# A COMPARATIVE EVALUATION OF DISASTER MANAGEMENT LAWS IN INDIA WITH REFERENCE TO JAPAN

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## ABSTRACT

Disaster pose a significant challenge to nations world-wide, necessitating effective disaster management strategies and legal frameworks to mitigate their impact. This research paper examines the disaster management laws in India and compares them with Japan, a country known for its robust disaster management practices. The study focuses on analysing the legislative frameworks, institutional mechanisms and key policies pertaining to disaster management in both the countries. Thus, by evaluating the similarities and differences between the two systems, this research aims to review current practices and identify ways to improve them in India's disaster management legal framework.

**Key words:** Disaster, Disaster management, preparedness, mitigation, resilience, India, Japan

# 1. INTRODUCTION

## 1. 1 Background

Disasters are natural and anthropogenic i.e., caused by humans which are likely to cause extensive loss of life, infrastructure damage, and socio-economic disruptions. Recognizing the need for effective disaster management, nations have implemented legal frameworks to mitigate risks and enhance resilience. This study explores the disaster management laws in India and Japan, two countries with contrasting experiences in disaster management.

Disasters, regardless of their origin, can unleash immense devastation, threatening lives, livelihoods, and societal stability. Recognizing the urgency of efficient disaster management, India and Japan have put in place legal frameworks to tackle these formidable challenges. This study conducts a cross-jurisdictional study of disaster management laws in both the countries, which seeks to identify their pros and cons.

India's Disaster Management Act, enacted in 2005, represents a pivotal milestone in the country's approach to disaster management. Its comprehensive structure embraces all aspects of crisis management system, from proactive measures like risk reduction and advance preparation to reactive responses and the efforts after happening of disasters. The formation of the "National Disaster Management Authority (NDMA)" which is headed by the Prime Minister of India, demonstrates India's commitment to top-level coordination and policy formulation for effective disaster management. Furthermore, the presence of "State Disaster Management Authorities (SDMA)" and "District Disaster Management Authorities (DDMA)" facilitates decentralized decision-making and localized disaster responses, considering India's diverse geographical and demographic landscape.

Japan's Basic Act on Disaster Control Measures, with its origins dating back to 1961, reflects the country's long-standing experience and expertise in dealing with various natural calamities. The statute emphasizes a comprehensive and a holistic and systematic method for addressing disaster risks in Japan, Promoting the idea of comprehensive disaster management strategies that include prevention, mitigation, preparedness, response, and recovery. Central to Japan's Disaster Management structure is the "Disaster Management Council", having its head the Prime Minister, to foster collaboration among relevant ministries and agencies. The "Local Disaster Management

Councils" compliment this approach by ensuring that disaster management measures align with local needs and specific risks. Both India and Japan share commonalities in their disaster management strategies. They prioritize collaboration between central and local governments, recognizing the need for multi-level coordination to effectively respond to disasters. Additionally, both nations place significant emphasis on disaster prevention education, raising public awareness and fostering a culture of preparedness.

However, India and Japan also face unique challenges in their disaster management endeavours. India's vast geographical spread and diverse demographics present hurdles in implementing uniform disaster management measures across the entire country. Balancing the needs of densely populated urban areas with those of remote rural regions poses intricate policy hallenges. Furthermore, India grapples with limited resources, necessitating innovative approaches to optimize disaster preparedness and response capabilities.

Japan, while celebrated for its disaster preparedness, is no stranger to the complexities of managing frequent and intense natural calamities. The country's geographic location makes it vulnerable to multiple types of disasters, requiring a finely tuned and dynamic approach to disaster management. Japan's experiences with catastrophic events, like the "Great East Japan Earthquake" and "Tsunami in 2011", continue to influence and refine its disaster management laws and practices. By conducting this comparative study between India and Japan, we aim to contribute valuable insights in area of managing disasters. Identifying the strengths and weaknesses of each country's legal framework can inform policymakers and practitioners worldwide, fostering cross-national learning and collaboration. As the threat of disasters looms ever larger in an increasingly interconnected world, shared knowledge and cooperative approaches become essential in building resilient societies capable of weathering the storm.

## 1. 2 Objective

The research is principally directed towards conducting a relative study of the disaster management legislations of India and Japan, shedding light on their respective approaches to handling natural and man-made calamities. By closely examining the institutional structures, roles of various authorities, and disaster response mechanisms in both countries, we aim to identify the similarities and differences in their disaster management frameworks. Through this comprehensive

comparative analysis, we seek to gain a deeper understanding of the factors that contribute to effective disaster management in different contexts.

The study aims to analyse both the strengths and weaknesses of disaster management laws and practices in India and Japan. By evaluating the successes and challenges faced by each nation in lessening, arranging, acknowledging and recuperating from the disasters, we aim to unearth valuable insights into their disaster resilience strategies. By understanding the factors that have contributed to their respective successes and limitations, we can offer constructive feedback and recommendations for improvement in their disaster management systems.

Another critical aspect of this study is to draw lessons from the experiences of India and Japan in disaster management. By examining how each country's legal framework has influenced community participation, public awareness, and adaptive capacities, we aim to uncover best practices that can be applied globally. Understanding how different geographical locations and historical contexts have shaped their disaster management strategies will provide valuable knowledge for policymakers and practitioners seeking to enhance disaster resilience in their own regions.

Based on our findings, this research aims to develop evidence-based policy recommendations to strengthen disaster management capabilities in both India and Japan. By suggesting potential areas of improvement, policy reforms, and resource allocations, we hope to contribute to the enhancement of their disaster management systems and further fortify their resilience against future disasters.

Beyond the individual countries under study, the study under consideration also seeks to explore the implications of the comparative study on a global scale. By examining how lessons learned from India and Japan's experiences can be applied in other countries and regions facing similar disaster challenges, we aim to promote the importance of cross-national collaboration and knowledge exchange. Encouraging international cooperation in disaster management will foster a collective efforts to build a robust disaster response network and enhance the overall global capacity to mitigate and respond to disasters effectively.

Thus, this research endeavors to contribute to the advancement of disaster management theory and practice by providing a comprehensive understanding of the legal frameworks and strategies

employed by India and Japan. Through rigorous analysis and evidence-based recommendations, we hope to empower policymakers, disaster management practitioners, and international organizations to strengthen disaster resilience and protect communities from the devastating impacts of disasters.

## 2. RESEARCH METHODOLOGY

### 2.1 Data Collection

A Comparative Study with reference to Japan is designed to provide a detailed understanding of disaster management approaches in the two countries. By adopting a comparative study design, the research aims to analyze and contrast the legal frameworks, policies, and strategies employed by India and Japan in handling various natural and man-made disasters. To gather relevant data, a multifaceted approach is taken. A thorough literature review was conducted to explore existing academic papers, reports, policy documents, and legal statutes related to disaster management in both countries. This review will help to establish a foundation for the research and identify gaps.

The research has involved an in-depth legal analysis of "The Disaster Management Act" of India and the "Basic Act on Disaster Control Measures" of Japan, along with any relevant regulations and policies. By closely examining the legal provisions and mechanisms for disaster recovery, preparedness and response with the study aim to identify key similarities and differences between the two nations' disaster management frameworks.

Moreover, the actual -world case studies of specific disaster events in India and Japan are examined. These case studies have offered valuable insights into the practical implementation of disaster response and recovery measures, providing context and depth to the analysis. To ensure a comprehensive perspective, data is sourced from various reliable resources.

Ultimately, this research aims to contribute to understanding disaster management practices and serve as a valuable resource for policymakers, disaster management practitioners, and international organizations working towards building disaster resilience and effective response strategies. By uncovering lessons from India and Japan's experiences, the study seeks to facilitate cross-national learning and collaboration in disaster management to address global challenges effectively.

## 2. 2 Comparative Analysis

An analysis of the legal frameworks and procedures utilized by both Japan and India to deal with the problems brought about by natural and man-made disasters is presented in research that compares the two countries' disaster management systems. The analysis focuses on several key aspects, including institutional structures, roles of various authorities, disaster response mechanisms, funding arrangements, public awareness and community engagement.

In India, the "Disaster Management Act, 2005", established the "National Disaster Management Authority (NDMA)" at the national level, the "State Disaster Management Authority (SDMA)" at the state level and the "District Disaster Management Authority (DDMA)" at the district level. These authorities are responsible for making laws, policies, guidance and planning documents for managing disaster and coordinating disaster response efforts at their respective levels.

Similarly, Japan's "Basic Act on Disaster Control Measures" sets up the "Disaster Management Council" to coordinate efforts among relevant ministries and develop disaster management policies under the supervision of the Prime Minister. At the regional level, disaster management initiatives are spearheaded by Local Disaster Management Councils. The institutional structures in both countries emphasizes on central and local government collaboration for effective disaster management.

The disaster response mechanism in India and Japan have specialized disaster response forces dedicated to swift and effective response of disasters. "India's National Disaster Response Force (NDRF)" and Japan's local disaster management offices are specifically trained and equipped to handle rescue and relief operations during disasters.

Both countries have provisions for dedicated disaster response funds. India's "National Disaster Response Fund (NDRF)" and "State Disaster Response Fund (SDRF)" are created to finance relief and rehabilitation measures during disasters. Japan follows a similar approach, with the central and local governments allocating funds for disaster response and recovery efforts.

Further, India and Japan place significant emphasis on disaster prevention education and public awareness campaigns. The key to building resilient communities is getting the word out about catastrophe risks, how to be prepared, and how to evacuate.

The comparative analysis acknowledges the diverse geographical and contextual factors influencing disaster management in both countries. India's vulnerability to a broad range of disasters, includes earthquakes, cyclones, floods and droughts requires a comprehensive and flexible approach. In contrast, due to its location on the Pacific Ring of Fire, Japan faces persistent threats from earthquakes, tsunamis, and volcanic eruptions and typhoons, necessitating specialized disaster preparedness measures.

Therefore, the analysis of disaster management laws in India and Japan offers valuable lessons and policy implications for both countries and other regions facing similar disaster challenges. Improving resilience and response capabilities may be achieved by identifying successful strategies, best practices, and areas for improvement in disaster management.

However, by comparing and contrasting Disaster Management Laws in India and Japan, we can see how both countries have worked to reduce disaster risks, strengthen response mechanisms, and encourage community involvement. By drawing on the strengths of each country's approach and learning from their experiences, disaster management policymakers and practitioners can further enhance disaster resilience and contribute to global disaster risk reduction efforts.

## 3. MANAGING OF DISASTERS IN INDIA

### 3. 1 Legislative Framework

The legislative framework of satutory Disaster control mechanism in Inida is primarily governed through the "Disaster Management Act, 2005" enacted on December 23, 2005, this comprehensive legislation establishes a strong framework for disaster management throughout the country. At its core is the "National Disaster Management Authority (NDMA)", administered by the Prime Minister and responsible for creating national disaster management strategies, plans, and guidelines. Also, every district is required by law to have its own District Disaster Management Authority (DDMA), and the Chief Minister of each state is responsible for establishing local SDMAs. Within their various areas of responsibility, these entities are to put disaster management strategies into action and coordinate response activities. The Act also resulted in the establishment of the National Disaster Response Force (NDRF) to enhance disaster response capabilities. As it takes a holistic and coordinated approach to handling the many various kinds of catastrophes that might strike India, the Disaster Management Act, 2005 represents a watershed moment in the

country's disaster management system. Both proactive tactics for disaster avoidance and preparation and reactive measures for disaster response are emphasized in the Act. By establishing the NDMA, SDMA and DDMA the legislative framework ensures a clear hierarchy and coordination between the federal, state, and community level in disaster management planning and implementation. This structure facilitates effective communication, resource allocation and decision-making during all stages of disaster management.

The creation of the NDRF as a specialized disaster response force reflects India's commitment to ensuring a swift and professional response to emergencies. The National Disaster Relief Fund (NDRF) is an essential national organization that provides medical aid, conducts rescue operations, and supports disaster relief activities with its qualified personnel and state-of-the-art equipment. Disaster management plans, which include disaster preparedness and response activities, are also emphasized in the Act. These plans are regularly updated, taking into account changing risk profiles and lessons learned from past disasters.

The Disaster Management Act ensures that disaster response efforts are adequately funded through the NDRF and SDRF. This financial provision enables prompt and effective relief and rehabilitation measures during emergencies. Moreover, the act's focus on public awareness and training fosters a culture of preparedness among citizens, empowering them with knowledge about potential risks and appropriate actions to take in emergencies. Over the years, the legislative framework has facilitated improvements in India's disaster management capabilities, resulting in more coordinated and efficient responses to disasters. However, as the country continues to face evolving challenges, such as climate change and urbanization, ongoing efforts are required to enhance disaster resilience. India has pledged to protect its people and assets from disasters by establishing a legislative framework for disaster management. By focusing on proactive measures, interagency coordination and public engagement, India aims to build a more resilient society that can withstand and recover from the diverse range of disasters it faces. In India's ongoing efforts to become more disaster resilient and reduce risks associated with disasters, the act will remain a cornerstone as the country's disaster management strategy adapts to new circumstances. unit whose only purpose is to aid in rescue and relief operations.

Furthermore, the law ensures financial provisions by creating the "National Disaster Response Fund (NDRF)" and "State Disaster Response Fund (SDRF)" to financial relaxation and

rehabilitation measures during disasters. The "Disaster Management Act" emphasizes the formulation of disaster management plans at various levels, defining the roles and duties of different contributors. By promoting public awareness and conducting training programs, the act seeks to strengthen disaster preparedness and response capabilities across the country. In general, this legislative framework highlights India's dedication to proactive disaster management and resilience development in the face of both natural and man-made disasters.

### 3. 2 Key Institutions and Authorities

Institutional mechanisms established in India for handling of disasters include the "National Disaster Management Authority (NDMA)", "State Disaster Management Authorities (SDMAs)", and "District Disaster Management Authorities (DDMAs)". Policies, efforts, and the implementation of crisis management system measures are shaped by these entities at the federal, state, and local levels of government, respectively.

"National Disaster Management Authority (NDMA)" is the highest authority for handling of disasters in India. It came into force under the "Disaster Management Act, 2005". The NDMA is presided by the head of Government of India and comprises different experts and representatives from relevant ministries and departments. Its primary responsibilities include:

a. The NDMA formulates blueprints, plans and guidelines for Emergency Governance Framework at the entral level. It lays down the overall framework and direction for the disaster readiness, response and recovery efforts across the country.

b. The National Disaster Management Agency (NDMA) makes it easier for federal and state governments, different ministries, and others to work together during disasters.

c. To lessen the blow of disasters, the National Disaster Management Agency prioritizes disaster preparedness and risk reduction. It advocates for actions to fortify infrastructure, increase capability, and fortify communities.

d. The NDMA undertakes capacity-building activities including training programs, workshops and knowledge sharing to enhance ability to manage disasters of various stakeholders.

"The Disaster Management Act" mandates the constitution of "State Disaster Management Authorities (SDMAs)" in every state and union territory of India.  The SDMAs are led by the Chief Minister or the Administrator of the Union Territory.  Their key functions include:

a.  The SDMAs are responsible for applying disaster management, measures within their respective states or union territories.

b. In accordance with the national framework, the State Disaster Management Plans are prepared by the SDMAs.  The States' disaster preparedness, response, and recovery initiatives are mapped out in these plans.

c.  The SDMAs allocate resources and funds for disaster management activities in coordination with the "National Disaster Response Fund (NDRF)" and "State Disaster Response Fund (SDRF)".

d.  The SDMAs collaborate with the NDMA and other central authorities for effective disaster response and resource mobilization during emergencies.

Further, the "Disaster Management Act" mandates the formation of "District Disaster Management Authorities (DDMAs)" in every district of India.  The DDMAs are headed by the District Magistrate or District Collectors.  Their key responsibilities include:

a.  The DDMAs develop and implement district-level disaster management plans that align with the state and national frameworks.

b.  The DDMAs coordinate disaster response efforts within their respective districts, involving various departments, agencies and stakeholders.

c. In order to access additional resources for disaster response and relief operations, the DDMAs coordinate with higher authorities and mobilize local resources.

d. Public education about district-level disaster preparedness measures and evacuation procedures is the responsibility of the DDMAs.

Together, the NDMA, SDMAs and DDMAs form a multi-tiered institutional mechanism that enables effective disaster management in India. The many challenges presented by natural and manmade disasters may be effectively addressed by effective coordination, cooperation, and resource utilization, made possible by this hierarchical structure.

# 4. DISASTER MANAGEMENT IN JAPAN

## 4. 1 Legislative Framework

Japan's legislative framework for management of disaster is deeply rooted in the nation's historical experiences related to natural calamities.  The "Basic Act on Disaster Control Measures" establishes a detailed and multi-faceted techniques for disaster readiness, response, and recovery measures.  The Cabinet Office and the "Disaster Management Council" acts as the center of disaster coordination, ensuring a swift and well-coordinated response across government agencies. At the local level, prefectures and municipalities have a critical role in disaster management planning and implementation, tailoring strategies to address region-specific risks.The Japan Meteorological Agency's have sophisticated monitoring and early warning systems which enables rapid dissemination of critical information to the public and authorities helping minimize loss of life and property.  During large-scale disasters the Self-Defense Forces swiftly deploys, providing essential support in rescue operations and logistical assistance.

Public awareness and education campaigns foster a tradition of readiness and community persistence.  Regular drills and training programs ensure that citizens are well-prepared to respond effectively during emergencies.  Furthermore, the legislative framework emphasizes on measures aimed at minimising disaster-related risks and mitigation measures, recognizing the importance of preemptive actions to lessens the impact of disasters.The spirit of volunteering and societal solidarity is deeply ingrained in Japan's disaster management approach.  Local communities actively participate in disaster response and recovery efforts, working in tandem with governmental bodies and non-governmental organizations.

Japan's legislative framework reflects a deep commitment to proactive disaster management, drawing on a comprehensive network of resources and expertise. Consequently, Japan has built a strong disaster management system that helps mitigate disaster effects and makes the country more resilient to future threats.  This legislative framework has been continuously amended and adapted to demonstrate Japan's unwavering will to safeguard its citizens and maintain social and economic stability in the face of disasters.

**4. 2 Key Institutions and Authorities**

Disaster management system of Japan relies on a network of key institutions and authorities that works in unity to safeguard the nation from a wide range of hazards. The Cabinet Office assumes a central role in disaster preparedness and response, setting overall policies and coordinating disaster management efforts at the central level. Supporting the Cabinet Office, the "Disaster Management Council", consisting of experts and representatives from relevant ministries, formulates strategic disaster management plans and ensures their swift implementation. The Japan Meteorological Agency (JMA) acts as a watch dog which continuously monitors meteorological conditions and issuing timely warnings for potential disasters like typhoons, heavy rainfall and earthquakes. At the local level, prefectures and municipalities, in conjunction with fire and Disaster Management Agencies, take charge of disaster response and relief activities within their jurisdictions. The Japan Coast Guard plays a crucial role in maritime safety which undertakes search and rescue operations during coastal disasters. Additionally, the National Police Agency assists with public order and traffic management during emergencies. The Self-Defense Forces stand as a pillar of strength, promptly deploying in times of large-scale disasters to provide crucial support in rescue operations, medical services and transportation. This collaborative and multi-layered approach ensures Japan's resilience and swift response to disasters, protecting its citizens and minimizing damage in times of crisis.

## 5. COMPARATIVE ANALYSIS

**5. 1 Similarities between the Indian and Japanese System of Disaster Management**

The similarities and differences between the disaster management systems in India and Japan are examined in this section. It delves into the institutional mechanisms, shared approaches, shared laws, and policy initiatives that help reduce disaster risk and respond effectively. India and Japan's disaster management systems are quite similar, which means that both countries are working to reduce catastrophe risks and react efficiently.

India and Japan have established comprehensive legislative frameworks to address different aspects of crisis management system. In India, the "Disaster Management Act, 2005" serves as the primary legislation, while in Japan has the "Basic Act on Disaster Control Measures" It gives disaster management its legal footing. The legislation outlines what each stakeholder is

responsible for risk assessment processes, emergency response mechanisms and provisions for recovery and rehabilitation.

The establishment of dedicated entities at the national and subnational levels is accountable for disaster management in both nations.  In India, the "National Disaster Management Authority (NDMA)" serves as the highest authority, while "State Disaster Management Authorities (SDMAs)" and "District Disaster Management Authorities (DDMAs)" at the state and municipal levels, respectively, are tasked with implementing disaster management strategies.  Similarly, Japan has the Cabinet Office and the "Fire and Disaster Management Agency (FDMA)" as central coordinating bodies, along with local governments responsible for disaster management. Risk Assessment and Planning: Both India and Japan emphasizes on the importance of risk assessment and planning in their disaster management frameworks.  They promote the use of scientific methods to assess various hazards, vulnerability mapping and the development of disaster management plans at various levels.  These plans include strategies for early warning systems, evacuation procedures and resource allocation during emergencies.

They understand the need of community involvement in disaster management.  In disaster preparedness, response, and recovery efforts, they highlight the importance of local communities' knowledge.  When it comes to spreading information, helping with evacuations, and offering assistance during emergencies, community-based organizations like volunteer groups and local self-help organizations are indispensable. India and Japan actively engage in international cooperation for disaster management.  They participate in regional and global forums, share best practices and collaborate with other countries in areas such as early warning systems, capacity building and post-disaster recovery efforts.  Both countries have also developed a framework for sharing information and experiences with international organizations and neighbouring countries.

India and Japan emphasize the use of technological innovations for disaster management.  They leverage advancements in information and communication technologies, remote sensing and geospatial mapping to improve early warning systems, real-time monitoring and efficient response coordination. Thus, both the nations invest in research and development to enhance technological capabilities for disaster risk reduction.

**5. 2 Differences between the Indian and Japanese System of Disaster management**

This part examines the differences among the disaster management systems in India and Japan. It analyzes variations in legal frameworks, institutional structures, policy formulation, public participation and the effectiveness of response and recovery efforts. While there are similarities between the disaster management laws in India and Japan, there are also significant differences that arise from variations in legal frameworks, institutional structures, policy approaches and cultural contexts.

India's disaster management legal structure is primarily governed by the "Disaster Management Act, 2005", that prioritizes an all-encompassing strategy for disaster management. In contrast, Japan's legal framework consists of multiple acts, including the Basic Act on Disaster Control Measures, which delineates specific responsibilities for different levels of government and focuses on a hierarchical command structure during emergencies.

The system of institutions responsible for managing disasters differs between India and Japan. In India, the "National Disaster Management Authority (NDMA)" serves as the apex body, with "State Disaster Management Authorities (SDMAs)" and "District Disaster Management Authorities (DDMAs)" at the state and district levels, respectively. In Japan, the Cabinet Office and the "Fire and Disaster Management Agency (FDMA)" National disaster management efforts are coordinated by the federal government, while local governments play a crucial role in putting disaster management measures into action. India's disaster management policies emphasize community-based approaches and encourages the community participation in disaster management activities. There is a focus on decentralized decision-making and empowering local communities. In contrast, Japan's policies emphasize top-down command and control structures, with a strong emphasis on government-led disaster response and coordination.Cultural Factors: Cultural factors play a role in shaping the disaster management systems of both countries. In India, the cultural diversity and decentralized governance structures present unique challenges for disaster management. The need to accommodate multiple languages, cultural practices and community-based organizations requires tailored approaches. In Japan, the cultural values of discipline, collective responsibility and respect for authority influence disaster management practices including adherence to evacuation orders and efficient coordination during emergencies.

India and Japan have different levels of engagement in international cooperation for disaster management. While both countries participate in regional and global forums, Japan has a long-

standing tradition of providing assistance and expertise in disaster management to other countries, sharing its knowledge and technological advancements.  India, on the other hand, has been more focused on strengthening its domestic disaster management capabilities, although it has recently increased its engagement in international collaborations. They face different types of disasters due to their geographical locations. Natural disasters such as floods, cyclones, earthquakes, and droughts are common in India.  Typhoons, earthquakes, tsunamis, and volcanic eruptions are all too common in Japan.  These varying risk profiles influence the priorities and strategies adopted by each country in their disaster management laws and policies.

In order to learn from one another's experiences and adapt best practices to their own contexts, policymakers and practitioners must grasp these differences. The exchange of knowledge and collaboration between India and Japan can help enhance disaster management capacities and promote effective response and resilience in both countries.

## 5. 3 Lessons Learned from Japan's Approach Based on the comparative analysis

Japan's approach to disaster management has yielded valuable lessons that serve as a model for countries world-wide.  The nation's proactive preparedness, with regular drills and public awareness campaigns have instilled a culture of readiness among its citizens.  The integrated and coordinated response involving various institutions and authorities ensures a swift and efficient action during emergencies.  Japan's advanced early warning systems, exemplified by the Japan Meteorological Agency have saved countless lives by providing timely alerts for weather-related disasters. The country's commitment to continuous improvement and adaptation, learning from past events, keeps its disaster management strategies up-to-date and effective.  In disaster response and recovery, community resilience, which is nurtured via local involvement and support, is crucial.  Japan's innovative use of technology in disaster management, coupled with pre-emptive measures and risk reduction efforts, significantly reduces the impact of disasters.  The nation's transparent approach and willingness to share information facilitate international cooperation and collaboration during crises.  The lessons derived from Japan's experience underscore the importance of preparedness, coordination, and community engagement in building resilience and safeguarding societies from the impact of disasters world-wide.

# 6. RECOMMENDATIONS FOR INDIA

## 6. 1 Strengthening of Legal Framework

The legal frameworks for disaster Governance in India is of utmost importance due to the nation's vulnerability to various natural and man-made hazards. To address this need, India must enact a comprehensive legislation that consolidates existing laws and addresses gaps in disaster Governance. Incorporating mitigation, preparedness, response, and recovery measures, a new Disaster Management Act should take into account lessons learned from previous catastrophes and international best practices.

The growing severity of climate-related disasters necessitates that India's legal framework take action to adapt to these changes. For the nation to be more resilient in the face of climate-related disasters, the law should require the establishment of early warning systems and adaptation plans.

Furthermore, strengthening institutional mechanisms is crucial. The "National Disaster Management Authority (NDMA)", "State Disaster Management Authorities (SDMAs" District "Disaster Management Authorities (DDMAs)" need clear mandates, sufficient resources, and enhanced coordination to ensure effective disaster response and recovery efforts. Promoting private sector involvement is essential to harness additional resources and innovative solutions during emergencies. Legislation should incentivize businesses to invest in disaster preparedness and define their roles in disaster response.

Investing in advanced technology and risk warning mechanisms is imperative to improve disaster forecasting and response. The legislative framework needs to make the creation of a comprehensive national early warning system that efficiently notifies vulnerable communities a top priority. When it comes to disaster management, community engagement is key. The legal framework should empower local communities and incorporate their perspectives in disaster planning and decision-making. Establishing Local Disaster Management Committees with local representatives, NGOs and community-based organizations can ensure grassroots involvement.

Further, the disaster risk reduction (DRR) should form the core of India's legal framework. Regular risk assessment, planning laws and structural compliance standards prioritizing safety and resilience must be mandated at all levels of governance. The post-disaster relief and rehabilitation provisions are essential for effective recovery. Legislation should ensure equitable distribution of

relief measures and efficient delivery of services to affected communities, with special attention to protecting vulnerable populations.

Thus, enhancing India's legal frameworks for disaster governance through comprehensive legislation and targeted measures is crucial to building resilience and reducing the impact of disasters. India can enhance its ability to safeguard its people and infrastructure from a range of dangers by emphasizing community engagement, early warning systems, adaptation to climate change, and disaster risk reduction. A robust legal framework will empower the nation to respond to disasters efficiently, promote unity and compassion and facilitate a safer and more secure future for all.

### 6. 2 Promotion of Public Awareness and Participation

Building a resilient and proactive society requires increasing public awareness and engagement in disaster management. Schools, businesses, and community centers should routinely provide training and education programs to educate people how to be safer, more prepared, and respond in the event of an emergency. Government-led public information campaigns using mass and digital communication tools can effectively disseminate information about disaster risks, safety measures and evacuation procedures. Involving local communities in disaster management planning through Local Disaster Management Committees ensures that their perspectives are considered, fostering community engagement. Additionally, emphasizing the significance of early warning systems and encouraging timely responses during drills can save lives during emergencies. Public-private partnerships, volunteers programs and media engagement further enhance public involvement in disaster management efforts. Now a days mobile applications can provide real-time information on disaster alerts and safety tips, promoting widespread adoption for better preparedness. Regular community drills and exercises help familiarize people with response procedures and assess the effectiveness of disaster plans. Incentives and recognition, such as awards or tax benefits, encourage individuals and communities to actively participate in disaster preparedness and response initiatives. By implementing these strategies, governments and organizations can empower citizens with the knowledge and skills to protect themselves, their families, and their communities during disasters, ultimately reducing the impact of calamities and fostering a more resilient society.

# 7. CONCLUSION

## 7. 1 Summary of Findings

### *India*

India's "Disaster Management Act, 2005", provides a comprehensive legal overall structure for disaster management, emphasizing proactive measures, interagency coordination and public engagement. The formation of the "National Disaster Management Authority (NDMA)", "State Disaster Management Authorities (SDMAs)" and "District Disaster Management Authorities (DDMAs)" facilitates effective disaster management at the federal, state, and local levels by outlining clear reporting relationships and responsibilities. NDRF, India's specialized disaster response force, is ready to respond to emergencies with professionalism and speed thanks to its trained personnel and state-of-the-art equipment. The "Disaster Management Act" ensures that disaster response efforts are adequately funded through the "National Disaster Response Fund (NDRF)" and "State Disaster Response Fund (SDRF)".

Despite a strong legislative framework, disaster management measures are not effectively implemented at the ground level due to bureaucratic inefficiencies and inadequate resources. Different parts of India have different levels of public awareness of disaster hazards and preparedness measures, which might cause delays in response times during emergencies. Also, rapid urbanization has put immense pressure on infrastructure, often lacks proper disaster-resilient design, which thereby increases vulnerability to disasters in urban areas.

### *Japan*

Japan has a strong emphasis on proactive preparedness, with regular drills, public awareness campaigns, and education programs, instilling a culture of readiness among citizens. The Japan's Meteorological Agency (JMA) has a sophisticated monitoring and early warning systems, issuing timely alerts for weather-related disasters, reducing potential impacts on lives and property. Its approach emphasizes community engagement and involvement in disaster response and recovery efforts, enhancing social cohesion and effective response during crises. Thus, Japan leverages advanced technology and innovation in disaster management, enabling real-time data collection, analysis and dissemination for improved forecasting and response.

**7. 2 Conclusion**

The comparative study of disaster management laws in India and Japan reveals valuable insights into the strengths and areas for improvement in India's approach. Coordinated disaster management efforts are made easier by the institutional mechanisms established by India's 2005 Disaster Management Act, which offers a comprehensive legal framework. However, challenges lie in the effective implementation of measures and raising public awareness. Japan, on the other hand, excels in proactive preparedness, advanced early warning systems, and community engagement. Both nations demonstrate their commitment to disaster resilience through legislative advancements and innovative strategies. By learning from each other's experiences, India and Japan can further strengthen their disaster management systems, fostering more resilient societies prepared to tackle future challenges effectively. As disasters continue to pose threats globally also, the study highlights the significance of continuous improvement and cooperation in mitigating the impacts of natural and man-made calamities.

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