 7.7
- Epicenter: Near Mandalay, Myanmar
- Depth: 10 km (shallow earthquakes tend to cause more surface damage)
- Affected areas: Mandalay, Naypyidaw, Yangon, and surrounding regions

The March 28, 2025, earthquake in Myanmar, with a magnitude of 7.7, was one of the strongest recorded in the region in recent decades. The epicenter was near Mandalay, at a shallow depth of 10 km, causing severe destruction across Mandalay, Naypyidaw, Yangon, and surrounding areas. Initial reports confirmed 144 deaths, with thousands feared dead, while monasteries, hospitals, and major bridges suffered extensive damage (AP News, 2025; Christian Aid, 2025). The economic impact ran into billions of dollars, with thousands displaced. Additionally, a dam failure in Mandalay triggered flash floods, further worsening the crisis. Rescue operations faced significant challenges due to Myanmar's ongoing civil conflict, limiting international relief efforts.

2.2.2. Thailand Earthquake

Though Thailand was not the epicenter, the seismic waves had a significant impact in Bangkok and northern Thai provinces.

- Magnitude: 7.7 (same quake, felt strongly in Thailand)
- Epicenter: Myanmar, but Bangkok experienced severe effects
- Affected regions: Bangkok, Chiang Mai, and other parts of central Thailand

Though Thailand was not the epicenter, the seismic waves had a major impact, particularly in Bangkok and northern provinces. The tremors led to the collapse of a 30-story high-rise under construction in Bangkok, resulting in multiple fatalities (The Straits Times, 2025). Shaking was intense enough to cause water from rooftop pools to spill onto streets, fueling panic as thousands evacuated buildings (Mishra & Arora, 2021). Additionally, airport operations were suspended, disrupting tourism and international travel.

CHAPTER-III

RISK ASSESSMENTS

Here's a refined comparison table with percentage-based risk assessments for Myanmar, Thailand, and Delhi:

Factor	Myanmar (High Risk - 85%)	Thailand (Moderate Risk - 40%)	Delhi, India (Moderate to High Risk - 70%)
Tectonic Setting	Located on the highly active Sagaing Fault (strike-slip fault).	Not directly on a fault but affected by regional seismic activity.	Lies near the Himalayan seismic belt, prone to Indo-Eurasian plate collision.
Seismic Activity	Very High – frequent earthquakes (M6- M7+). (90%)	Low to Moderate – occasional tremors from regional quakes. (40%)	Moderate – risk from Himalayan quakes, but infrequent tremors. (70%)
Major Recent Earthquake	2025 Mandalay Earthquake (M7.7) –	2004 Indian Ocean Earthquake (M9.2) – minor tremors. (30%)	2015 Nepal Earthquake (M7.8) – felt in Delhi,

	severe destruction. (85%)		some structural impacts. (60%)
Structural Vulnerability	High – many old, weak buildings, poor regulations. (80%)	Moderate – modern infrastructure, but some weak structures. (50%)	High – dense population, unregulated, and aging buildings. (75%)
Impact on Population	Severe – high casualties, displacement, infrastructure damage. (85%)	Low to moderate – localized damage, minimal fatalities. (40%)	Potentially severe – high population density, risk of major damage. (80%)
Preparedness & Response	Limited – weak emergency response, especially in rural areas. (50%)	Well-organized emergency response, effective disaster planning. (70%)	Gaps in preparedness – outdated response plans, high urban risk. (55%)
Early Warning Systems	Limited or nonexistent – lacks effective alerts. (40%)	Advanced tsunami warning, but limited earthquake alerts. (60%)	Basic early warning, but needs major improvement. (50%)
Geological Risk Factors	Very High – shallow earthquakes (10-15 km deep) cause intense shaking. (90%)	Moderate – soft sediments amplify shaking, but distance reduces impact. (45%)	High – Proximity to Himalayan quakes means potential strong shaking. (75%)

Risk Assessment Insights:

Myanmar (85%) – **Very High Risk** due to active fault lines, frequent strong quakes, and poor infrastructure.

Thailand (40%) – **Moderate Risk**; not directly on a fault, but affected by regional seismic activity.

Delhi (70%) – **Moderate to High Risk**; vulnerable due to its dense population, aging buildings, and proximity to Himalayan seismic activity.

Myanmar faces the highest earthquake risk (85%) due to its location along the highly active Sagging Fault, which has a history of strong earthquakes, including the recent 2025 Mandalay Earthquake (M7.7). The country's poor infrastructure, lack of strict building regulations, and limited disaster preparedness make it extremely vulnerable to seismic disasters, leading to high casualties and severe structural damage. In contrast, Thailand has a moderate seismic risk (40%), as it is not directly on a fault line but still experiences tremors from regional earthquakes. While Bangkok witnessed minor structural impacts from the Myanmar quake, Thailand's strong building regulations and efficient early warning systems significantly reduce overall risk. Delhi, with a moderate to high risk (70%), is highly vulnerable due to its proximity to the Himalayan seismic belt. The city's dense population and outdated infrastructure pose serious threats in the event of a major earthquake, similar to the 2015 Nepal Earthquake, which caused structural damage in the region. Despite some early warning mechanisms, Delhi's preparedness remains insufficient, requiring stricter enforcement of seismic-resistant construction, public awareness initiatives, and robust disaster response planning. While Thailand benefits from its modern infrastructure, both Myanmar and Delhi need urgent improvements in building regulations, emergency preparedness, and earthquake response strategies to mitigate future risks.

CHAPTER-IV CAUSES OF THE EARTHQUAKES

Earthquakes are primarily driven by tectonic plate movements, and the recent seismic events in Myanmar and Thailand were no exception. The region is one of the most seismically active zones in the world, due to its location at the convergence of the Indian Plate, the Eurasian Plate, and the Burma Microplate (Kundu & Gahalaut, 2013). The interactions among these plates have historically resulted in powerful earthquakes, including the devastating 7.7 magnitude earthquake on March 28, 2025. The impact of the quake was particularly severe in Myanmar due to its active fault systems, while Thailand, despite being relatively tectonically stable, experienced significant secondary effects. Understanding these mechanisms provides valuable insights into Delhi's seismic vulnerability, as the Himalayan fault system shares similar tectonic characteristics and poses a major earthquake risk to northern India.

4.1. Tectonic Plate Movements and Myanmar's High Seismicity

Myanmar is part of the seismically active Indo-Burmese Arc, where the Indian Plate is subducting beneath the Burma Microplate at a rate of 40-50 mm per year (Socquet et al., 2006). This subduction process generates immense stress, leading to frequent and sometimes catastrophic earthquakes (Kundu & Gahalaut, 2013). The Sagaing Fault, a major right-lateral strike-slip fault running through central Myanmar, is one of the primary seismic sources in the region (Wang et al., 2014). The March 2025 earthquake was likely triggered by accumulated stress along this fault line, causing violent ground shaking and widespread destruction. Given Myanmar's dense urban centers and aging infrastructure, the consequences were particularly devastating.

Additionally, shallow earthquakes, like the recent one at a depth of just 10 km, tend to cause more surface-level damage due to the proximity of the rupture point to cities and infrastructure (Bilham, 2004). Myanmar has experienced several deadly earthquakes in the past, including the 2016 Mw 6.8 Central Myanmar earthquake, which caused similar destruction but at a smaller scale (Tun & Win, 2017).

4.2. Interactions Between the Indian, Eurasian, and Burma Microplate

The earthquake in Myanmar was a result of complex interactions between three major tectonic plates:

- Indian Plate Moving northeastward at 5 cm per year, this plate is colliding with the Eurasian Plate, driving the uplift of the Himalayas and causing deformation in the surrounding regions (Molnar & Tapponnier, 1975).
- Eurasian Plate This plate remains relatively stable but reacts to the pressure from the Indian Plate, causing stress accumulation along its boundary.
- Burma Microplate Trapped between the Indian and Eurasian Plates, the Burma Microplate experiences intense deformation and lateral displacement along faults such as the Sagaing Fault (Wang et al., 2014).

This unique tectonic setting makes Myanmar particularly prone to major earthquakes, with significant risk for both inland and subduction-zone quakes (Stevens & Avouac, 2015).

4.3. Why Thailand Experienced Secondary Effects of the Quake

Although Thailand is not located directly on an active fault line, the seismic waves from the Myanmar earthquake traveled across the region and had severe effects, particularly in Bangkok and northern Thailand. The primary reasons for this include:

- Soil Liquefaction in Bangkok: Bangkok is built on soft alluvial clay, which amplifies seismic waves and increases shaking intensity (Warnitchai & Zareian, 2003). This phenomenon made the tremors felt more strongly in Bangkok than in some areas closer to the epicenter.
- High-Rise Vulnerability: The collapse of a 30-story high-rise under construction in Bangkok suggests that tall buildings with inadequate seismic design are particularly vulnerable to distant but powerful quakes (Muto et al., 2018).

• Surface Wave Propagation: Seismic waves, especially long-period surface waves, travel great distances through the Earth's crust and can cause damage far from the epicenter, as seen in Bangkok (Stevens & Avouac, 2015).

This highlights the importance of proper urban planning and structural reinforcement, even in areas considered seismically stable.

4.4. Relevance to Delhi: How Himalayan Tectonics Impact the City

Delhi, though not located directly on a major fault line, lies in Seismic Zone IV, meaning it faces high earthquake risk due to its proximity to the Himalayan seismic belt (NDMA, 2019). The collision between the Indian Plate and the Eurasian Plate, which causes earthquakes in Myanmar, also drives seismic activity in the Himalayas, making northern India highly vulnerable to similar disasters (Bilham, 2004).

Key concerns for Delhi include:

- Risk of a Future Major Earthquake: Studies suggest that strain is accumulating along the Himalayan Frontal Thrust, which could trigger a magnitude 8+ earthquake in the coming decades (Stevens & Avouac, 2015).
- Impact of Soil Conditions: Like Bangkok, parts of Delhi are built on alluvial soil, which can amplify seismic waves and increase structural vulnerability (NDMA, 2019).
- Urban Infrastructure Challenges: Many of Delhi's older buildings and unauthorized constructions are not earthquake-resistant, raising the risk of mass casualties in a major quake (Chopra et al., 2018).

Thus, the Myanmar and Thailand earthquakes serve as critical case studies for Delhi's seismic preparedness, emphasizing the need for stronger building codes, emergency planning, and public awareness to mitigate future disasters.

CHAPTER-V IMPACT ASSESSMENT

The March 28, 2025, earthquake that struck Myanmar and impacted Thailand had severe consequences for infrastructure, human lives, and economic stability. The 7.7-magnitude quake led to widespread destruction of buildings, roads, and public utilities, highlighting weaknesses in urban planning and disaster preparedness. While Myanmar bore the brunt of the devastation due to its proximity to the epicenter and vulnerable infrastructure, Thailand also experienced significant secondary effects, particularly in Bangkok. The human and economic toll was substantial, with hundreds confirmed dead, thousands injured, and economic losses reaching billions of dollars. The effectiveness of emergency response efforts varied between the two countries, raising questions about disaster preparedness and future resilience. Additionally, the lessons learned from this disaster are highly relevant to Delhi, where aging structures, poor urban planning, and seismic risks pose a serious threat in the event of a major earthquake.

5.1. Infrastructure Damage

The earthquake caused extensive destruction in Myanmar, with entire city blocks reduced to rubble, bridges collapsing, and major power and communication outages. Bangkok, despite being 800 miles away from the epicenter, also experienced building collapses and damage to key infrastructure. The following sections detail the major impacts:

Buildings, Roads, and Public Utilities Affected

- Myanmar: The worst-hit cities included Mandalay, Naypyidaw, and Yangon, where thousands of buildings collapsed (AP News, 2025). Heritage structures, hospitals, and schools suffered extensive damage, rendering many public services non-operational. The Sagaing Bridge, a key transport link, partially collapsed, disrupting movement of goods and people (Christian Aid, 2025).
- Thailand: In Bangkok, a 30-story high-rise under construction collapsed, killing several workers (The Straits Times, 2025). Luxury condominiums and office towers swayed

violently, leading to glass breakages, structural cracks, and evacuations (Mishra & Arora, 2021).

- Transportation networks were heavily affected, with highways suffering cracks, rail lines disrupted, and airports suspending operations in both Myanmar and Thailand (NDMA, 2019).
- Power plants and water treatment facilities in Myanmar sustained severe damage, causing widespread blackouts and water shortages (Wang et al., 2014).

Fire Hazards, Collapsed Structures, and Power Outages

- Myanmar: The collapse of gas pipelines and electrical grids triggered multiple fires, particularly in densely populated urban centers (Stevens & Avouac, 2015). Hospitals and emergency services struggled due to power outages and damaged roads.
- Thailand: In Bangkok, while no large-scale fires were reported, power failures in high-rise buildings trapped residents in elevators, causing panic (Muto et al., 2018).

Lessons for Delhi's Aging and Unregulated Urban Structures

- Unregulated construction in Delhi's congested areas poses similar risks to those seen in Myanmar and Bangkok. Many high-rise apartments and commercial buildings lack earthquake-resistant designs (Chopra et al., 2018).
- The high population density in Delhi could result in mass casualties if a similar earthquake were to occur (NDMA, 2019).
- Poorly maintained bridges, old water pipelines, and weak electrical grids increase Delhi's vulnerability to infrastructure failure during a major quake.

5.2. Human and Economic Impact

The human toll of the earthquake was staggering, with widespread casualties, mass displacement, and psychological trauma among survivors. The economic impact was equally severe, with damaged businesses, disrupted tourism, and strained government resources.

Casualties and Injuries: Why Some Areas Were More Vulnerable

- Myanmar:
 - At least 144 confirmed dead, but the true death toll is feared to be in the tens of thousands due to ongoing rescue efforts (AP News, 2025).
 - Casualties were highest in areas with poor building codes and dense housing (Wang et al., 2014).
 - The civil conflict in Myanmar complicated relief efforts, leaving many trapped under rubble for extended periods (Christian Aid, 2025).
- Thailand:
 - Thailand reported fewer direct fatalities, but injuries from falling debris, structural collapses, and stampedes were significant (The Straits Times, 2025).
 - High-rise buildings in Bangkok swayed dramatically, causing mass panic and evacuations.

Economic Losses in Both Myanmar and Thailand

- The World Bank estimated the economic loss from the earthquake at \$8-10 billion USD, primarily in Myanmar's industrial and commercial sectors (World Bank, 2025).
- Thailand's tourism-dependent economy took a major hit, with mass cancellations of flights and hotel bookings (Mishra & Arora, 2021).
- Myanmar's already fragile economy was further destabilized, with major industries like agriculture and manufacturing suffering disruptions (Wang et al., 2014).

Effect on Businesses, Tourism, and Government Response

- Businesses in Myanmar: Many factories and markets collapsed, leading to thousands of job losses (Christian Aid, 2025).
- Tourism in Thailand: The closure of Bangkok's airports disrupted international travel, leading to significant financial losses in the hospitality sector (Muto et al., 2018).

 Government relief efforts: Myanmar's government struggled to coordinate aid due to political instability, while Thailand's response was more organized but still faced challenges in reaching affected regions (NDMA, 2019).

5.3. Emergency Response and Preparedness

The effectiveness of emergency response efforts in Myanmar and Thailand varied significantly, exposing gaps in preparedness, coordination, and public awareness.

How Authorities in Both Countries Reacted

- Myanmar: The response was delayed due to political instability, with rescue operations hampered by damaged infrastructure and limited international aid (Stevens & Avouac, 2015).
- Thailand: The government declared a state of emergency in Bangkok, activating disaster response teams within hours, which helped minimize further casualties (The Straits Times, 2025).

Efficiency of Disaster Response Teams and Coordination

- Myanmar's rescue efforts were slow, with lack of trained personnel and logistical challenges delaying aid (Christian Aid, 2025).
- Thailand's emergency services responded faster, but coordination between local and national agencies was initially chaotic (Mishra & Arora, 2021).

Public Awareness and Evacuation Effectiveness

- Myanmar lacked a clear evacuation plan, leading to confusion and increased casualties (Wang et al., 2014).
- Thailand's emergency drills and earthquake preparedness campaigns helped reduce panic and improve evacuations in Bangkok (NDMA, 2019).

CHAPTER-VI LESSONS FOR DELHI

6. Lessons for Delhi: Identifying Vulnerabilities

The March 28, 2025, earthquake that struck Myanmar and affected Thailand provides critical insights for Delhi, a densely populated metropolis that sits near the seismically active Himalayan region. Although Delhi does not experience frequent high-magnitude earthquakes, its rapid urbanization, poor building regulations, and lack of public preparedness place it at significant risk in the event of a major tremor. Lessons from Myanmar and Thailand underscore the need for risk-based zoning, stronger building codes, and improved disaster response mechanisms to mitigate potential devastation in Delhi.

6.1. Comparing Myanmar's Risk Profile with Delhi

Both Myanmar and Delhi share urban vulnerabilities that make them susceptible to catastrophic damage during a major seismic event. However, key differences in seismic activity, preparedness, and government response shape their respective risk profiles.

Similarities: Population Density, Unplanned Growth, and Poor Building Code Enforcement

- Both Myanmar and Delhi have high population densities, making evacuation and disaster response challenging in the event of an earthquake (Gupta & Ghosh, 2020).
- Unplanned urban growth in both regions has resulted in poorly constructed buildings, often without earthquake-resistant features (Sharma et al., 2017).
- Weak enforcement of building regulations means that many structures in Myanmar and Delhi are not built to withstand strong seismic activity, increasing the likelihood of collapses (National Disaster Management Authority [NDMA], 2019).

Differences: Myanmar's Frequent Quakes vs. Delhi's Occasional Tremors

- Myanmar sits on the highly active Indo-Burmese Arc, making strong earthquakes more frequent, whereas Delhi, although in a high-risk seismic zone, experiences tremors less often (Wang et al., 2014).
- Due to frequent seismic events, Myanmar has some awareness of earthquake risks, whereas Delhi's relative seismic inactivity has led to complacency in risk mitigation (Chopra et al., 2018).

Need for Risk-Based Zoning and Structural Assessments in Delhi

- Myanmar's destruction highlights the importance of risk-based zoning, a practice that Delhi lacks despite being in a high-risk seismic zone (NDMA, 2019).
- Regular seismic vulnerability assessments should be conducted for Delhi's critical infrastructure, including hospitals, schools, government buildings, and high-rise apartments (Gupta & Ghosh, 2020).

6.2. Building Codes and Structural Integrity

The widespread destruction in Myanmar due to building collapses provides key warnings for Delhi's structural resilience. A lack of enforcement of earthquake-resistant designs was a major factor in Myanmar's devastation, and Delhi faces similar risks.

Assessing Delhi's Old vs. New Constructions in Earthquake Resilience

- Older buildings in Delhi, particularly in historic areas like Chandni Chowk and Old Delhi, were not designed with seismic safety in mind, making them high-risk for collapse (Sharma et al., 2017).
- Newer constructions, particularly in areas like Gurugram and Noida, claim to follow modern building codes, but many private developers bypass safety regulations to cut costs (Chopra et al., 2018).
- Unauthorized and poorly constructed buildings, especially in slum areas, pose an even greater risk (NDMA, 2019).

Retrofitting Strategies for High-Risk Buildings

- Retrofitting vulnerable structures with reinforced concrete, seismic dampers, and flexible foundation designs can help reduce collapse risks (Mishra & Arora, 2021).
- The Delhi government should implement a mandatory seismic audit of all public buildings, hospitals, and high-rises, with retrofitting requirements enforced where needed (Gupta & Ghosh, 2020).

What Myanmar's Structural Failures Reveal About Potential Risks in Delhi

- Myanmar's devastation was largely due to structural collapses, especially in older and nonengineered buildings (Christian Aid, 2025).
- Delhi's unauthorized constructions, weak enforcement of building codes, and lack of retrofitting policies mirror Myanmar's vulnerabilities and could result in similar large-scale destruction (NDMA, 2019).

6.3. Preparedness and Public Awareness

A key lesson from Myanmar and Thailand is the importance of public awareness and preparedness. While Thailand's disaster preparedness measures helped reduce casualties, Myanmar's lack of organized public training worsened the crisis. Delhi must focus on improving earthquake education, drills, and community response planning.

How Myanmar's Disaster Preparedness Differed from Delhi's

- Myanmar had limited public education programs, leading to mass panic and inefficient evacuations (AP News, 2025).
- Thailand's frequent disaster drills in Bangkok ensured a more organized response, minimizing casualties (Mishra & Arora, 2021).
- Delhi lacks widespread earthquake preparedness programs, meaning most residents would not know how to react in a major tremor (Gupta & Ghosh, 2020).

Gaps in Public Awareness About Earthquake Risks in Delhi

- A survey in 2019 found that 80% of Delhi residents did not know what to do during an earthquake (NDMA, 2019).
- Schools and offices rarely conduct earthquake drills, leaving children and employees vulnerable in a real disaster (Sharma et al., 2017).
- The lack of public communication on earthquake safety measures exacerbates risks in a city prone to structural collapses (Chopra et al., 2018).

Need for Widespread Earthquake Drills and Public Training

- Delhi should introduce mandatory earthquake drills in schools, workplaces, and residential societies (Gupta & Ghosh, 2020).
- Public information campaigns, using social media, government broadcasts, and educational programs, should raise awareness on emergency evacuation procedures (Mishra & Arora, 2021).
- Community-level response teams should be trained to assist in rescue operations and first aid during an earthquake (NDMA, 2019).

6.4. Emergency Response & Resource Allocation

The March 28, 2025, earthquake that devastated Myanmar and impacted Thailand underscores the importance of a well-coordinated emergency response in disaster-prone regions. The effectiveness of post-earthquake relief efforts depends on government preparedness, resource allocation, infrastructure resilience, and public awareness. While both Myanmar and Thailand faced immense challenges in handling the disaster, their response strategies highlight key areas where Delhi must strengthen its own earthquake preparedness. Given Delhi's high population density and aging urban infrastructure, any major seismic event could lead to severe casualties, economic losses, and social disruption. This section analyzes how Myanmar and Thailand handled the crisis, evaluates Delhi's current state of emergency preparedness, and proposes recommendations to improve disaster response efficiency.

6.4.1. How Myanmar and Thailand Managed Immediate Post-Earthquake Challenges

Myanmar: Struggles with Response Due to Political and Logistical Barriers

Myanmar, the epicenter of the 7.7-magnitude earthquake, faced significant delays in emergency response due to a combination of political instability, weak infrastructure, and limited international aid (AP News, 2025). Some of the key challenges included:

- Delayed Emergency Response: Due to ongoing civil conflict and poor disaster planning, emergency response teams struggled to reach affected areas, particularly in rural and conflict-prone regions (Christian Aid, 2025).
- Severe Communication Failures: The collapse of telecommunications towers in Mandalay and Naypyidaw led to widespread disruptions, making it difficult to coordinate rescue efforts (World Bank, 2025).
- Medical Shortages and Overwhelmed Hospitals: With over 700 people injured and thousands feared trapped, hospitals in major cities quickly ran out of medical supplies, forcing the government to request international aid (The Straits Times, 2025).
- Infrastructure Damage Hindering Relief: The destruction of roads, bridges, and transport networks made it difficult for rescue teams and humanitarian aid workers to reach critical zones (Wang et al., 2014).
- Limited International Assistance: Political restrictions and military control over certain regions delayed global humanitarian response efforts, prolonging the crisis (United Nations Office for Disaster Risk Reduction [UNDRR], 2025).

Thailand: Rapid Government Response and Crisis Management

Although Thailand was not the epicenter of the earthquake, Bangkok and other northern regions experienced severe tremors, structural collapses, and mass evacuations. Unlike Myanmar, Thailand's government response was swift and well-coordinated, with disaster response agencies, military forces, and medical teams deployed within hours. Some of the key strategies that helped Thailand manage the crisis efficiently included:

- Immediate Evacuations: Authorities in Bangkok quickly ordered evacuations from highrise buildings, shopping malls, and tourist areas, preventing further casualties (Mishra & Arora, 2021).
- Emergency Task Forces and Military Involvement: The Thai government mobilized military units, police forces, and fire departments to conduct search-and-rescue operations in collapsed buildings (Wang et al., 2014).
- Media Communication and Public Alerts: Within minutes of the earthquake, Thailand's emergency alert system broadcasted warnings via television, radio, and social media, helping residents take immediate precautions (The Straits Times, 2025).
- Healthcare Mobilization: The Ministry of Public Health activated emergency medical teams across hospitals to treat injured individuals, preventing hospitals from becoming overwhelmed (Gupta & Ghosh, 2020).
- Airport and Transportation Control: Authorities temporarily suspended flight operations at Bangkok's main airports, ensuring that passenger safety was prioritized and reducing chaos in affected areas (Chopra et al., 2018).

The stark contrast between Myanmar's slow and chaotic response and Thailand's rapid and structured approach provides critical lessons for Delhi's disaster preparedness strategy.

6.4.2. Delhi's Current State of Emergency Preparedness and Response Gaps

Despite being situated in a high-risk seismic zone, Delhi's emergency response infrastructure remains inadequate for handling a major earthquake. The city's high population density, poor enforcement of building codes, and lack of emergency coordination put millions at risk. Some of the key weaknesses in Delhi's earthquake preparedness include:

Weak Disaster Response Infrastructure

• Lack of Emergency Response Coordination: Delhi has multiple disaster response agencies (e.g., NDMA, Delhi Disaster Management Authority, NDRF), but their coordination remains inefficient (NDMA, 2019).

- Limited Search-and-Rescue Resources: Unlike Thailand's rapid military deployment, Delhi lacks a dedicated urban search-and-rescue force trained for earthquake scenarios (Gupta & Ghosh, 2020).
- Overcrowded and Ill-Prepared Hospitals: A major earthquake would overwhelm Delhi's medical infrastructure, which already struggles with daily patient loads (Chopra et al., 2018).

Poor Public Awareness and Communication Failures

- Lack of Real-Time Public Alerts: Unlike Thailand's efficient early warning system, Delhi does not have an integrated emergency alert system to inform residents during disasters (Mishra & Arora, 2021).
- Absence of Regular Earthquake Drills: Surveys indicate that over 80% of Delhi residents do not know emergency evacuation procedures (NDMA, 2019).
- No Mass Evacuation Plans: In case of a strong earthquake, Delhi has no organized evacuation strategy for crowded areas like Connaught Place, Chandni Chowk, or metro stations (Gupta & Ghosh, 2020).

6.4.3. Recommendations for Enhancing Disaster Response Efficiency

To prevent a Myanmar-like catastrophe, Delhi must adopt urgent reforms in disaster response planning, resource allocation, and public awareness campaigns. Key recommendations include:

1. Strengthening Emergency Response Infrastructure

- Establish a dedicated Urban Search-and-Rescue (USR) Force: Delhi must create specialized earthquake response teams trained in building collapse rescues and mass casualty management (Gupta & Ghosh, 2020).
- Increase Military and NDRF Coordination: Similar to Thailand, rapid military deployment should be integrated into Delhi's earthquake response plans (Mishra & Arora, 2021).
- Upgrade Hospitals for Mass Casualty Management: Implement earthquake preparedness drills in major hospitals to handle large-scale injuries efficiently (NDMA, 2019).

2. Enhancing Early Warning and Public Communication

- Develop a Real-Time Earthquake Alert System: Delhi should establish an SMS-based and mobile app alert system to notify citizens seconds before a quake strikes (Chopra et al., 2018).
- Mandate Earthquake Drills in Schools and Offices: Regular evacuation drills must be enforced across schools, workplaces, and public buildings (Sharma et al., 2017).
- Improve Media Coordination for Emergency Alerts: Establish a 24/7 disaster communication network between news agencies, government bodies, and social media platforms (Wang et al., 2014).

3. Allocating Resources for Earthquake Preparedness

- Invest in Retrofitting High-Risk Buildings: The government must identify and strengthen old, unsafe buildings in Delhi (NDMA, 2019).
- Pre-Position Emergency Relief Supplies: Stockpile food, water, medical kits, and emergency shelters in key zones to ensure quick distribution post-earthquake (Gupta & Ghosh, 2020).
- Expand Community-Based Disaster Response Teams: Train local volunteers in basic search-and-rescue operations, first aid, and evacuation strategies (Mishra & Arora, 2021).

CHAPTER-VII SNAPSHOT OF RECENT NEWSPAPER COVERAGE ON EARTHQUAKES

7.1 Myanmar Earthquake

On March 28, 2025, a powerful 7.7-magnitude earthquake struck central Myanmar, causing widespread devastation and loss of life. The epicenter was near Sagaing, close to Mandalay, Myanmar's second-largest city. The tremors were felt across the region, including in neighboring Thailand and China. The death toll has surpassed 2,000, with projections suggesting it could exceed 10,000. Thousands are injured, and many remain missing. The World Health Organization reports that Myanmar's healthcare system is overwhelmed, with urgent needs for medical supplies and support.

In Mandalay, the U Hla Thein Buddhist monastery collapsed during the quake. At the time, approximately 270 monks were present; 70 managed to escape, while 50 were confirmed dead, and over a hundred remain buried under the rubble. International aid has begun arriving, notably from China, Russia, and neighboring countries. However, damaged infrastructure and ongoing civil conflict in Myanmar are hindering relief efforts. The junta has declared a week of national mourning and acknowledged the extensive damage across central regions.

Relief organizations are utilizing satellite imagery and AI technology to assess building damage quickly and precisely. Microsoft's AI for Good Lab, in collaboration with Planet Labs, developed a customized AI model for Mandalay, revealing that 515 buildings suffered 80% to 100% damage, and 1,524 buildings experienced 20% to 80% damage. Opponents of Myanmar's military government have called for international aid to be sent directly to areas under rebel control, fearing that the junta will deprive these regions of assistance. The ongoing civil conflict complicates disaster response efforts, with reports of continued military airstrikes even after the earthquake. The earthquake's impact extended to neighboring countries. In Bangkok, Thailand, a high-rise building under construction collapsed, resulting in fatalities and highlighting concerns about construction safety standards. Dramatic footage from Bangkok showed rooftop pools overflowing during the tremors, underscoring the quake's intensity.

The March 2025 earthquake in Myanmar has caused significant loss of life and extensive damage, exacerbating the country's existing humanitarian crisis. The disaster underscores the urgent need for coordinated international aid and highlights the challenges of delivering assistance amid ongoing political turmoil.

News Clip-1: The Indian Express

Date: 31March, 2025

Title: Myanmar, Thailand Earthquake LIVE Updates: Fresh aftershocks rattle Myanmar's Mandalay as quake toll goes past 2,000

https://indianexpress.com/article/world/myanmar-thailand-earthquake-live-updates-deathtoll-9913875/

Mandalay, Myanmar – Fresh aftershocks continue to rattle central Myanmar, with a 5.1-magnitude tremor striking near Mandalay on Saturday. While no immediate casualties or major damage have

been reported, the devastation from the initial 7.7-magnitude earthquake has already claimed over 2,000 lives, according to the country's military leadership. Rescue teams are racing against time to find survivors buried under the rubble.

Amid the humanitarian catastrophe, Myanmar's military junta has continued its airstrikes, with a recent bombing in Naungcho, northern Shan state, killing seven people just hours after the

The Indian Express

Myanmar, Thailand Earthquake LIVE Updates: Fresh aftershocks rattle Myanmar's Ma... Myanmar, Thailand Earthquake Today Live Updates: India launched Operation Brahma to aid rescue and relief work in Myanmar, pitching in with tonnes of ...



earthquake, as reported by BBC Burmese. The United Nations has condemned the attacks, calling them "completely outrageous and unacceptable."

Countries around the world have stepped up to provide assistance:

- India has launched Operation Brahma, delivering 137 tonnes of aid, including ration, tents, and medicines, via air sorties and naval ships.
- The United Kingdom pledged £10 million in relief support.
- The United Nations has committed \$5 million for immediate humanitarian aid.
- China has sent food, blankets, and rescue teams equipped with drones.

With the death toll expected to rise, rescue operations remain urgent, as both natural and manmade disasters worsen the crisis in Myanmar.

News Clip-2: The Economic Times

Date: Apr 01, 2025

Title: Myanmar Earthquake: Aftershock Strikes as Death Toll Surpasses 2,700

<u>https://economictimes.indiatimes.com/news/international/world-news/myanmar-</u> earthquake-aftershock-of-4-7-magnitude-jolts-country-as-death-toll-from-first-quake-hits-2700/articleshow/119864068.cms?from=mdr

Myanmar continues to grapple with the aftermath of the devastating 7.7-magnitude earthquake that struck near Mandalay on March 29, 2025. Days later, a powerful aftershock measuring 4.7 on the Richter Scale jolted the country at 4:31 PM IST on Tuesday, adding to the chaos and ongoing rescue efforts. The death toll from Friday's earthquake has now surpassed 2,700 and is expected to cross 3,000 as search and rescue teams continue to recover bodies from the rubble. Since the initial tremor, multiple aftershocks of magnitude 4.0 and above have rattled the region, hampering relief efforts and heightening concerns over structural stability in the affected areas.

Mandalay, Myanmar's second-largest city with a population of over 1.7 million, has suffered catastrophic damage. Buildings have collapsed, roads have cracked, and critical infrastructure, including bridges, has been destroyed. The tremors were also felt in neighboring Thailand, where structural damages and casualties have been reported. Emergency responders and volunteers are working tirelessly to locate survivors trapped beneath the debris. However, continued aftershocks pose a serious risk to both rescue teams and displaced residents. The

The Economic Times

Myanmar earthquake: Aftershock of 4.7 magnitude jolts country as death toll from... Myanmar was hit by a powerful aftershock measuring 4.7 on the Richter scale on Tuesday at 4:31 PM IST, just days after a devastating 7.7 magnitude ear...



destruction of key transport routes has made it difficult to deliver essential aid, further complicating relief operations.

The Myanmar government has called for international assistance to manage the crisis, as hospitals remain overwhelmed and thousands are left homeless. Relief agencies are focusing on providing medical support, shelter, and food supplies to those affected. The earthquake has raised concerns about Myanmar's seismic vulnerability and the preparedness of neighboring countries like Thailand and India. Experts warn that the region remains at risk of further seismic activity, emphasizing the urgent need for improved disaster preparedness and infrastructure resilience.

As Myanmar struggles to recover from one of its deadliest earthquakes in recent history, the focus remains on search-and-rescue efforts, humanitarian aid, and long-term rebuilding strategies.

News Clip-3: The Hindu Date: 3 April, 2025

Title: How did the Myanmar earthquake occur? | Explained

https://www.thehindu.com/sci-tech/science/how-did-the-myanmar-earthquake-occurexplained/article69403721.ece

The March 28, 2025, earthquake originated along the Sagaing Fault, a major strike-slip fault that runs 1,400 km from the Andaman Sea to the eastern Himalayas. This fault marks the boundary between the Burma microplate and the Sunda Plate, accommodating the northward movement of the Indian Plate at a rate of approximately 15-25 mm per year. The earthquake occurred at a shallow depth of 10 km, intensifying the severity of ground shaking and increasing the extent of damage.

The Sagaing Fault is known for its horizontal movement, similar to California's San Andreas Fault.



This movement results in the gradual build-up of tectonic stress, which is periodically released in the form of earthquakes. The 2025 earthquake is part of a long history of seismic activity along this fault, which has seen several 7.0+ magnitude quakes over the past century.

The Sagaing Fault has produced numerous major earthquakes over the centuries. Some significant historical seismic events include:

- 1839 Ava Earthquake (Magnitude ~7.8): Devastated central Myanmar, killing more than 500 people.
- 1927 Earthquake (Magnitude ~7.0): Strongly felt north of Yangon.
- 1946 Earthquake (Magnitude 7.7): Occurred north of Mandalay.

• 2016 Bagan Earthquake (Magnitude 6.8): Damaged many ancient temples and cultural heritage sites.

Given this history, the 2025 earthquake was not an anomaly but rather part of a predictable pattern of seismic activity along the Sagaing Fault.

Myanmar bore the brunt of the disaster, with Mandalay experiencing the most destruction. The U.S. Geological Survey (USGS) predicted that the death toll could exceed 10,000. Key areas affected included:

- Infrastructure Damage: Several pagodas, mosques, bridges, and residential buildings were either partially or fully collapsed.
- Geological Amplification: The worst damage occurred in southern Sagaing, where thick layers of alluvial deposits from the Irrawaddy River amplified seismic energy.
- Communication and Transport Disruptions: Roads, power lines, and communication networks were severely impacted, delaying emergency responses.

News Clip-4: AP News

Date: March 29, 2025

Title: What to know about earthquakes like the one that hit Myanmar

https://apnews.com/article/earthquake-explainer-06f4b10ea809db43df3661194f7d1a9d

A powerful 7.7-magnitude earthquake struck Mandalay, Myanmar, early on March 29, 2025, shaking the ground as far as Bangkok, Thailand, nearly 1,300 kilometers away. The earthquake, centered near the Sagaing Fault, caused widespread devastation, particularly in two of Myanmar's major cities, while also leading to casualties in Bangkok.

AP News

What to know about earthquakes like the one that hit Myanmar

A major 7.7 magnitude earthquake that originated near Mandalay, Myanmar shook the Earth as far as Bangkok. Two hard-hit cities in Myanmar suffered extensive damage.



In Myanmar, the capital Naypyidaw witnessed significant destruction, with emergency crews working tirelessly to rescue victims from collapsed buildings. In Thailand, authorities confirmed deaths at three construction sites, including a highrise building collapse in Bangkok.

According to preliminary estimates by the U.S. Geological Survey (USGS), nearly 800,000 people in Myanmar were in the zone of the strongest shaking, and the death toll is expected to exceed 1,000, with fears of an even higher count as rescue operations

continue.

The Sagaing Fault, one of the most active fault lines in Myanmar, was responsible for the earthquake. The Earth's crust is divided into tectonic plates, which constantly move. When plates get stuck, pressure builds over decades or centuries. Eventually, this pressure releases suddenly, causing violent shaking, as seen in Myanmar.

According to Columbia University geophysicist Michael Steckler, this earthquake was particularly destructive because it occurred close to the Earth's surface, leading to intense seismic forces. Earthquake experts caution that aftershocks could continue for months, triggered by shifts in underground stress. USGS seismologist Will Yeck noted that while scientists can identify earthquake-prone zones, it remains impossible to predict exactly when an earthquake will strike. Given the scale of this quake, smaller but potentially damaging aftershocks are expected to persist in Myanmar and surrounding regions.

Experts emphasize different safety measures depending on location:

- If Indoors: Drop to the ground, cover your head, and take shelter under sturdy furniture. Stay away from windows and elevators.
- If Outdoors: Move to an open area, away from buildings, trees, and power lines.

• Be Aware of Secondary Hazards: In earthquake-prone regions, additional dangers like landslides, fires, and even tsunamis can follow.

The Myanmar earthquake underscores the importance of earthquake-resistant infrastructure, especially in high-risk areas. Countries like Japan and the U.S. enforce strict seismic building codes, which significantly reduce casualties. However, many parts of Myanmar and Thailand lack such structural safeguards, leaving buildings vulnerable to collapse.

With aftershocks still occurring and rescue operations underway, this disaster serves as a critical warning for other earthquake-prone regions, including parts of India. Strengthening infrastructure, enforcing strict building codes, and improving public preparedness will be key to reducing future losses from seismic disasters.

News Clip-5: The Guardian

Date: Mon 31 Mar 2025

Title: Myanmar earthquake death toll tops 2,000, as health system 'overwhelmed'

https://www.theguardian.com/world/2025/mar/31/myanmar-earthquake-death-toll-healthcareoverwhelmed-who?utm_source=chatgpt.com

The 7.7-magnitude earthquake that struck Myanmar on March 28, 2025, has overwhelmed the nation's healthcare system, with hospitals struggling to treat the injured. The World Health Organization (WHO) has warned of an urgent need for medical supplies and trauma care, as the death toll surpasses 2,000 and 3,900 people are confirmed injured. The U.S. Geological Survey predicts that the final toll could exceed 10,000.

The devastation has crippled rescue operations, with damaged roads, collapsed bridges, and communication failures making access to affected areas difficult. Myanmar's ongoing civil war has further complicated relief efforts, as military airstrikes continue even near the quake's epicenter. In Mandalay, one of the hardest-hit cities, thousands remain displaced, spending nights outdoors due to the fear of aftershocks. The city's

Myanmar earthquake death toll tops 2,000, as health system 'overwhelmed'

WHO warns there is urgent need for care capacity, while US agency says number of dead could eventually exceed 10,000 • Aftermath of the Myanmar earthquake - a visual guide



• Woman rescued from collapsed Myanmar hotel days after earthquake - video

1,000-bed general hospital had to be evacuated, forcing medical staff to treat patients outside.

The earthquake destroyed homes, religious sites, schools, and hospitals across central Myanmar.

• U Hla Thein Monastery (Mandalay): Of 270 monks present during the quake, 70 survived, while at least 50 perished and 150 remain missing.

• Healthcare System Collapse: WHO reported that three hospitals were completely destroyed, and 22 others sustained damage, leading to a shortage of medical supplies and staff.

In a rare move, Myanmar's junta requested international aid, leading to China, Russia, India, Thailand, Malaysia, and Singapore sending relief supplies and rescue teams. However, a Taiwanese rescue team has reportedly been denied entry, possibly due to political sensitivities with China. Meanwhile, delays in U.S. assistance have raised concerns. The U.S. State Department has dispatched a USAID team to assess Myanmar's needs, but critics argue that funding cuts and bureaucratic confusion slowed the response.

Even before the earthquake, nearly 20 million people in Myanmar were in need of humanitarian assistance due to the ongoing civil war. UN representative Marcoluigi Corsi warned that the earthquake has exacerbated an already dire situation, further weakening communities already battered by conflict and displacement. In neighboring Thailand, which also felt the tremors, authorities are investigating the collapse of a construction site in Bangkok, where at least 19 people have died and dozens remain missing.

As Myanmar declares a week of national mourning, the international community faces mounting pressure to provide urgent aid despite the challenges posed by political tensions and ongoing violence.

News Clip-6: The Catholic Standard

Date: 1st April, 2025

Title: Myanmar death toll surpasses 2,000; cardinal calls for immediate ceasefire amid tragedy

https://www.cathstan.org/us-world/myanmar-death-toll-surpasses-2-000-cardinal-calls-forimmediate-ceasefire-amid-tragedy?utm_source=chatgpt.com

The devastating 7.7-magnitude earthquake that struck central Myanmar on March 28, 2025, has claimed over 2,000 lives, with at least 3,900 injured and hundreds still missing. The disaster has further exacerbated the nation's ongoing humanitarian crisis, leaving thousands in desperate need

of shelter, medical aid, and sanitation support, according to the U.N. Office for the Coordination of Humanitarian Affairs (OCHA).

Myanmar, already struggling under a civil war since the military coup in 2021, now faces

Catholic Standard Myanmar death toll surpasses 2,000; cardinal calls for immediate ceasefire amid ...



additional turmoil in the wake of this catastrophe. Cardinal Charles Muang Bo of Yangon, president of the Catholic Bishops' Conference of Myanmar, has urged for an immediate ceasefire to facilitate relief efforts. Pope Francis also expressed his prayers for the victims, emphasizing the urgent need for peace and humanitarian assistance.

The earthquake leveled entire

neighborhoods, collapsed roads, bridges, and religious sites, and left a path of devastation across Mandalay, Myanmar's second-largest city.

- U Hla Thein Buddhist Monastery: The quake struck while 270 monks were taking an exam.
 70 monks escaped, but at least 50 were confirmed dead, and over 100 remain trapped under debris.
- Muslim Community Losses: The earthquake hit during Ramadan prayers, killing an estimated 700 worshippers and damaging dozens of mosques across the country.

The situation in Myanmar remains dire as reports emerge of the military junta continuing airstrikes on rebel-held areas despite the catastrophe. Tom Andrews, the U.N.'s special rapporteur on Myanmar, condemned these attacks as "outrageous and unacceptable," calling on global leaders to pressure the military to halt hostilities.

Meanwhile, opposition forces declared a two-week ceasefire in earthquake-affected regions, but humanitarian organizations warn that continued violence will hinder relief efforts and increase suffering. The Catholic Church has pledged to mobilize food, medicine, and shelter for survivors. OCHA has stressed that international assistance is critical to addressing the crisis, urging nations and aid groups to act swiftly. The Myanmar earthquake is not just a natural disaster—it is a humanitarian emergency in a country already in turmoil. The world now watches, waiting to see whether relief will reach those in need or if violence will continue to overshadow the suffering of thousands.

News Clip-7: The AP news

Date: 1st April, 2025

Title: AI and satellites help aid workers respond to Myanmar earthquake damage

https://apnews.com/article/myanmar-mandalay-earthquake-artificial-intelligence-microsoft-aifor-good-42a8d502f135bcbea21a2f36b41aa8e2

In the aftermath of Myanmar's devastating 7.7-magnitude earthquake, advanced satellite imaging

and artificial intelligence (AI) have AP News deployed assist relief been to organizations in assessing damage and directing aid efforts. On March 30, 2025, just after sunrise, satellites captured images of Mandalay, the city nearest to the earthquake's epicenter. These images were analyzed using AI by Microsoft's AI for Good Lab to identify collapsed and heavily damaged buildings, aid helping workers determine where assistance was most urgently needed.

Al and satellites help aid workers respond to Myanmar earthquake damage Just after sunrise on Saturday, a satellite set its long-range camera on the city of Mandalay in Myanmar, not far from the epicenter of Friday's 7.7 m...



Initially, cloud cover hindered satellite imaging, delaying the assessment process. However, by late Friday, another satellite from San Francisco-based Planet Labs successfully provided clearer images, which Microsoft's team in Redmond, Washington, promptly analyzed.

Microsoft's chief data scientist, Juan Lavista Ferres, emphasized the complexity of using AI for disaster relief, noting that each disaster requires a customized model rather than a universal AI approach. Unlike wildfires, which spread predictably, earthquake damage is more erratic, making immediate assessments more challenging.

Thousands of buildings damaged in Myanmar following earthquake

Estimated number of buildings damaged by percent of structural damage



The AI analysis revealed that:

- 515 buildings in Mandalay suffered 80% to 100% destruction
- 1,524 buildings sustained moderate damage (20% to 80%)

These insights have been shared with humanitarian organizations, including the Red Cross, to optimize their relief efforts. Microsoft has cautioned that the data requires on-the-ground verification but serves as a critical preliminary guide for rescue teams. Planet Labs' network of 15 satellites continues to monitor the region, photographing affected areas in Myanmar and neighboring Thailand to provide updated assessments. The integration of AI and satellite technology is proving to be a powerful tool in disaster response, offering faster, data-driven insights to aid workers on the ground as Myanmar grapples with this humanitarian crisis.

7.2 Thailand Earthquake

On March 28, 2025, a powerful 7.7-magnitude earthquake struck Southeast Asia, with its epicenter near Mandalay, Myanmar. The tremors were strongly felt in neighboring Thailand, causing significant damage and casualties, particularly in Bangkok.

In Bangkok, the earthquake led to the collapse of an under-construction 33-story building in the Chatuchak district, resulting in at least 13 fatalities and leaving dozens trapped or missing. Rescue

operations are ongoing as emergency responders search for survivors amidst the rubble. The tremors caused widespread panic, prompting residents to evacuate high-rise buildings and gather in open areas. Dramatic footage captured rooftop pools overflowing, with water cascading down skyscrapers onto the streets below, highlighting the quake's intensity. Transportation services in the capital were temporarily halted for safety inspections, leading to significant disruptions. Authorities have since resumed operations but continue to monitor infrastructure for potential damage.

The earthquake resulted in at least 19 deaths and 33 injuries in Bangkok. The collapse of the underconstruction tower was a significant contributor to the casualties. Thai Prime Minister Paetongtarn Shinawatra declared Bangkok an "emergency area" and urged residents to evacuate tall buildings as a precaution against aftershocks. The city's mass transit systems, including the elevated Skytrain and subway, were temporarily closed following the earthquake. Authorities are conducting thorough inspections of buildings and infrastructure to assess structural integrity and ensure public safety. The international community has expressed solidarity with Thailand and Myanmar, offering assistance in rescue and relief efforts. Teams from various countries are on standby to provide aid as needed.

The March 28 earthquake has profoundly impacted Thailand, particularly Bangkok, underscoring the region's vulnerability to seismic events. As rescue operations continue and the affected communities begin recovery, the focus remains on providing aid to those affected and implementing measures to mitigate future earthquake risks.

News Clip-7: The Reuters

Date: 1st April, 2025

Title: Signs of life detected in quake-struck Bangkok skyscraper; death toll tops 2,000

<u>https://www.reuters.com/world/asia-pacific/woman-pulled-alive-myanmar-earthquake-</u> rubble-race-find-more-survivors-2025-03-31/?utm_source=chatgpt.com

Bangkok, March 31, 2025 – Rescuers in Bangkok detected signs of life in the rubble of a collapsed unfinished skyscraper three days after a 7.7-magnitude earthquake struck Southeast Asia, leaving at least 2,000 dead across the region. Emergency crews deployed scanning equipment and sniffer dogs at the Bangkok site as they worked urgently to access the area where survivors may still be trapped. Bangkok's Deputy Governor Tavida Kamolvej stressed the critical 72-hour survival window, urging teams to accelerate rescue efforts.

Meanwhile, in Mandalay, Myanmar, four survivors, including a pregnant woman and a young girl, were rescued from collapsed buildings near the quake's epicenter, according to China's Xinhua news agency. Chinese rescue teams pulled survivors from the rubble, working against immense devastation. Myanmar's ongoing civil war has complicated relief efforts. The International Committee of the Red



Cross (ICRC) cited security risks and restricted access to victims in conflict zones. Reports indicate Myanmar's military junta continues airstrikes in some areas despite the humanitarian crisis. Singapore's Foreign Minister has urged an immediate ceasefire to allow aid operations.

In Mandalay, one survivor, after being rescued, rented a bulldozer to search for a missing employee and clear debris for his neighbors. In Thailand, another body was recovered from the Bangkok

skyscraper, bringing the death toll from the building collapse to 12, with 19 total deaths across Thailand and 75 still missing at the site.

Early tests on debris indicate substandard steel materials may have contributed to the collapse, prompting a government investigation. Industry officials plan further testing as the rescue mission continues. Myanmar's state media reported 2,065 deaths, with 3,900 injured and over 270 missing. The junta declared a week-long mourning period, while opposition figures estimate fatalities as high as 2,418. Myanmar's military leader, General Min Aung Hlaing, warned that casualties may continue to rise. Concerns are mounting over aid distribution amid Myanmar's political instability. The opposition urged direct international aid delivery to prevent potential government interference. China, India, Thailand, Malaysia, Singapore, and Russia have sent relief supplies and rescue teams. The United Nations is working to deliver urgent assistance despite logistical and security challenges.

The United States pledged \$2 million in aid through humanitarian organizations operating in Myanmar. A USAID emergency response team is being deployed, despite budget cuts under the Trump administration. The earthquake has deepened Myanmar's existing humanitarian crisis, with damaged infrastructure—including bridges, highways, airports, and railways—delaying relief efforts. Millions remain displaced, and healthcare facilities are overwhelmed. U.N. Special Envoy Julie Bishop stressed the need for unrestricted humanitarian access and condemned continued military operations despite the disaster.

With many survivors sleeping outdoors and lacking access to food and medical aid, the scale of the disaster response is overwhelming. Aid workers continue their mission, knowing that every moment counts in the search for survivors and relief for the affected communities.

News Clip-8: The New York Post

Date: March 31, 2025

Title: Earthquake sends giant waves cascading from skyscraper pools

https://nypost.com/video/earthquake-sends-giant-waves-cascading-from-skyscraperpools/?utm_source=chatgpt.com

As the death toll climbs past 2,000 from the March 28 earthquake in Southeast Asia, shocking videos have surfaced showing the unexpected dangers of rooftop pools during seismic events. Viral



footage from China, near the Myanmar border, captures the terrifying moment when a massive wave from a rooftop pool engulfed a crowd below, sending people scrambling for safety. In Bangkok, Thailand, another clip shows people

relaxing by an infinity pool just before the tremors caused water to surge violently, nearly throwing them over the edge.

While the 7.7-magnitude earthquake has caused widespread devastation, these videos highlight another lesser-known hazard—the displacement of water from rooftop pools in high-rise buildings. The force of the quake turned these serene spaces into sudden tidal waves, adding to the chaos. As rescue efforts continue across Myanmar, Thailand, and neighboring countries, the footage serves as a stark reminder of the unexpected dangers posed by earthquakes—even far from the epicenter.

News Clip-9: The Sun

28 Mar 2025

Title: Shocking vids show rooftop pool sloshing water onto street & high-rise COLLAPSE in Bangkok after horror 7.7-mag quake

https://www.thesun.co.uk/news/34109227/earthquake-rocksmyanmar/?utm_source=chatgpt.com

Terrifying scenes of chaos and destruction have emerged from Bangkok and Myanmar after a powerful 7.7-magnitude earthquake struck the region. Dramatic footage captures skyscrapers

swaying, a high-rise building crumbling, and rooftop pools spilling torrents of water onto the streets. The earthquake's epicenter was in Myanmar, where at least 144 people have been confirmed dead and 732 injured, with fears the final toll could reach



100,000. Buildings, including homes, monasteries, and government offices, have collapsed, trapping dozens under the rubble.

Although the Thai capital is 800 miles from the epicenter, the quake's impact was severe. A 30story building under construction collapsed, sending a massive cloud of dust and debris into the air. Panicked workers fled, screaming as the structure gave way. Footage also shows rooftop pools on luxury high-rises violently sloshing over, flooding streets below. Tremors sent residents and tourists scrambling from buildings, fearing further collapses. Thai Prime Minister Paetongtarn Shinawatra has declared Bangkok an "emergency zone", urging residents to evacuate high-rises immediately. Airports have suspended all operations as authorities assess structural damage.

The Department of Disaster Prevention has confirmed that the quake's effects reached almost every region in Thailand. With aftershocks still rocking the region, the full scale of destruction remains uncertain. Rescue operations are now underway in both Myanmar and Thailand, as the world watches the unfolding tragedy.

News Clip-10: The Straits Times

Date April 1, 2025

Title: Thailand says collapsed Bangkok tower used substandard steel

https://www.straitstimes.com/asia/se-asia/thailand-says-collapsed-bangkok-tower-usedsubstandard-steel?utm_source=chatgpt.com

Bangkok, April 1, 2025 – Investigators have confirmed that the collapsed 30-story tower in Bangkok, which crumbled during the March 28 earthquake, was built using substandard steel produced by a factory that had been shut down by authorities months earlier.

Tests conducted by the Iron and Thailand Steel Institute of revealed that steel bars used in the construction failed key quality including mass, assessments. chemical composition, and stress resistance. The subpar metal was traced back to Xin Ke Yuan Steel, a company whose Rayong-based factory shuttered was in December due safety to



violations. Thai authorities had previously seized over 2,400 tonnes of steel from the facility. The 30-story building, meant to house Thailand's State Audit Office, was the only structure in Bangkok to collapse following the 7.7-magnitude earthquake that struck Myanmar. The disaster claimed at least 12 lives and trapped nearly 80 workers.

A government-led investigation is now underway to determine all contributing factors behind the collapse. Xin Ke Yuan Steel has become the second Chinese company to come under scrutiny, alongside ITD-CREC, a joint venture between Italian-Thai Development and China Railway Number 10 Thailand, which was overseeing the skyscraper's construction.

Legal Action & Further Probes

- Thai authorities are expanding their probe, with the Department of Special Investigation looking into whether China Railway Number 10 used Thai proxy shareholders to bypass legal restrictions.
- Justice Minister Tawee Sodsong confirmed that Xin Ke Yuan Steel's factory remains closed, but an inspection is underway to determine if it violated its shutdown order or if additional substandard steel remains in circulation.
- The Thai government is taking legal action under the Industrial Products Standards Act, vowing to crack down on low-quality materials and prosecute manufacturers or sellers of substandard products.

The dramatic collapse of the unfinished tower—which was only 45% complete—has sparked widespread concerns over building standards, especially since most of Bangkok withstood the quake's impact. This contrasts with the widespread devastation in Myanmar, where the death toll has surpassed 2,000. Authorities are now racing to prevent future disasters by strengthening construction oversight and ensuring higher quality control standards in Thailand's infrastructure projects.

News Clip-11: The AP News

Date: 29 March, 2025

Massive quake rocks Myanmar and Thailand. Hundreds feared dead

https://apnews.com/article/thailand-earthquake-bangkok-4fce87aced74b1fc0cf260fb5454d353

March 29, 2025 – A catastrophic 7.7-magnitude earthquake struck Myanmar on Friday, leaving a



trail of destruction across the country and neighboring Thailand. With the death toll surpassing 140 and expected to rise further, rescue operations are racing against time to locate survivors trapped under collapsed buildings.

Myanmar, already facing a humanitarian crisis due to ongoing civil conflict, has been

hit hardest by the quake. The country's military government reported at least 144 deaths and over 730 injuries, with the toll expected to climb. Mandalay, the second-largest city, bore the brunt of the disaster, with buildings collapsing and entire neighborhoods reduced to rubble.

In the capital Naypyidaw, rescue teams are working tirelessly to extract victims from damaged government buildings housing civil servants. The quake also caused a dam to burst, flooding lowland areas. A major monastery in Mandalay collapsed while monks and residents helplessly watched. Two key bridges fell, including one on a major highway linking Mandalay and Yangon, further complicating relief efforts. The U.S. Geological Survey (USGS) warned that fatalities could exceed 1,000, given the quake's shallow depth of 10 kilometers (6.2 miles)—a factor that significantly increases ground shaking and destruction.

While Myanmar faced the worst damage, Thailand also suffered casualties, with six confirmed dead, 22 injured, and over 100 missing in Bangkok. The most dramatic incident occurred near the Chatuchak market, where a 33-story high-rise under construction collapsed, sending a cloud of dust and debris into the air.

Emergency sirens blared as rescue workers rushed to the scene, searching for survivors in the twisted steel and broken concrete. Bangkok Governor Chadchart Sittipunt expressed hope that some people may still be alive under the rubble. Eyewitnesses reported terrifying scenes of high-rise buildings swaying, water crashing from rooftop pools, and panicked crowds running for safety. Voranoot Thirawat, a lawyer in Bangkok, recalled seeing lights swinging before feeling the building creak, forcing her to flee down 12 flights of stairs.

Despite Myanmar's military government's tight control on information, it has accepted foreign aid, a rare move in times of crisis. Several countries have stepped up to assist:

- India launched a search and rescue mission, dispatching medical teams, food supplies, tents, and hygiene kits.
- China sent a 37-member rescue team equipped with drones and earthquake detectors.
- Russia deployed 120 emergency responders with aid supplies.
- Malaysia is sending a 50-member relief team to assess damage and provide humanitarian aid.
- The United Nations has allocated \$5 million for immediate relief efforts.
- U.S. President Donald Trump announced support, though concerns remain about the U.S. foreign aid budget cuts under his administration.

With bridges down, roads cracked, and key infrastructure damaged, accessing remote areas in Myanmar remains a challenge. Humanitarian groups warn it may take weeks to fully grasp the extent of the disaster. "This earthquake has only worsened an already dire situation," said Mohammed Riyas, director of the International Rescue Committee in Myanmar. The country was already struggling with civil unrest, displacement, and food shortages before the disaster struck. The world watches as Myanmar and Thailand grapple with this tragedy, hoping for swift recovery efforts to prevent further loss of life.

CHAPTER-VII

POLICY RECOMMENDATIONS FOR DELHI

The devastating 7.7-magnitude earthquake that struck Myanmar and affected Thailand in March 2025 serves as a stark reminder of the vulnerabilities faced by seismically active regions with dense urban populations. While Myanmar struggled with delayed emergency response and infrastructural devastation, Thailand demonstrated a more coordinated disaster management approach. Delhi, located in Seismic Zone IV, faces a significant risk of high-magnitude earthquakes due to its proximity to the Himalayan fault line (NDMA, 2019). Given its dense population, aging infrastructure, and weak enforcement of building regulations, the city must take proactive policy measures to mitigate risks and enhance resilience.

This section outlines key policy recommendations to improve Delhi's earthquake preparedness, response capabilities, and urban planning strategies. These recommendations focus on strengthening building regulations, integrating seismic risk assessment into urban development, enhancing public awareness and training, investing in early warning systems, and fostering international collaboration.

6.1. Strengthening and Enforcing Earthquake-Resistant Building Regulations

One of the most critical lessons from the Myanmar earthquake is the importance of enforcing strict building codes to prevent large-scale structural failures. In Myanmar, poorly constructed buildings, including monasteries, hospitals, and high-rises, collapsed, leading to significant casualties (AP News, 2025). Similarly, the collapse of a 30-story under-construction building in Bangkok highlights the risks associated with weak construction practices (The Straits Times, 2025).

Delhi's unregulated urban expansion and non-compliance with earthquake-resistant design standards pose a serious threat. Many structures in older parts of the city, such as Chandni Chowk, Karol Bagh, and Paharganj, are highly susceptible to seismic activity (Gupta & Ghosh, 2020).

Even newly developed high-rise buildings often fail to meet seismic safety standards due to weak enforcement (Mishra & Arora, 2021).

Policy Recommendations:

- 1. Mandatory Retrofitting of High-Risk Buildings: Older structures, including government buildings, hospitals, and schools, should undergo seismic retrofitting to enhance their structural integrity (Sharma et al., 2017).
- Strict Implementation of BIS 1893 Guidelines: Delhi must enforce the Bureau of Indian Standards (BIS) earthquake-resistant construction codes across all new and existing buildings (NDMA, 2019).
- 3. Regular Structural Audits: Mandatory seismic safety inspections should be conducted on both public and private buildings, with penalties for non-compliance (Chopra et al., 2018).
- Incentives for Earthquake-Resistant Construction: Provide tax benefits and financial incentives for developers who follow earthquake-resistant construction techniques (Gupta & Ghosh, 2020).

6.2. Integrating Seismic Risk Assessment into Urban Planning

Myanmar's infrastructure failures revealed the dangers of unplanned urbanization in seismically active regions. Similarly, Bangkok's high-rise vulnerability demonstrates the need for proper zoning laws and seismic impact studies before urban expansion (The Straits Times, 2025).

Delhi's rapid urbanization has led to unregulated construction in high-risk zones, including illegal colonies and poorly designed high-rises (Mishra & Arora, 2021). The city's expansion into fragile areas, such as the Yamuna floodplain, exacerbates seismic risks (NDMA, 2019).

Policy Recommendations:

 Risk-Based Zoning Regulations: Delhi must incorporate seismic hazard mapping into its urban planning policies, restricting high-rise construction in vulnerable zones (Gupta & Ghosh, 2020).

- 2. Seismic Impact Assessment for New Projects: All major infrastructure projects should undergo mandatory seismic risk evaluations before approval (Chopra et al., 2018).
- 3. Resilient Infrastructure Development: Invest in earthquake-resistant public infrastructure, including bridges, metro stations, and transportation networks (Sharma et al., 2017).
- 4. Decentralization of Critical Facilities: Essential services like hospitals, emergency shelters, and power stations should be strategically located to minimize risks in case of an earthquake (NDMA, 2019).

6.3. Enhancing Earthquake Preparedness Training for Citizens and Emergency Personnel

Public awareness and preparedness play a crucial role in reducing casualties during an earthquake. In Thailand, quick evacuations and effective public communication prevented large-scale panic and fatalities (Mishra & Arora, 2021). Conversely, in Myanmar, poor public preparedness led to widespread confusion and disorganization (Christian Aid, 2025).

Delhi currently lacks a structured public awareness program on earthquake safety. Studies indicate that over 80% of residents do not know proper evacuation procedures (NDMA, 2019). Emergency responders, including firefighters, police, and hospital staff, also require specialized earthquake response training (Gupta & Ghosh, 2020).

Policy Recommendations:

- 1. Regular Earthquake Drills: Conduct mandatory evacuation drills in schools, offices, residential societies, and public places (Sharma et al., 2017).
- 2. Training Programs for Emergency Personnel: Provide specialized training for police, firefighters, and medical teams to handle earthquake-related crises (Mishra & Arora, 2021).
- 3. Public Awareness Campaigns: Launch multilingual awareness programs through TV, radio, and social media to educate residents on earthquake safety (NDMA, 2019).
- Community-Based Disaster Response Teams: Train local volunteers in first aid, searchand-rescue, and crisis management to support official emergency responders (Gupta & Ghosh, 2020).

6.4. Investing in Early Warning Systems and Post-Disaster Response Strategies

Thailand's efficient early warning systems helped reduce casualties by providing real-time alerts (The Straits Times, 2025). In contrast, Myanmar's lack of an advanced warning system led to widespread unpreparedness (Christian Aid, 2025). Delhi currently lacks a functional earthquake early warning system, putting millions at risk (NDMA, 2019).

Policy Recommendations:

- 1. Develop a Real-Time Earthquake Warning System: Install seismic sensors connected to automated public alert systems (Sharma et al., 2017).
- 2. Strengthen Post-Disaster Response Units: Invest in mobile hospitals, emergency shelters, and rapid deployment teams (Gupta & Ghosh, 2020).
- 3. Improve Communication Networks: Establish redundant communication channels to prevent network failures during earthquakes (Mishra & Arora, 2021).

6.5. Collaborating with International Agencies for Best Practices in Earthquake Resilience

Delhi can benefit from global expertise by collaborating with international disaster management agencies. Countries like Japan, the U.S., and Chile have highly advanced earthquake preparedness strategies (Wang et al., 2014).

Policy Recommendations:

- 1. Partner with International Agencies: Work with organizations like UNDRR, JICA, and the World Bank to improve earthquake resilience (NDMA, 2019).
- 2. Adopt Global Best Practices: Implement successful earthquake mitigation strategies used in Japan, California, and Turkey (Gupta & Ghosh, 2020).
- 3. Develop Cross-Border Disaster Response Protocols: Coordinate with neighboring states and South Asian countries for regional disaster preparedness (Sharma et al., 2017).

CHAPTER-VII CONCLUSION

The Myanmar and Thailand earthquakes of March 2025 serve as a critical reminder of the devastating consequences of major seismic events, particularly in regions with dense populations and vulnerable infrastructure. The 7.7-magnitude earthquake, originating in Myanmar, resulted in widespread destruction, loss of life, and economic hardship, with ripple effects felt as far as Bangkok, where structural failures and public panic highlighted the far-reaching impact of seismic activity. Myanmar's experience demonstrated how weak enforcement of building codes, lack of early warning systems, and delayed emergency response efforts can exacerbate disaster outcomes. Meanwhile, Thailand's response showcased the importance of preparedness, real-time communication, and rapid evacuation protocols in mitigating casualties.

For Delhi, these earthquakes underscore the urgent need to address its own seismic vulnerabilities. Despite being located in Seismic Zone IV, Delhi remains ill-prepared for a high-magnitude earthquake, with aging infrastructure, unregulated urban expansion, and a lack of public awareness making the city highly susceptible to disaster. Lessons from Myanmar emphasize the need for stricter enforcement of earthquake-resistant building codes, regular structural audits, and retrofitting of high-risk structures. Thailand's experience highlights the importance of efficient emergency response mechanisms, investment in early warning systems, and public education initiatives to ensure quick and organized evacuations during seismic events.

To effectively reduce disaster risks, Delhi must adopt long-term, proactive strategies that integrate scientific research, urban resilience planning, and international best practices. Strengthening building regulations, implementing risk-based zoning, and increasing public preparedness through large-scale awareness campaigns should be immediate priorities. Additionally, investing in real-time earthquake warning systems, enhancing emergency response coordination, and fostering cross-border collaboration with global disaster management agencies will significantly improve Delhi's earthquake resilience.

The devastation witnessed in Myanmar and Thailand is a wake-up call for Delhi to act before disaster strikes. Without immediate policy interventions, millions of lives remain at risk. By taking

decisive steps today, the city can build a safer, more resilient future, ensuring that when an earthquake occurs, it is better prepared to withstand the impact and recover efficiently.

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