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The contribution of Indian leaders to disaster management: An overview

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Abstract
The evolution of disaster management in India reflects a paradigm shift from colonial-era reactive "scarcity relief" to a proactive, technology-driven "zero-casualty" framework. This study examines the instrumental role of political leadership and high-level committees in driving this transition. Through a qualitative systematic review and critical policy analysis, the research evaluates how the strategic visions of leaders-ranging from early proponents of social resilience like Mahatma Gandhi to modern architects of institutionalization like Atal Bihari Vajpayee and Dr. Manmohan Singh culminated in the Disaster Management Act of 2005. The findings highlight how the creation of a three-tier governance structure (NDMA, SDMA, and DDMA) shifted disaster management from a peripheral administrative task to a core component of national security and development. Furthermore, the paper analyzes the "Odisha Model" as a benchmark for state-level political will and discusses the integration of advanced technologies like Artificial Neural Networks and GNSS-R signals into governance. The study concludes that while India has achieved global leadership in disaster resilience, addressing the "implementation gap" between high-level policy and local-level action remains the final frontier for leadership in disaster risk reduction.

Keywords: India, Odisha model, disaster management, political leadership, resilience, governance, disaster risk reduction

Introduction
The history of disaster management in India represents a profound journey from colonial-era famine relief to a contemporary, technology-driven "zero-casualty" approach. This evolution has been steered by political leadership and high-level committees that transitioned the nation from a reactive crisis management model-focused mainly on post-disaster relief to a proactive paradigm emphasizing prevention, mitigation, and preparedness (Bhardwaj *et al*., 2024; Walia, 2020) [4, 26]. Following major catastrophes like the 1999 Odisha Super Cyclone and the 2001 Bhuj earthquake, the political will to institutionalize disaster risk reduction resulted in a comprehensive framework addressing social foundations and legislative institutionalization (Ankalkoti & Yashodha, 2025; Haran, 2016) [1, 8].
The contributions of former leaders were particularly impactful in establishing the current structure. Under the leadership of Prime Minister Atal Bihari Vajpayee, India moved away from the ad-hoc "scarcity relief" model, initiating the High-Powered Committee (HPC), which recommended a permanent, holistic management system. Prime Minister Dr. Man Mohan Singh subsequently codified this vision through the landmark enactment of the Disaster Management Act of 2005. This legislative milestone created a decentralized, three-tier governance system the National, State, and District Disaster Management Authorities which remains the backbone of the country's resilience strategy today. By providing a legal mandate and dedicated funding streams, these leaders ensured that disaster management became a core component of national development rather than a secondary administrative task.
Building upon this robust institutional foundation, modern disaster governance in India now focuses on the integration of diverse knowledge systems and technological innovations to bridge the gap between technocratic planning and community realities. In flood-prone regions like the Eastern Brahmaputra Basin, participatory "co-learning" spaces now integrate local aspirations with scientific climate projections (Tschakert *et al*., 2016) [24].

Advanced technological frameworks such as the application of Artificial Neural Networks (ANN) for storm surge prediction and GNSS-R signals for high-resolution flood mapping are being utilized to overcome the limitations of traditional remote sensing (Sahoo & Bhaskaran, 2019; Unnithan *et al*., 2020) [21, 25]. This synthesis of visionary leadership, legal institutionalization, and cutting-edge geospatial intelligence has transformed India into a global leader in disaster resilience, where indigenous wisdom like the "Smong" narratives of Simeulue or the water systems of Ladakh are increasingly protected alongside digital ecosystems (Kandari *et al*., 2021; Rafliana *et al*., 2022) [10, 19].

This study provides a detailed outline of how the vision of Indian leaders and governance bodies reshaped the disaster management framework, moving the country from ad-hoc responses to a structured, multi-tiered governance system. It encompasses the examination of high-level policy interventions, such as the constitution of the High-Powered Committee (HPC) in 1999, which was the first attempt to draw a holistic and systemic approach towards disaster management at the national, state, and district levels (Pradhan & Nayak, 2025) [17]. Furthermore, it covers the subsequent establishment of the National Disaster Management Authority (NDMA) under the chairmanship of the Prime Minister, which placed disaster management as a high-priority agenda within the national policy framework (Ankalkoti & Yashodha, 2025) [1].

Statement of the problem

While the Disaster Management Act of 2005 undoubtedly provides a solid legal framework, it is not merely an act that sets a structure; it is the manifestation of the evolving vision of governance that rephrased the national approach over time to establish a foundation for disaster resilience. However, current discourse often treats the Act as a standalone administrative development, overlooking the crucial role of "committed political leadership" and the governance deficits that persist between policy formulation and on-the-ground implementation. There is a pressing need to understand how leadership facilitates the shift from resource consumption to resilience thinking, addressing root causes of vulnerability rather than just managing events.

Review of Literature

The scholarly discourse on India's disaster management evolution highlights a fundamental transition from colonial-era "scarcity relief" to a contemporary "zero-casualty" paradigm, a shift credited mainly to the strategic vision of national and state-level leadership (Pradhan *et al*., 2025; Pradhan & Nayak, 2025) [17]. Existing literature posits that early intellectual foundations for social resilience were laid by pre-independence figures like Dadabhai Naoroji, whose "Drain Theory" first linked economic exploitation to heightened disaster vulnerability. This philosophy was operationalized by Mahatma Gandhi, who championed decentralized, community-led sanitation and health reforms, asserting that relief must be rooted in local empowerment rather than top-down charity. Following independence, the literature emphasizes an institutional building phase where leaders such as Jawaharlal Nehru and Sardar Vallabhbhai Patel established the scientific infrastructure and administrative unity via the All-India Services necessary for coordinated federal responses.

Scholars note that the 1999 Odisha Super Cyclone and the 2001 Bhuj earthquake served as critical "wake-up calls," prompting leaders like Atal Bihari Vajpayee to move beyond ad-hoc responses by constituting the High-Powered Committee (HPC) to draft a systemic national framework (Gupta, 2018) [7]. This culminated in the landmark enactment of the Disaster Management Act of 2005 under Dr. Manmohan Singh, which shifted the national responsibility of disaster management from the Ministry of Agriculture to the Ministry of Home Affairs, thereby treating disasters as issues of national security. In the contemporary era, the literature identifies a move toward global leadership and technological integration, driven by Prime Minister Narendra Modi's "10-Point Agenda" and the Coalition for Disaster Resilient Infrastructure (CDRI), which align national policy with international mandates like the Sendai Framework.

Furthermore, state-level success stories, particularly the "Odisha Model" under Chief Minister Naveen Patnaik, are frequently cited as evidence of how committed political will can achieve "zero-casualty" outcomes through institutional innovation and mass evacuation strategies (Few *et al*., 2023; Kumar & Pradhan, 2022; Pal *et al*., 2017) [6, 11, 15]. However, critical scholarship also highlights persistent "implementation gaps" and governance hurdles, noting that while national guidelines are robust, local execution in states like Uttarakhand often faces interference from competing economic interests in hydropower and tourism (Dash & Punia, 2019; Nautiyal *et al*., 2025) [5, 13]. Recent research concludes that while the legal architecture is now firmly in place, the future of Indian disaster resilience hinges on "disaster resilience leadership" that can bridge the divide between high-level policy intent and micro-level community action.

Research Gap

Despite the acknowledgment of institutional evolution, there is a gap in analyzing the specific influence of political leadership and governance quality in driving the "adaptive governance" required to manage complex disaster scenarios. While the structural aspects of the DM Act 2005 and the technological advancements in early warning systems are well-researched, there is limited literature explicitly detailing how governance leadership addresses the "implementation gap" between high-level policy intent and local-level action (Balaram & Dhananjay, 2025) [2]. Additionally, the integration of resilience thinking into the broader governance framework to address underlying drivers of vulnerability remains an underexplored area in the context of leadership.

Research Question

How did the strategic vision of Indian political leaders and high-level committees set the foundation for the Disaster Management Act of 2005 and drive the transition toward a holistic, technology driven disaster management framework?

Novelty of the research

This research reminds us that while institutional frameworks are critical, the contribution of leadership in navigating the transition from a relief-centric to a resilience-based approach is equally important. However, their specific role in fostering a culture of prevention is often ignored by

current literature. By focusing on leadership as a driver for change, this study highlights how political will, demonstrated through the formation of bodies like the HPC and the enactment of the DM Act, is a prerequisite for transforming governance structures to manage disaster risks effectively (Bhardwaj *et al*., 2024; Haran, 2016) [4, 8].

Methodology

Study Design and Approach

This research employs a qualitative systematic review and critical policy analysis to examine the evolution of disaster governance in India. Following the IMRAD approach, the study utilizes a historical-interpretive lens to evaluate how political leadership transitioned the national framework from a reactive relief model to a proactive resilience paradigm. The analysis is grounded in the Constant Comparative Method (CCM), where units of meaning—such as policy statements, legislative clauses, and leadership agendas are compared across different political eras (e.g., pre- and post-2005) to identify core themes of "adaptive governance".

Data Sources and Selection Criteria

The study utilizes a multi-tiered search strategy to identify relevant academic literature, government reports, and legislative documents:

- **Academic Databases:** Primary searches were conducted in Google Scholar, and Mendeley, Science Direct, Upon Alex using keyword such as Indian political leadership in DRR.
- **Government Documents:** Formal policy frameworks, including the National Policy on Disaster Management (2009) and the DM Act 2005, were analyzed as primary artifacts of leadership vision.
- **Inclusion Criteria:** Documents were included if they specifically addressed:
  - The transition from relief to mitigation.
  - The impact of specific leadership committees (e.g., the J.C. Pant Committee).
  - Technological integration driven by national policy.

Thematic Analysis

A thematic content analysis approach was employed to categorize findings into three primary anchors:

- **Institutional Leadership:** Mapping the creation of the NDMA, SDMAs, and DDMAs under the Prime Minister's chairmanship.
- **Technological Shift:** Evaluating the adoption of ANN, GNSS-R, and IoT frameworks as mandates of a modernized governance agenda.
- **Governance Gaps:** Analyzing the "implementation gap" between high-level policy intent and local-level action using existing case reports.

Results

The trajectory of disaster management in India represents a profound journey from colonial-era famine relief to a contemporary, technology-driven "zero-casualty" approach. This evolution has been steered by political leadership and high-level committees that transitioned the nation from a reactive crisis management model to a proactive paradigm emphasizing prevention, mitigation, and preparedness. While the Disaster Management Act of 2005 is the modern cornerstone, it is the culmination of decades of philosophical and structural groundwork laid by key political figures who recognized the link between governance, development, and resilience.

Historical Foundations and Social Philosophy

Long before formal state structures existed, early Indian leaders identified that vulnerability to disasters was deeply tied to economic and social conditions.

- **Economic Awareness:** Dadabhai Naoroji's "Drain Theory" challenged colonial neglect, arguing that economic depletion rendered the Indian peasantry uniquely vulnerable to natural calamities.
- **Mass Mobilization:** Bal Gangadhar Tilak utilized political mobilization to build community awareness, asserting that a self-aware society is better prepared for systemic shocks (O'Hanlon, 1985).
- **Rural Self-Reliance:** Mahatma Gandhi advocated for village-level sanitation and health reforms, emphasizing that relief must be rooted in local participation and empowerment rather than top-down charity.
- **Agrarian Reform:** Acharya Narendra Deva advocated for socialist and agrarian reforms to address chronic rural vulnerabilities such as landlessness.

Institutional Building and Modernization

Following independence, the focus shifted toward creating a unified administrative apparatus and scientific infrastructure to manage large-scale emergencies.

- **Administrative Unity:** Sardar Vallabhbhai Patel established strong federal governance and administrative unity through the All India Services, which remains the backbone of coordinated response (Gupta, 2018; Sinha & Srivastava, 2017) [17, 23].
- **Scientific Temper:** Jawaharlal Nehru and Dr. Rajendra Prasad laid the foundations for modern research institutions, recognizing that scientific progress was essential for predicting and mitigating natural disasters.
- **Resource Security:** Lal Bahadur Shastri spearheaded the Green Revolution and established the Food Corporation of India (FCI), transforming drought management by ensuring national food security.
- **Governance Efficiency:** Morarji Desai emphasized administrative efficiency and public health, strengthening bureaucratic routines for emergency coordination.

Structural Strengthening and Technological Integration

As the nation matured, leaders integrated disaster management into broader social welfare and infrastructure planning.

- **Integrated Welfare:** Indira Gandhi modernized agriculture and expanded poverty alleviation schemes to reduce the vulnerability of the poor to climatic shocks.
- **Technological Advancement:** Rajiv Gandhi promoted telecommunications and computerization, which professionalized response forces and shortened emergency communication times.
- **Connectivity:** Atal Bihari Vajpayee invested heavily in national highways and rural roads, which significantly enhanced the reach of evacuation and relief distribution.
- **Planning Vision:** Planners devoted a specific chapter to "Disaster Management: The Development

Perspective" in the Tenth Five-Year Plan (2002-2007) during the Vajpayee administration, integrating mitigation into the national development process (Gupta, 2018) [7].

The era of legislative institutionalization (2005-Present)

The contemporary framework is defined by a shift from "relief" to "risk reduction," mandated by law and bolstered by global diplomacy.

- **The DM Act, 2005:** Under Dr. Manmohan Singh, the enactment of the Disaster Management Act created a three-tier governance structure the NDMA, SDMAs, and DDMAs placing the Prime Minister and Chief Ministers at the helm.
- **Global Leadership:** Prime Minister Narendra Modi elevated India's role through the 10-Point Agenda for DRR and the Coalition for Disaster Resilient Infrastructure (CDRI).
- **Knowledge Exchange:** Indian leadership has facilitated platforms like the SAARC Disaster Management Centre to provide policy advice and capacity-building across South Asia.

State-Level Leadership: The Odisha Model

Odisha serves as the primary case study for how committed political leadership transforms disaster governance.

- **Adaptive Governance:** Following the 1999 Super Cyclone, leadership under Chief Minister Naveen Patnaik facilitated a transition toward adaptive governance characterized by flexibility and learning (Banerjee & Mohapatra, 2023) [3].
- **Institutional Innovation:** Odisha established the Odisha State Disaster Management Authority (OSDMA) before the national authority was even formed (Pal & Singh, 2018) [16].
- **Zero-Casualty Vision:** This political commitment was demonstrated during Cyclone Phailin (2013) and Cyclone Fani (2019), where mass evacuations drastically reduced mortality compared to 1999 (Jha *et al*., 2016) [9].

Discussion

The contribution of Indian political leadership has been instrumental in steering the nation's disaster governance from an ad-hoc, fatalistic, and relief-centric approach toward a robust, technology-driven, and institutionalized framework focused on proactive resilience. This evolution was cumulative, beginning with early visionaries like Mahatma Gandhi, who emphasized decentralized empowerment and sanitation as the bedrock of local resilience, followed by Jawaharlal Nehru and Dr. Rajendra Prasad, who established the scientific foundations and infrastructural projects, such as river-valley systems, essential for flood mitigation. Specific sectoral interventions further strengthened this capacity, including Lal Bahadur Shastri's establishment of the Food Corporation of India to mitigate drought-induced food insecurity and Rajiv Gandhi's promotion of telecommunications and computerization to enhance emergency coordination and shorten communication times.

The strategic shift to a formal legal framework was catalyzed by high-level committees established after the 1999 Odisha Super Cyclone, notably the High-Powered Committee chaired by J.C. Pant, which culminated in the enactment of the Disaster Management Act of 2005. This legislative landmark structurally embedded political accountability by designating the Prime Minister as the ex-officio Chairperson of the National Disaster Management Authority (NDMA) and Chief Ministers as heads of State Disaster Management Authorities (SDMAs), ensuring that disaster risk reduction received the highest political priority. This top-tier involvement fostered a "whole-of-government" approach, vividly exemplified by the "Odisha Model," where committed leadership under Naveen Patnaik pioneered the Odisha State Disaster Management Authority (OSDMA) and a "zero-casualty" vision that drastically reduced fatalities during cyclones such as Phailin and Fani.

Furthermore, political leaders have actively catalyzed technological integration, such as specific directives for local-level flood warning systems (FEWS) in Guwahati, and aligned domestic strategies with global standards like the Sendai Framework through the Prime Minister's 10-point agenda and initiatives like the Coalition for Disaster Resilient Infrastructure (CDRI). Despite these successes, the translation of political vision into implementation faces ongoing scrutiny regarding the balance between centralization and federalism exemplified by the "securitization" of the COVID-19 response and delays in establishing the National Disaster Mitigation Fund (NDMF) due to bureaucratic debates. Ultimately, while implementation gaps persist at the local level, the strategic direction provided by high-level leadership has been pivotal in shifting the narrative of Indian disaster management from fatalism to resilience.

Conclusion

The trajectory of disaster management in India is a testament to the power of committed political leadership in transforming national priorities. The shift from a fatalistic acceptance of natural calamities to a structured, institutionalized, and technology-oriented resilience framework was not accidental but the result of deliberate legislative and administrative interventions. By moving disaster oversight from the Ministry of Agriculture to the Ministry of Home Affairs and placing the Prime Minister at the apex of the National Disaster Management Authority, India has successfully "securitized" disaster risk, ensuring it receives sustained fiscal and political attention. The "Odisha Model" demonstrates that even in resource-constrained environments, political will can achieve world-class "zero-casualty" outcomes. However, the future of India's disaster resilience lies in moving beyond mass evacuations toward addressing the root causes of vulnerability such as urban planning, climate-sensitive infrastructure, and social inequity. As the nation aligns its domestic policies with global mandates like the Sendai Framework, the role of leadership will remain the bridge between technocratic expertise and community-level empowerment.

Limitations

Despite the comprehensive nature of this review, several limitations must be acknowledged:

- **Centralization Bias:** Much of the existing literature focuses on national-level policy and high-profile state successes (like Odisha), potentially overlooking the nuanced challenges and failures in smaller or less politically prioritized states.
- **Qualitative Scope:** This study relies on qualitative

analysis of policy documents and leadership rhetoric; it does not employ quantitative metrics to correlate specific leadership tenures with statistical reductions in disaster-related economic losses.

- **Dynamic Technological Landscape:** While the study mentions AI and GNSS-R, the rapid pace of technological evolution means that policy frameworks may struggle to keep up with the ethical and operational implications of these tools in real-time.
- **Implementation Gap:** The research identifies the gap between policy intent and local action but does not provide an exhaustive ethnographic account of how district-level administrators navigate political interference during disasters.

References

1. Ankalkoti P, Yashodha BN. Challenges and reforms in India's disaster management: A critical evaluation of the role of NDMA. EPRA Int J Res Dev. 2025;10(3):235-238. DOI: 10.36713/epra20631.
2. Balaram P, Dhananjay N. Adaptive governance for disaster risk reduction: Lessons from Odisha. Disaster Adv. 2025;18(11):57-64. DOI: 10.25303/1811da057064.
3. Banerjee S, Mohapatra S. Managing disasters in a compounding scenario: A case of adaptive governance in the state of Odisha, India. Int J Clim Change Impacts Responses. 2023;16(1):107-129. DOI: 10.18848/1835-7156/CGP/v16i01/107-129.
4. Bhardwaj S, Acharya P, Gupta AK. Evolution of disaster risk reduction systems in India. In: Disaster risk and management under climate change. Disaster resilience and green growth. Singapore: Springer; 2024. p. 27-38. DOI: 10.1007/978-981-99-4105-6_2.
5. Dash P, Punia M. Governance and disaster: Analysis of land use policy with reference to Uttarakhand flood 2013, India. Int. J Disaster Risk Reduct. 2019;36:101090. DOI: 10.1016/j.ijdrr.2019.101090.
6. Few R, Ranjit N, Nalla V, Jain G, Tebboth MGL, Singh C, *et al*. 'We are not in the same boat': Representations of disaster and recovery in India. Int J Disaster Risk Reduct. 2023;92:103709. DOI: 10.1016/j.ijdrr.2023.103709.
7. Gupta D. Significance of formal and informal education in disaster prevention, preparedness and mitigation. Examines Mar Biol Oceanogr. 2018;1(4):000517. DOI: 10.31031/eimbo.2018.01.000517.
8. Haran NP. Disaster laws in India. In: Singh A, editor. Disaster law: Emerging thresholds. London: Routledge; 2016, p. 375-382.
9. Jha A, Basu R, Basu A. Studying policy changes in disaster management in India: A tale of two cyclones. Disaster Med Public Health Prep. 2016;10(1):42-46. DOI: 10.1017/dmp.2015.116.
10. Kandari S, Pasupuleti RS, Samaddar S. Cultural systems in water management for disaster risk reduction: The case of the Ladakh region. J Integr Disaster Risk Manag. 2021;11(2):28-56. DOI: 10.5595/001C.34567.
11. Kumar S, Pradhan B. Comparative analysis of disaster management system between the state of Odisha and Gujarat. Quest J Res Humanit Soc Sci. 2022;10(6).
12. Nath S. A sociological perspective on institutional coordination for disaster risk reduction in India. In: Disaster risk reduction: Community resilience and responses. Singapore: Springer; 2018. p. 157-172. DOI: 10.1007/978-981-10-8845-2_10.
13. Nautiyal A, Kalra M, Singh K, Kumar U, Bora A, Kumar A, *et al*. A governance-based analysis of the policy-practice gap in glacial flood risk management in Uttarakhand. Int J Environ Sci. 2025;2299-2310. DOI: 10.64252/p1y2zg36.
14. Ogra A, Donovan A, Adamson G, Viswanathan KR, Budimir M. Exploring the gap between policy and action in disaster risk reduction: A case study from India. Int J Disaster Risk Reduct. 2021;63:102428. DOI: 10.1016/j.ijdrr.2021.102428.
15. Pal I, Ghosh T, Ghosh C. Institutional framework and administrative systems for effective disaster risk governance: Perspectives of 2013 Cyclone Phailin in India. Int J Disaster Risk Reduct. 2017;21:350-359. DOI: 10.1016/j.ijdrr.2017.01.002.
16. Pal I, Singh S. Disaster risk governance and response management for flood: A case study of Assam, India. In: Disaster risk reduction in South Asia. Singapore: Springer; 2018, p. 143-163. DOI: 10.1007/978-981-10-3310-0_8.
17. Pradhan B, Kumar S, Nayak D. From vulnerability to resilience: A systematic review of Odisha's integrated approach to disaster risk reduction. Int. J Disaster Risk Manag. 2025;7(1):519-532. DOI: 10.18485/ijdrm.2025.7.1.30.
18. Pradhan B, Nayak D. Adaptive governance for disaster risk reduction: Lessons from Odisha. Disaster Adv. 2025;18(18):57-64. DOI: 10.25303/1811da057064.
19. Rafliana I, Jalayer F, Cerase A, Cugliari L, Baiguera M, Salmanidou D, *et al*. Tsunami risk communication and management: Contemporary gaps and challenges. Int J Disaster Risk Reduct. 2022;70:102771. DOI: 10.1016/j.ijdrr.2021.102771.
20. Rao GD, Sharma M. Resilience thinking in disaster governance. In: Singh A, editor. International handbook of disaster research. Cham: Springer; 2023, p. 863-874.
21. Sahoo B, Bhaskaran PK. Prediction of storm surge and coastal inundation using artificial neural network: A case study for 1999 Odisha super cyclone. Weather Clim Extremes. 2019;23:100196. DOI: 10.1016/j.wace.2019.100196.
22. Sengupta S, Jha MK. Social policy, COVID-19 and impoverished migrants: Challenges and prospects in locked down India. Int. J Community Soc Dev. 2020;2(2):152-172. DOI: 10.1177/2516602620933715.
23. Sinha A, Srivastava R. Gender aspect of disaster management in India. Int. J Sci Res. 2017;6(7):599-602. DOI: 10.21275/art20175346.
24. Tschakert P, Das PJ, Pradhan SN, Machado M, Lamadrid A, Buragohain M, *et al*. Micropolitics in collective learning spaces for adaptive decision making. Glob Environ Change. 2016;40:182-194. DOI: 10.1016/j.gloenvcha.2016.07.004.
25. Unnithan SLK, Biswal B, Rüdiger C. Flood inundation mapping by combining GNSS-R signals with topographical information. Remote Sens. 2020;12(18):3026. DOI: 10.3390/rs12183026.
26. Walia A. Sustainable development goals and national disaster mitigation fund. In: Disaster management for 2030 agenda for the SDG. New Delhi: National Institute of Disaster Management; 2020.