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Decoding Disaster Risk Governance in India: A Thematic and Multi-Parametric Expert Sentiment Analysis of India's DM Act and Amendment Bill

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Abstract: The Disaster Management (Amendment) Bill, 2024, seemingly represents India's legislative response to the challenge of resolving the policy dichotomy between reactive disaster governance and proactive disaster risk governance (DRG). This study provides a comprehensive, multi-layered evaluation, combining a thematic analysis of the foundational DM Act, 2005, with syntactic and semantic analysis of the Amendment Bill's provisions and mandates. A novel multi-parametric sentiment analysis framework, utilizing Structured Expert Elicitation (SEE) across 18 parameters, quantified the professional reception within India's quasi-federal context. Key findings revealed a statistically significant inverse correlation as greater professional experience correlated with lower agreement on the amendments, signalling deep skepticism regarding implementation feasibility. The analysis identifies a centralization-devolution paradox in its provisions, operational efficacy risks of critical operational devolution as in case of Urban Disaster Management Authorities and the Bill's failure to fully integrate escalating climate-induced risks and establish minimum standards for post-disaster relief, undermining both adaptive capacity and equitable support. The findings underscore that the Bill's success hinges on pertinent statutory and fiscal calibration to bridge the gap between progressive disaster risk governance rhetoric and administrative reality.

Keywords: disaster risk governance; sentiment analysis; disaster law

1. Introduction

Disaster governance, which loosely interprets into governance of the aftermath (a disaster), has evolved from reactive relief-oriented responses to proactive risk reduction strategies [1,2]—disaster risk governance (DRG), driven by the recognition that effective legislation is essential for coordinating multi-stakeholder efforts and embedding risk considerations holistically into development planning. While it is understood that *governing disaster risks* emphasizes on pre-emptive mitigation, vulnerability reduction and systemic resilience, yet a conceptual disparity exists wherein it is equated syntactically as *governing disasters*, which focuses on post-event response, relief, and recovery [3,4]. This distinction, rooted in institutional theory, underscores how legal frameworks can either perpetuate fragmented, event-driven bureaucracies or foster policy coherence across sectors [5].

In India, where disasters exacerbate socio-economic inequities and climate vulnerabilities, dedicated legislation is crucial for aligning national policies with global standards, such as the Sendai Framework for Disaster



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Risk Reduction (SFDRR) and India has always been a leader in this arena. India's Disaster Management Act of 2005 marked an attempted shift towards holistic disaster risk governance. Furthermore, the 2024 Amendment Bill seeks to address specific issues like emerging risks, urban resilience, and data-driven mechanisms. While the foundational Act has been paid some attention to by scholars, the reception of the Act in conjunction with the Amendment Bill among experts remains underexplored. Existing policy analyses often rely on descriptive comparisons or doctrinal reviews, lacking quantitative sentiment metrics to capture nuanced stakeholder perceptions [6,7]. This study bridges this gap by introducing multiparametric sentiment analysis—a mixed-methods approach combining Likert-scale surveys with correlation modeling to quantify expert sentiments across 18 parameters, thereby advancing beyond traditional qualitative assessments.

Drawing on policy coherence frameworks, we evaluate the 2005 Act and 2024 Amendment through the lens of risk governance, benchmarking against existing standards. By surveying 25 purposively selected Indian disaster management experts (scientists, policymakers, and practitioners), we derive replicable insights into the Amendment's strengths and shortcomings, informing future legislative reforms in quasi-federal contexts. This analysis contributes methodologically by demonstrating how sentiment-based metrics can scale for cross-national policy evaluations, enhancing evidence-based design in disaster risk governance. The paper proceeds with a historical overview, methodological details, findings and future implications for global risk reduction.

2. Need of the Study

Effective disaster risk governance requires legislative frameworks that transcend reactive disaster management—centered on response, relief and recovery—to proactive risk governance, which integrates vulnerability reduction, multi-hazard assessment, and policy coherence across scales [8]. Globally, such shifts are imperative for aligning with the Sendai Framework's priorities and other relevant frameworks and standards. In India, the Disaster Management Act of 2005 represented a foundational pivot toward holistic approaches, yet empirical critiques highlight persistent deficiencies like ineffective decentralization and cross-sectoral integration [9], definitional ambiguities and limited local integration [6], which undermine implementation in a quasi-federal context.

The 2024 Amendment Bill, enacted to incorporate new dimensions like emerging risks and data mechanisms, offers potential modernization but seemingly lacks rigorous, stakeholder-informed evaluation. Existing scholarship predominantly employs doctrinal or descriptive analyses of Indian legislation, often neglecting quantitative sentiment metrics or comparative benchmarking against international norms. This leaves a critical gap and this study addresses this lacuna by deploying a section-wise analysis of the foundational Act and multiparametric sentiment analysis—a novel mixed-methods framework blending Likert-scale quantification with correlation modeling—of the Amendment across 18 parameters, drawing on purposively sampled Indian experts. This study attempts to advance policy evaluation methodologies and hopes to inform future legislative reforms for enhanced coherence and resilience.

3. Methodology

This study employs a mixed-methods approach to evaluate India's Disaster Management Act (2005) and its 2024 Amendment Bill, integrating doctrinal legal analysis with quantitative expert elicitation. Doctrinal legal analysis, also known as doctrinal legal research, is a traditional and dominant method in legal scholarship focused on systematically studying existing laws, statutes, case law, and authoritative legal materials to interpret, explain, and justify legal propositions [10,11]. The doctrinal component provides a structured unpacking of legislative texts of the foundational Act against international benchmarks, while the empirical component—multiparametric sentiment analysis—quantifies stakeholder perceptions of the Amendment Bill. Multiparametric sentiment analysis is defined here as a replicable framework that decomposes legislation into thematic parameters, elicits ordinal responses via Likert scales, and models inter-parameter correlations to derive policy insights, extending beyond descriptive reviews by enabling scalable, evidence-based critiques [12].

We conducted a historical-institutional analysis of India's disaster risk management (DRM) evolution, drawing on policy documents and academic literature. We also explored the constitutional basis of the Act through legislative documents and relevant scholarly works. The foundational Act (11 chapters, 79 sections) was dissected section-wise and thematically. Qualitative content analysis and comparative benchmarking was done against international standards, frameworks and well-known legislations from other countries.

The Amendment Bill was similarly unpacked and analysed content-wise to develop 18 critical parameters. This deconstruction led to the development of a parametric framework for sentiment analysis, ensuring granularity in expert assessment. Structured Expert Elicitation (SEE) involved purposive sampling of 25 Indian DRM

professionals (8 scientists/academicians, 7 practitioners, 6 bureaucrats, 4 policymakers), selected via snowballing from various trust-based DRM networks. Criteria emphasized disciplinary diversity (policy, engineering social sciences) and regional representation (North: 7; South: 6; East: 6; West: 6) to mitigate regional bias. A structured questionnaire presented parameters with Act/Amendment excerpts, eliciting responses on a Likert scale. The Likert approach was selected for its ordinal robustness in aggregating nuanced sentiments, enabling parametric tests [13]. Responses were coded numerically, cleaned and analysed in R (v4.3.2) via multiple tests. This yielded a comprehensive understanding, informing interpretive insights on legislative efficacy.

4. Evolution of the Governance Landscape for Disaster Management in India

India's disaster management (DM) governance has transitioned from a fragmented, relief-centric paradigm—rooted in colonial-era responses to famines and earthquakes to a structured, framework supporting pre-emptive (prevention, mitigation and preparedness) measures, influenced by institutional inertia and global normative pressures [14,15]. Under British rule, DM relied on ad hoc mechanisms like Famine Codes (1880) and provincial Relief Commissioners, emphasizing post-event aid over prevention, a legacy persisting post-independence through state-level commissioners and the central “Scarcity Relief Division” (later Natural Disaster Management Division) under the Ministry of Agriculture [15]. Five-Year Plans sporadically addressed hazards (e.g., floods via irrigation programs; droughts through the 1970s Drought Prone Areas Programme), but lacked statutory coherence, rendering DM a discretionary, sectorally siloed activity vulnerable to bureaucratic fragmentation [16].

The 1990s marked a pivotal shift toward proactive governance, catalysed by international initiatives such as the International Decade for Natural Disaster Reduction (1990–1999) and the Yokohama Strategy (1994), alongside domestic triggers like the 1993 Latur earthquake. This prompted central intervention in a traditionally state-dominated domain, culminating in the 1999 High-Powered Committee (HPC) on DM, which recommended a national policy framework. Catastrophic events like the 1999 Odisha super-cyclone and the 2001 Gujarat earthquake exposed systemic inadequacies, accelerating legislative momentum. By 2002, DM was transferred to the Ministry of Home Affairs and finally, the adoption of the Hyogo Framework for Action (HFA) paved the way for the Disaster Management Act, 2005, which institutionalized a multi-tiered architecture—National Disaster Management Authority (NDMA), State DMAs (SDMAs), National Institute of Disaster Management and response forces embedding the core principles of disaster risk management within development planning for holistic risk reduction [17].

The Disaster Management Act's enactment navigates India's quasi-federal structure, where the subject of disaster management is absent from the Seventh Schedule's Union, State, or Concurrent Lists, reflecting its operational rather than enumerated status at Constitution-framing [15]. This omission stems from historical de-prioritization and reliance on colonial tools, relegating primary competence to states (e.g., via List II entries on public health, agriculture, and water). The Union invoked Entry 23 of the Concurrent List (“Social Security and Social Insurance; Employment and Unemployment”) to legitimize the Act, enabling central oversight while mandating state compliance (Article 256). The Second Administrative Reforms Commission (2008) and HPC reports critiqued this ambiguity, advocating concurrent subject status to balance federal coordination with subsidiarity. Empirically, this has fostered hybrid governance; states often lead mitigation but central mechanisms, e.g., National Disaster Response Force (NDRF) deployment dominates response and relief, highlighting tensions in resource allocation and accountability.

The Disaster Management (Amendment) Bill, 2024, intends to represent a targeted evolution in India's governance landscape related to disaster risk management, addressing persistent gaps in the 2005 foundational Act by incorporating contemporary imperatives such as emerging risks, urban resilience and data-driven approaches [18]. The Amendment refines definitions, mandates risk registers and national databases for evidence-based planning and empowers local entities like Autonomous District Councils and Urban Disaster Management Authorities to foster subsidiarity and coordination. This reform, intent-wise, advances proactive risk governance.

5. Unpacking the Disaster Management Act of 2005

The 79 sections of the DM Act can be clustered into core functional areas that define the legal and institutional mandates across the Union, State, and District levels. The same is illustrated in Table 1.

Table 1. Section-wise unpacking of the DM Act of 2005.

Sections	Content Description (Clustered)	Thematic Focus
Section 1–2	Nomenclature & Definitions: Scope of applicability, date of commencement, and definitions of key terms, including “disaster,” “disaster management,” and “capacity building”.	Legal Provisions & Scope
Sections 3–13	National Disaster Management Authority (NDMA): Establishes the NDMA (chaired by the Prime Minister), outlining its composition, roles, responsibilities, and powers.	Institutional Arrangement
Sections 14–24	State Disaster Management Authorities (SDMAs): Details the establishment, composition (headed by the Chief Minister), and functions of the SDMAs.	Institutional Arrangement
Sections 25–34	District Disaster Management Authorities (DDMAs): Covers the establishment, formation, structure (led by the District Collector/Magistrate), powers, and responsibilities of the DDMAs.	Institutional Arrangement
Sections 35–40	Government Responsibilities: Outlines the specific obligations of the Central Government for establishing warning systems, effective communication, continuous capacity building, preparedness, response, and finance distribution.	Response & Preparedness
Section 41	Local Authorities: Mandates the responsibility of local authorities (including Panchayats/municipalities) for capacity building, resource adequacy, and developing/implementing disaster management plans.	Devolution of Authority
Sections 42–43	National Institute of Disaster Management (NIDM): Lays the foundation for NIDM to lead national training, research, and capacity building efforts.	Institutional Arrangement
Sections 44–45	National Disaster Response Force (NDRF): Establishes the NDRF and defines its functions and deployment mechanisms.	Response Mechanism
Sections 46–50	Financial Mechanisms: Establishes the National Disaster Response Fund (NDRF) (Section 46), National Disaster Mitigation Fund (NDMF) (Section 47), and State/District response funds (Section 48). Sections 49–50 cover book-keeping and auditing.	Financial Arrangement
Sections 51–60	Penal Provisions and Offences: Includes punishments for offences such as obstruction of personnel, dissemination of misinformation, and failure of duty by a government officer.	Penal Provisions & Accountability
Sections 61–79	Miscellaneous Provisions: Covers practicalities such as compensation and <i>ex gratia</i> relief, delegation of powers, and protection of actions taken in good faith.	Legal Provisions & Accountability

5.1. Contextual Shift: From Relief to Risk Reduction

Prior to 2005, India’s institutional structure for handling calamities was overwhelmingly response-driven [15,19]. Operations were coordinated ad hoc by the District Collector/District Magistrate at the local level and the State Relief Commissioner at the state level, focusing primarily on rescue, relief, and post-event financial aid.

The DM Act explicitly aimed to introduce a paradigm focused on “prevention-mitigation-based holistic disaster management”. This change in policy language reflects an acknowledgement of global shifts in disaster management thinking. The legislation provides the basis for comprehensive planning, organizing, coordinating, and implementing measures encompassing preparedness, capacity-building, mitigation and rehabilitation.

5.2. Critique of Core Definitions

The legal efficacy of the DM Act is intrinsically linked to the adequacy of its foundational definitions. The definitions of ‘disaster’, ‘disaster management’ have been heavily critiqued. Not only have the Second Administrative Reforms Commission advised on revising these shortcomings [19] but many academics, over the years [20,21] have also discussed and reported the same. In fact,. These definitions fail to incorporate emergent and contemporary issues like climate change or management of systemic disaster risks, which in turn renders effective DRR mainstreaming challenging, as many cascading or slow-onset events fall outside the ambit of the definitions. The COVID-19 Pandemic stands out as a prominent example [22,23]. Additionally, the statutory framework does not adequately integrate chronic challenges such as climate change adaptation (CCA), environmental degradation, and deep-seated socio-economic vulnerabilities into its core legal purview, as far as elucidation of the definitions are concerned.

5.3. The Flawed Paradigm Shift

A key finding is the significant divergence between the Act's progressive conceptual adoption of DRR terminology and the subsequent failure of its epistemic integration into the operational culture of governance [20]. The Act adopted the language of prevention and mitigation but did not successfully enforce the necessary cultural shift away from viewing disasters as unavoidable, sudden "Acts of God" (natural events) to recognizing them as social phenomena arising from human-environment interaction and systemic vulnerabilities. The consequence of this failure is a persistence of the old reactive operational mindset. This is evidenced by the top-down nature of implementation of policies, approval seeking processes, the systemic neglect of allocating human and financial resources. This conceptual shortcoming is practically manifested in how state and local plans assess risk. Instead of focusing on the differentiated social and economic capacities of communities to cope with shocks (a vulnerability analysis), local plans often merely conflate vulnerability with hazard exposure, simply demarcating areas where disasters have previously occurred. This retrospective approach fundamentally undermines genuine DRR efforts, shifting the onus completely on disaster response, relief and recovery. This policy-action discordance demonstrates that the paradigm shift remains largely rhetorical, resulting in what some analysts term "policy sloganization" [24,25].

5.4. Institutional Framework: Strong yet Weak

Despite the establishment of a robust organizational chart, the institutional framework suffers from significant internal friction and capacity deficits [26]. These drawbacks include the encroachment of authority by the Ministry of Home Affairs (MHA), which historically controlled disaster response, into the NDMA's coordination mandate, confusion regarding roles, and chronic structural anomalies. Furthermore, a special task force was constituted in 2013 to address bottlenecks, eventually leading to a legal amendment that significantly downgraded the status of the NDMA Vice-Chair and members to that of a Secretary. This systematic weakening diminished the NDMA's political and administrative leverage, further confirming that institutional entities at all levels were frequently constrained by structural issues, inadequate infrastructure, and a lack of human resources commensurate with their responsibilities [27]. The downgrading of the NDMA's leadership status illustrates that while the Act created a strong structure, political resistance ensured a weak core. The MHA, rooted in the traditional relief-focused mandate, retained effective coordination control during crises, subordinating the NDMA, whose primary statutory mandate was focused on proactive mitigation. This implicitly reinforces the national preference for reactive governance—disaster governance—over disaster risk governance.

5.5. Devolution or Centralization: The Top-Down Nature of Authority and Responsibility

The DM Act operates within India's quasi-federal structure, yet its implementation has demonstrated a pronounced tendency toward centralization [28], fundamentally undermining the stated goal of community-based resilience. The Act is fundamentally top-down, consolidating the Union Government's authority in policy formulation and execution. State governments are mandated to adhere to the policy guidelines set forth by the NDMA. This centralized structure is seemingly attractive but fails miserably to ensure effective local level disaster risk reduction. For example, the District Disaster Management Authority (DDMA) is practically the operational linchpin at the local level. However, this authority often lacks true autonomy or sufficient resources [29], resulting in District Disaster Management Plans (DDMPs), which are often bureaucratic compilation of available response resources and a "glorified telephone directory" focused on contact lists, rather than strategic conceptual DRR planning. The centralized framework effectively preserves bureaucratic control, even if it undermines the principle of devolution necessary for effective DRR tailored to specific local contexts, vulnerabilities, and cultures.

Additionally, the Act "overlooked the role of the local community," limiting their involvement primarily to assisting other agencies during a crisis. First responders, often drawn from local, low-income communities (such as daily wage workers), are frequently unable to attend mandated training sessions due to the financial loss incurred from missing a day's pay. The administrative mechanism fails to account for these localized capacity differences, demonstrating a stark disconnect between top-down mandates and the practical challenges of ground-level resilience building [30].

5.6. The Financial Framework: Disparity between Response and Mitigation Funding

The DM Act established a clear dual-track system for financing disaster risk management, but the implementation of this system has structurally favoured reactive measures over proactive investment, proving to be the clearest manifestation of the failed paradigm shift [19]. The most critical financial failure has been the

protracted non-constitution and non-operationalization of the National Disaster Mitigation Fund (NDMF) and its corresponding state funds for many years following the Act's introduction. The lack of a dedicated mitigation fund meant that proactive work often depended on uncertain or flexible allocations from other centrally sponsored schemes, which lacked a specific DRR mandate. This historical funding landscape was inherently detrimental to a proactive vision, constraining local administrators who required stable resources to undertake visionary, long-term mitigation actions. The systemic preference for funding response over mitigation is explained by the political economy of disaster relief. Immediate relief and rehabilitation provide rapid, highly visible political benefit and attract media and executive attention [31]. Conversely, mitigation investments—such as strengthening building codes, long-term land-use planning, or resilient infrastructure projects—are cost-effective but politically invisible in the short term.

5.7. Response Mechanisms and Legal Provisions for Preparedness

The efficacy of the specialized response mechanism, epitomized by the National Disaster Response Force is widely acknowledged as a significant success. This multi-skilled force has professionalized rescue and relief operations across the country. Furthermore, the 2024 Amendment Bill seeks to bolster this framework by providing statutory enabling for the constitution of State Disaster Response Forces (SDRFs), thereby enhancing localized response capabilities.

The COVID-19 pandemic, however, served as an unprecedented stress test for the DM Act, 2005. While the Act's legal utility in providing a centralized, coordinated command structure during a national crisis was demonstrated, the massive scale exposed critical vulnerabilities [22]. Coordination bottlenecks emerged between the national and state authorities, and delays in resource disbursement hindered timely local interventions. The crisis also highlighted gaps in the legal framework regarding specific public health law and the complex challenge of balancing centralized control with ensuring health equity and local rights during a biological disaster [23,24].

Interestingly though, in the operational framework of the Act—the National Disaster Management Plan (NDMP, 2019) the word 'response' is heavily emphasized upon. The plan contains 339 mentions of "response" but only four of "mitigation," demonstrating the institutional priority [20].

5.8. Accountability: The Paradox of Self-Policing

Despite the legal rigor of penal provisions in the Act, the practical implementation of official accountability remains weak [7,15]. The effective prosecution of offenses under Sections 55 and 56 requires the bureaucracy and the political executive, the very entities responsible for the systemic failures, to initiate investigations and action against their own leadership. This intrinsic conflict of interest creates a paradox of self-policing. Consequently, prosecution rates for official misconduct related to systemic failure remain low, rendering these penal provisions largely symbolic rather than effective systemic deterrents against administrative neglect.

5.9. Accountability: The Judicial Nudge

A critical element ensuring the operability of the DM Act is the role of the judiciary, which has frequently intervened to compel executive compliance, compensating for political and bureaucratic inertia [15]. In the landmark case of *Swaraj Abhiyan vs. Union of India & Ors.* (2016), the Supreme Court was forced to intervene, noting the Union Government's failure to draft the National Plan and establish the National Disaster Mitigation Fund, a decade after the Act's passage, thereby compelling foundational compliance. Subsequent judicial directives in cases such as *Gaurav Kumar Bansal v. Union of India* (2017) and *Russel Joy v. Union of India* (2018) enforced the implementation of preparedness measures, including the formation of specialized sub-committees to monitor risks associated with critical infrastructure like the Mullaperiyar Dam. The Act's status as codified legislation, therefore, provides a necessary legal basis for external accountability, often through judicial compulsion rather than executive initiative.

6. Unpacking the Disaster Management Amendment Bill 2024

The Disaster Management (Amendment) Bill, 2024, as already stated, represents a significant effort to modernize India's disaster risk governance framework established by the Disaster Management Act, 2005 (DM Act, 2005). The Bill aims to integrate global good practices, notably the principles of DRR and "Build Back Better", much in compliance of the SFDRR. The following sections provides a thorough, detailed and thematic analysis of the amendments, scrutinizing the legal, institutional, financial, and federal implications of the proposed changes.

6.1. The Integration of Contemporary Disaster Risk Reduction Terminology

A major conceptual advancement is the explicit legal incorporation of contemporary DRR terminology. The Bill clarifies that the expression “disaster management” is now explicitly inclusive of “disaster risk reduction”. This step, semantically, aims to include the practice of analysing and managing the causal factors of disaster through three main pathways: reduced exposure to hazard, reduced vulnerability of people and assets and improved preparedness and capacity. Additionally, the Bill introduces detailed definitions for core DRR concepts that formalize a probabilistic approach to disaster risk. Furthermore, explicit definitions are provided for “exposure,” “vulnerability,” “hazard,” and “resilience”. This legislative overhaul legally binds India’s disaster governance structure to the proactive, risk-informed pathways.

However, despite this progressive terminological shift, a subtle policy deviation is evident. The Bill retains the umbrella term “disaster management” in the Act’s title and primary mandates, rather than fully adopting the internationally recognized term “disaster risk management”. This retention suggests the government is pursuing an incremental legal reform, integrating new concepts into the existing structure, rather than enacting a comprehensive institutional and conceptual transformation that a full adoption of the DRM paradigm would entail.

6.2. The Scope of Disasters: Inclusion, Exclusion, and Gaps

The Bill modifies the operational scope of disaster management by integrating “recovery” alongside the existing aspects of rehabilitation and reconstruction. This aligns the Act with global principles advocating resilient recovery, often termed as “Build Back Better”. Mitigation is also expanded to include the provisioning of “disaster-resilient infrastructure”, cementing the link between mitigative investment and critical development projects.

A point of contentious legal exclusion concerns the definition of “man-made causes”. The Bill inserts an explanation explicitly stating that “man-made causes” does not include any “law and order related matter or situation”. While the legislative intent behind this exclusion is likely to simplify jurisdictional clarity and prevent the politicization of standard crises by avoiding overlap with law enforcement duties, this decoupling introduces a significant policy challenge. Disasters, particularly urban and cascading events, frequently arise from the systemic failure of public administration or governance weaknesses intersecting with a natural or man-made hazard. By legally decoupling disaster risk management from law-and-order situations, the Act potentially narrows the scope for holistic accountability for systemic governance failures leading to disasters.

6.3. Emerging Risks and Climate Change Ambiguity

The Bill attempts to address contemporary threats by mandating the National Authority to take periodic stock of the entire range of disaster risks, specifically including “emerging disaster risks”. These emerging risks are explicitly defined to include those that may occur in the future due to “extreme climate events” and other factors. This statutory recognition of climate change as a driver of future hazards demonstrates an awareness of the scientific imperative for climate-adaptive planning.

However, this conceptual recognition is critically undermined by an operational gap. Despite the Bill’s acknowledgement of climate drivers, it fails to expand the list of notified disasters to include specific, increasingly frequent, climate-induced hazards like heatwaves. By not formally categorizing such events as ‘notified disasters,’ the system prevents them from automatically triggering mandatory relief protocols and standard funding allocation mechanisms under the Act, creating a regulatory dichotomy where climate risks are acknowledged conceptually but not fully actioned operationally. In the government’s defence, the governance machinery allows every State to take stock of their prevalent hazards and notify them as disasters for them, if necessary. However, this should not deter the National Authority to take up an exercise to revise the list of notified disasters.

6.4. Periodicity of Reviewing Disaster Management Plans

The periodicity for reviewing and updating disaster management plans has been substantially altered. The mandated frequency for the National Plan and State Plan review changes from annually (in the original Act) to review once every three years and update at least once every five years. Similarly, the District Plan review is relaxed from annually to “at least once in every two years or earlier as necessary”. While easing the mandated review cycle significantly reduces the administrative burden on central and state authorities, this modification is fundamentally inconsistent with the Bill’s own recognition of rapidly emerging risks driven by extreme climate events. In an environment of accelerating climate volatility, locking strategic plans into a triennial or quinquennial review cycle risks undermining adaptive planning. Such a lengthy cycle may render risk assessments and preparedness protocols obsolete long before the next formal legislative update. Policy effectiveness requires

mandating more frequent, possibly annual, risk assessment updates at the operational district level to ensure dynamic adaptation of preparedness plans.

6.5. New Mandates for Accountability and Assessment

The role of the National Authority is expanded to include specific accountability measures. The National Authority is mandated to undertake periodic disaster preparedness assessment of each State. Furthermore, following a “severe disaster” in any State, the National Authority must undertake a Post-Disaster Audit of preparedness and response activities.

A challenge in the implementation of the Post-Disaster Audit lies in the ambiguous terminological definitions surrounding disaster severity. The existing frameworks utilize classifications (such as L1, L2, L3) to categorize intensity and required response levels. The term “severe disaster” needs to be clearly standardized and aligned with these existing frameworks to ensure consistent triggering of the mandated audit requirement.

6.6. The Urban Disaster Management Authority (UDMA) & Autonomous District Councils

A crucial, city-centric amendment is the insertion of new Section 41A, which empowers State Governments to constitute a separate Urban Disaster Management Authority (UDMA) for State capitals and all cities having a Municipal Corporation (excluding the National Capital Territory of Delhi and Union Territory of Chandigarh). This provision is highly significant as it legally recognizes that complex, high-density urban environments face unique hazard profiles that necessitate dedicated planning and management structures distinct from the standard approach. The UDMA is designed to integrate governance layers, with the Municipal Commissioner serving as the Chairperson and the District Collector as the Vice-Chairperson. The UDMA’s primary function is the preparation and implementation of the Urban Plan (UP), subject to approval by the State Authority.

Despite the strategic importance of the UDMA, institutional concerns persist. There is ambiguity surrounding the supervisory roles within the complex hierarchy. Furthermore, the lack of dedicated provisions for mandated funding and training raises the threat of this becoming an unfunded mandate with subpar resources. Urban Local Bodies (ULBs) often face severe capacity deficits and without dedicated resources and trained personnel, the effectiveness of the UDMAs in planning and implementation will be critically limited.

In a parallel move towards operational devolution, the Bill amends the definition of “local authority” to explicitly include Autonomous District Councils. This recognition promotes local empowerment and encourages decentralization of disaster risk management to councils in tribal and scheduled areas. The legislative acknowledgement of these regional governance bodies is a positive step toward ensuring local context is integrated into disaster response. However, similar to the UDMA critique, the efficacy of this inclusion is dependent on sufficient resource allocation and capacity building, as these councils often lack the necessary resources for effective implementation of disaster management protocols.

6.7. The Centralization Critique and Federalism

Despite the measures for devolution at the urban and district levels, the overall direction of the DM Bill 2024 is towards strengthening centralization. The Central Government appears to be granting itself excessive rulemaking power through delegated legislation, allowing it to define the procedure and functions of key bodies and the terms of service for personnel. This potentially overlaps with legislative powers traditionally reserved for States under the constitutional framework (Entry 23 of the Concurrent List being the traditional basis for the DM Act). This perceived centralization undermines the spirit of cooperative federalism by restricting the necessary operational flexibility of state and district administrations. This centralization is underscored by the amendment to Section 56, which grants the State Government power to take disciplinary action against non-performing officers, but crucially, this action can be taken on the directions given by the Central Government. This power to direct administrative action confirms a powerful central oversight mechanism regarding performance during crises, thereby reinforcing the centralized accountability chain.

6.8. Formalization of Financial Architecture & Accountability through Financial Data and Audit

The financial amendments ensure that the application of funds—not just Central funds (NDRF, NDMF) but also the State Disaster Response Fund (SDRF) and State Disaster Mitigation Fund (SDMF) must be applied strictly in accordance with guidelines laid down by the Central Government in consultation with the National Authority. By mandating adherence to Central guidelines for the application of State funds, the Bill institutionalizes the Central Government’s fiscal dominance in disaster management. While this ensures standardization and financial

accountability, it significantly limits the financial autonomy and necessary flexibility states require to respond quickly and adaptively to unique regional disasters that may not fit central prescriptive guidelines.

To enhance financial transparency and evidence-based planning, the Bill introduces the concept of a “disaster database”. The mandated content of this database explicitly includes fund allocation detail and expenditure information, alongside preparedness and mitigation plans. This legislative mandate for integrated financial data is a major step toward achieving financial transparency and accountability, ensuring that resource deployment is tracked meticulously. This database, coupled with the National Authority’s new mandate to conduct Post-Disaster Audits, links resource expenditure directly to outcomes and preparedness metrics, promoting a feedback loop for future evidence-based mitigation planning. Concerns remain, however, regarding potential overlap with existing international data collection platforms (like the Sendai Framework Monitor and its Indian version) and the need to streamline data collection standards to avoid resource-intensive duplication.

6.9. The Legal Status of Relief and the Compensation Debate

Bill aims to transition from “compensation” models to “structured relief mechanisms”. This is formalized by amending Section 61, which relates to prohibiting discrimination in aid, to omit the words “compensation and”. Additionally, Sections 12 and 19 of the original Act, which mandated the National and State Authorities to lay down detailed guidelines for the minimum standards of relief and compensation, are omitted entirely. This omission could be interpreted as a significant policy retreat from establishing disaster relief as a legal entitlement. By removing the statutory obligation to lay down guidelines for minimum standards, the Bill institutionalizes the current reality where disaster relief is often treated as an obligation or ex-gratia assistance. This ambiguity permits significant variations in the nature and extent of government aid across different states and regions, challenging the principle of equitable support and standardization for disaster victims. The Bill only retains the power for the National Authority to recommend guidelines for minimum standards of relief without mandating these standards as a legally enforceable floor.

6.10. Formalizing State-Level Response Capacity

The Bill makes enabling provision for State Governments to formally constitute a State Disaster Response Force (SDRF) for specialist response. This institutionalizes SDRFs, ensuring they function as permanent, dedicated units complementary to the National Disaster Response Force (NDRF). This formalization enhances immediate state-level readiness and ensures better synergy with NDRF efforts. However, the effective establishment and maintenance of SDRFs require substantial, sustained investment in specialized training, equipment and infrastructure. The inherent financial risks are high and underfunded states may struggle to maintain readiness and efficiency without dedicated and consistent funding mechanisms, which must be clearly defined within the centralized financial architecture.

6.11. Enhanced Executive Powers in Multi-State Crises

The National Executive Committee (NEC) is granted considerably expanded powers to manage complex disasters affecting more than one State. In such multi-State events, the NEC can issue wide-ranging directions, including measures for coordination between concerned States, deployment of specialized teams and resources, requisitioning necessary resources and technical capacities from both public and private entities, implementation of containment measures, defined as actions to control or slow the spread of a disaster from its focal area.

The broad power granted to the NEC to mandate “containment measures” and requisition assets from the private sector demonstrates a legislative intent to impose swift, centralized control when regional boundaries complicate response, perhaps a lesson learnt from COVID-19. This legal authority enables the NEC to rapidly mobilize critical resources and override state administrative hurdles, prioritizing national response efficiency over immediate regional autonomy during escalating crises.

6.12. Minor Penalties for Public Non-Compliance

A new Section 60A has been inserted to empower the Central or State Government to issue notifications requiring any person to take specific actions, or refrain from taking actions, necessary for reducing the impact of a hazard. This provision is backed by a financial penalty: contravention of such a directive is liable to a penalty not exceeding ten thousand rupees (₹10,000). This provision introduces a fast, low-level financial deterrent aimed at ensuring quick compliance with immediate, crucial safety directives (e.g., evacuation orders, public health measures, or localized movement restrictions) during a hazardous event.

6.13. Enhanced Bureaucratic Accountability

The Bill strengthens the accountability mechanism for government functionaries during a crisis by amending Section 56. It specifically empowers the State Government to initiate disciplinary action under relevant rules against any officer who ceases, refuses to perform, or withdraws from duties, or is guilty of insubordination or dereliction of duty during a disaster. This amendment directly addresses concerns regarding bureaucratic inertia or non-cooperation during critical phases of disaster response. By creating a clear legal basis for rapid administrative action, it aims to reinforce the discipline and commitment of the state machinery. Importantly, the provision dictates that the State Government must ensure its disciplinary action is not inconsistent with the directions given by the Central Government. This reinforces the centralized command structure, ensuring that administrative performance in a crisis remains accountable to national-level direction.

7. Guided Sentiment Analysis through Structured Expert Elicitation

The evaluation of the Disaster Management (Amendment) Bill, 2024 (DM Bill 2024), moves beyond purely textual critique, as presented in the previous section, to incorporate quantitative analysis of professional sentiment. This section details the methodology employed for Structured Expert Elicitation (SEE) and presents a robust analysis of the resultant data, offering granular insights into the policy reception of the Bill among India's disaster risk management specialists.

7.1. Parametric Decomposition and Factor Identification

The first phase involved a rigorous syntactic and semantic analysis [32] of the DM Amendment Bill 2024, as presented in the previous section, and the parent Disaster Management Act, 2005. This process systematically decomposed the legal text into key operational and conceptual factors that either influence or alter the existing disaster risk governance framework. This decomposition yielded 18 critical parameters, as shown in Table 2, that were organized into four thematic categories (Figure 1), ensuring that the subsequent assessment captured the breadth of the Bill's impact, from high-level institutional architecture to technical resource requirements.

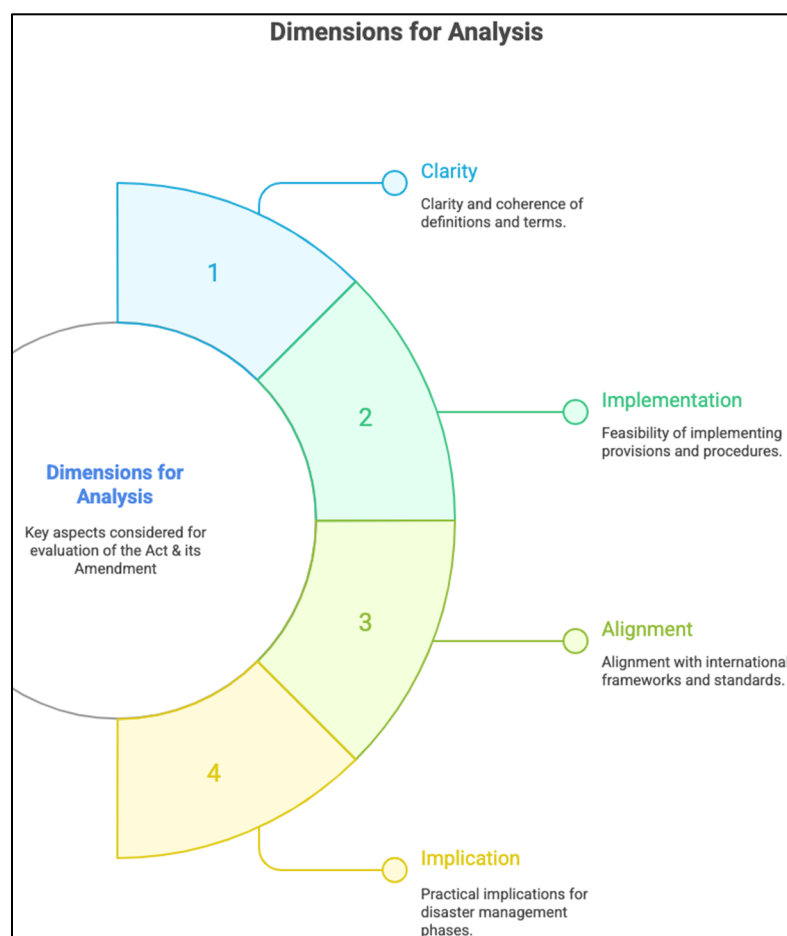


Figure 1. Dimensions used for analysis.

Table 2. Semantic and Syntactic Decomposition to Develop Parameters.

Code/Theme	Description	Parameters	Citation
EXP	Years of experience of the respondent	Corroborating the experience of the respondent with the clarity, implementation, alignment and implication of the Bill	
IMP	Overall impression of the Amendment Bill	Overall impression of the bill	
TRMn (Terminology)	Conceptual foundations, definitions, and scope of disaster management.	Usage of the term ‘disaster assessment’, Inclusion of the term ‘recovery’	[33,34]
		Promotion of ‘disaster management’ as the umbrella term	
		Usage of words like ‘severe’, ‘major’ to describe severity of disasters	
		Usage of ‘compensation’ or ‘ex gratia’	
Gn (Governance)	Institutional arrangement, devolution, centralization, and planning cycles.	Inclusion of Autonomous District Councils	[35,36]
		Setting up Urban Disaster Management Authority	
		Guidelines for DM Plans at all levels	
		Revision and updation of DM Plans	
		Quantum of task upon National and State Executive Committees	
LAWn (Law & Order)	The intersection and exclusion of law and order matters from the Act’s purview.	Focus on state specific disasters	[37,38]
		Penal provisions in the Act	
		Exclusion of ‘law and order’	
RRn (Risk Register)	Technicalities related to data infrastructure, risk assessment, and required resources.	Integration of law and order aspects	[39,40]
		Practicality	
CCn (Climate Action)	Integration of climate change impacts and accounting for damage and loss.	Required resources	
		Inclusion of Climate Change	[41,42]

These 18 parameters were translated into a structured questionnaire, forming the basis of the elicitation instrument used to survey specialized opinion.

7.2. Structured Expert Elicitation (SEE)

The SEE involved a purposive sample of 25 Indian Disaster Risk Management (DRM) professionals. Niche fields like disaster risk management often involve expert decision-makers or organizations, where the total knowledgeable population is inherently limited. Surveys in these contexts routinely use small samples, sometimes as low as 6–19 respondents, especially when surveying leaders or specialized groups [43]. When the population is small and well-defined, a sample of 25 can represent a significant proportion, providing meaningful insights despite wider margins of error [43,44]. Studies in disaster management and emergency response frequently use small groups for surveys, focus groups, or decision-making experiments, especially when targeting professionals or unique organizations. Methodological literature supports small samples in such cases, provided the limitations are acknowledged and the sample is as representative as possible [43,45,46]. Small samples are appropriate when the goal is to capture in-depth, expert knowledge rather than broad public opinion.

The selection criteria focused on ensuring disciplinary diversity and balanced regional representation, utilizing a snowballing technique from trust-based DRM networks. The cohort comprised 8 scientists/academicians, 7 practitioners, 6 bureaucrats, and 4 policymakers. Regional balance was achieved with 7 experts from North India, 6 from South India, 6 from East India, and 6 from West India, mitigating potential regional bias in the final assessment [46,47]. Collectively, these respondents contributed over 100 years of cumulative experience to the evaluation.

Experts were presented with a structured questionnaire incorporating the 18 parameters, alongside relevant excerpts from the Act and the Amendment Bill. Responses were collected using a Likert scale, chosen for its ordinal robustness, which facilitated the aggregation of nuanced sentiments and enabled subsequent parametric testing. The coded numerical responses were cleaned and analysed using R software (v4.3.2), focusing on tests for internal consistency and correlation.

7.3. Statistical Analysis

The statistical analysis yielded significant insights into the professional reception of the DM Bill 2024, highlighting areas of consensus and major policy contention. The internal consistency of the gathered dataset was assessed using Cronbach’s alpha (α). The result, $\alpha = 0.88$, indicates a high degree of reliability and coherence among the responses, confirming the dataset is robustly suited for correlational and descriptive analysis [48].

Given the ordinal nature of the Likert-scale data elicited from the experts¹⁹, the correlational analysis was computed using the Spearman’s rank correlation coefficient. This non-parametric approach is suitable for quantifying the monotonic relationship between ranked variables and provides a robust measure of association for ordinal survey data. This yielded a comprehensive understanding, informing interpretive insights on legislative efficacy.

8. Guided Sentiment Analysis

8.1. Insights from Descriptive Statistical Analysis

Descriptive analysis provided qualitative validation, highlighting nuanced perspectives across different professional demographics. A summary is given in Table 3.

Experienced practitioners, whose work directly involves field implementation and bureaucratic navigation, exhibited a “more stern view” of the Bill compared to experienced academicians, indicating a reality check on the administrative feasibility of the amendments. A marked observation was the high degree of “cohesion in thought” among young professionals, suggesting a uniform perspective on the principles of modern disaster risk management. Conversely, mid-career professionals displayed “more diversified opinions,” likely reflecting the diverse, complex compromises and competing priorities they encounter in managerial and execution roles.

The following table contains a description of how the experts perceived specific aspects of the Amendment Bill.

Table 3. Descriptive representation of reception of specific aspects of the Amendment Bill.

On the Topic of	What the Experts/Respondents Said
Overall impression of the bill	While 57.7% agreed that the amendment is a much needed upgrade, 11.5% thought that the changes were cautiously drafted and 19.2% opinionated that it was just a routine revision
Explicitly keeping ‘law and order’ issues outside the purview of the Act	50% thought that this might lead to further issues in the future. However, 46.2% respondents felt that this exclusivity is also a formal process of integrating law and order within the prevalent mechanism
Introducing the concept of ‘Disaster Database’ and terms like ‘Disaster Assessment’ and ‘Risk Register’	57.7% experts felt that the term ‘disaster assessment’ is technically ambiguous and can mean post disaster needs assessment or even disaster risk assessment 61.5% respondents felt that in a country as vast as India, a more detailed approach towards developing and maintaining risk register is required. 58.3% experts believe that many states do not have the adequate resources (human and financial) to main such database or register
Introduction of the word ‘recovery’ in the understanding of reconstruction and rehabilitation	50% of the respondents did not feel confident about the use of the word as ‘recovery’ has a wide and broad connotation which can be narrowly interpreted while practical implementation
‘Disaster Management’ being helmed as the umbrella term, subsuming concepts like disaster risk reduction	57.7% respondents agreed that this would be helpful in driving away conceptual dichotomies which often led to confusion
Inclusion of the Autonomous District Council	50% respondents agreed that this is a welcome decentralisation while 34.6% respondents presented their doubts over required capacity building, resources etc
Setting up of Urban Disaster Management Authority	While 61.5% agreed this to be a good step, 38.5% intended to wait and see how things play out in reality as there are pertinent issues of jurisdiction, authority, financial devolution etc
Having guidelines for DM Plans at different levels.	42.3% respondents believe that this would only increase the number of disaster management related documents without the urge of actually implementing plans. However, 57.7% agreed that this could be a good progress

The Bill repeatedly using terms like ‘severe’ or ‘major’ disasters or ‘threatening disaster situation’	53.8% of the respondents strongly objected to this as these words are not in line with existing nomenclature of levels of disaster
Reviewing Plans in 3 years and updating it in 5 years.	While 50% said that this is a good step, 46.2% disagreed saying that the riskscape is too volatile and dynamic for a revision to be done across 3 & 5 years
Too much task being bestowed upon the National and State Executive Committees?	53.8% respondents expressed their contention as these are influential decision making positions and it is pertinent that well-suited professionals are appointed as members without political or bureaucratic overbearing
Climate change impacts and Damage & Loss not finding space in the Amendment Bill	76.9% respondents agreed that the Amendment Bill was a perfect opportunity to integrate the pressing issues of climate change but unfortunately the opportunity is now missed
The Bill focussing on State Specific Disasters	69.2% experts said that if the Amendment Bill had done that, it would have given the relevant authorities a tool to notify state specific disasters more prominently
Penalties and punishments	73.1% experts believed that the amendment could have strengthened the aspects of penalties and punishments, but unfortunately it did not
Compensation or Ex gratia	While 42.3% respondents wanted to continue with ‘ex gratia’, 26.9% agreed to move on to the compensatory approach as proposed in the Amendment Bill

8.2. Correlational Analysis and Policy Contention

Correlational analysis provided deep insights into the expert cohort’s disposition towards the Amendment Bill, revealing specific policy areas where professional consensus indicates potential future administrative or operational challenges. Figure 2 illustrates the result of the correlation analysis. The X-axis depicts the strength as well as the direction of the correlation; shades of blue indicates positive correlation, while shades of red depicts negative correlation. The abbreviations used in the Y-Axis is based on the parameters of Table 1.

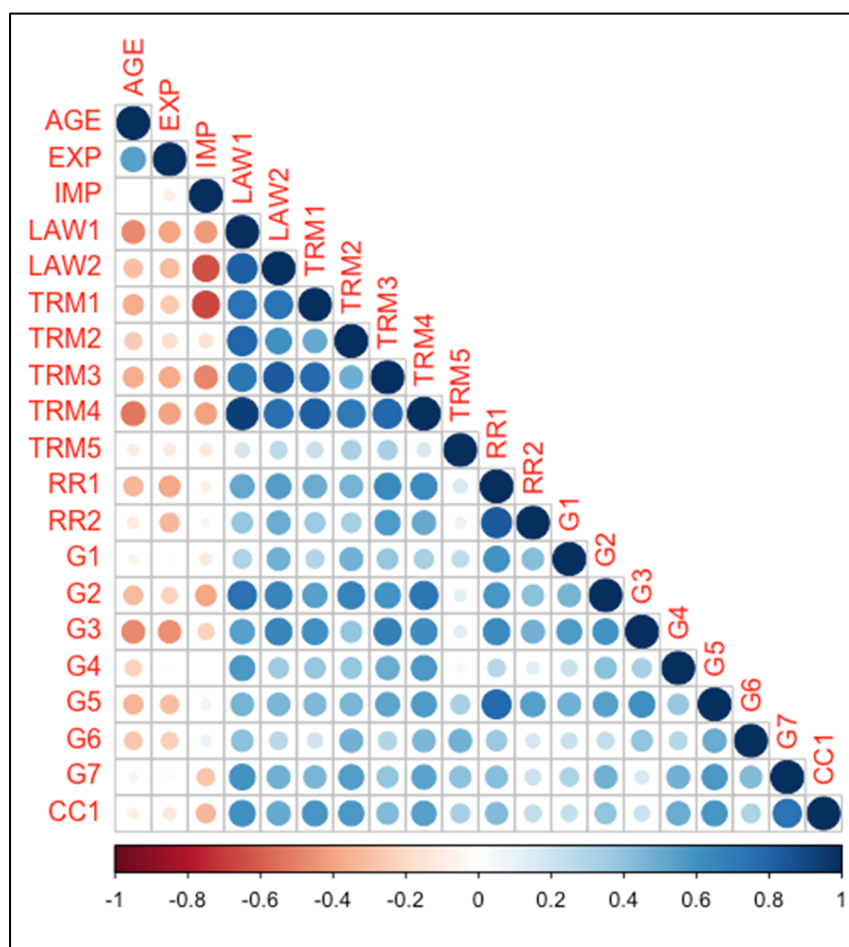


Figure 2. Correlogram as obtained through statistical analysis of the responses from the participants.

8.2.1. Inverse Correlation with Experience

A significant and consistent finding was the inverse relationship between professional experience and agreement with the proposed amendments. The data indicated that “higher the age, lower is the agreement of the respondents to the changes in the amendment,” and similarly, “higher the experience, lower is the agreement on the factors of the amendment”. This statistically significant trend suggests that seasoned professionals, possessing deeper institutional memory and practical exposure to field challenges, expressed greater skepticism regarding the efficacy or implementation success of the legislative changes.

This skepticism can be interpreted as empirical evidence of institutional and cultural inertia. Experts with long experience in India’s quasi-federal disaster landscape are likely attuned to the persistent administrative reality where proactive, long-term risk reduction (Disaster Risk Governance) is frequently subordinated to politically visible, immediate relief and recovery (Disaster Governance). The low agreement among experienced experts thus signals a deep-seated professional doubt that the new legal text alone is sufficient to overcome the historical preference for reactive governance, especially where implementation requires extensive fiscal devolution and bureaucratic culture change.

8.2.2. Negative Overall Impression

The factor representing the experts’ Overall Impression (IMP) of the DM Bill 2024 was found to be negatively correlated with almost all 18 tested parameters. This pervasive negative correlation confirms that the Amendment Bill, despite its forward-looking terminology, failed to secure a uniformly positive reception among the specialist community. Specific factors driving this negative sentiment included the divisive exclusion of law and order aspects (LAWn), ambiguity in the usage of terms like ‘Disaster Assessment’ (TRM1), and the perceived omission of crucial climate action dimensions (CCn).

8.2.3. Legal Exclusion and Social Conflict

The Amendment Bill’s exclusion of “law and order related matter or situation” from the definition of “man-made causes” (LAW1) was a highly contentious issue, failing to resonate with the collective expert opinion. Crucially, this exclusion exhibited a correlation with the debate over classifying post-disaster assistance as ‘Compensation’ versus ‘Ex gratia’ (TRM4). This correlation implies an expert foresight that the legal decoupling of disaster events from potential governance failures or social disruption—which often necessitate law-and-order intervention—is likely to exacerbate “usual fall outs between communities and the government ex post” during relief and recovery phases.

8.2.4. Aspiration vs. Resources in Technical Measures

The analysis revealed a strong expert apprehension regarding the practical execution of the Bill’s proposed technical ambitions. The perceived practicality of establishing a Risk Register (RR1) correlated positively with concerns about “Too much task bestowed upon the National and State Executive Committees” (G5). Simultaneously, RR1 also correlated with doubts over the availability of “resources required to maintain such databases and register” (RR2). This cluster of correlations statistically underscores the consensus that the Bill, while setting commendable targets aligned with global frameworks like the Sendai Framework for Disaster Risk Reduction (SFDRR), may be imposing unfunded mandates and high administrative burdens without adequate “cognisance of resources” or institutional capacity.

8.2.5. Jurisdictional Conflicts in Urban Governance

The planned establishment of Urban Disaster Management Authorities for major cities, while recognized as a necessary step for addressing city-centric risks, correlated with the exclusion of law and order matters (LAW1). This suggests expert concern that the creation of new urban structures will introduce overlapping jurisdictions and administrative conflicts, particularly between municipal and district authorities, reminiscent of the ambiguities the law-and-order exclusion seeks to avoid.

8.2.6. Planning Cycles and Adaptive Capacity

While the mandate to create Disaster Management Plans (DMPs) at every level is technically consistent with SFDRR targets, the professional cohort expressed skepticism regarding its practical utility in the absence of robust implementation capacity. Furthermore, the amendment modifying the planning cycle—reviewing plans every

three years and updating at least once every five years was negatively received, raising concerns that this relaxation undermines the adaptive planning necessary in an environment of accelerating climate volatility and emerging risks.

9. Discussion: Evaluating the Policy Dichotomies and Implementation Feasibility of the DM Amendment Bill, 2024

The analysis of the Amendment Bill 2024, utilizing Structured Expert Elicitation (SEE) across 18 parameters, reveals a complex professional reception defined by a tension between progressive conceptual intent and significant concerns regarding policy execution, resource allocation and statutory clarity. With a demonstrated internal reliability ($\alpha = 0.88$), the expert data provides a statistically robust foundation to discuss the Bill's critical implications across governance, policy, and administrative domains.

9.1. The Centralization-Devolution Paradox in Governance

The DM Bill 2024 introduces a nuanced, yet contentious, architecture characterized by a paradox of simultaneous centralization of strategic authority and devolution of operational responsibility. This shift is further reinforced by the statutory codification of high-level crisis bodies—the National Crisis Management Committee (NCMC) and the High Level Committee (HLC). While this streamlines decision-making during national crises and ensures high-level political ownership, it is perceived as an overbearing approach that limits operational flexibility. The analysis found that 53.8% of respondents expressed concern that “Too much task [is] bestowed upon the National and State Executive Committees”. Furthermore, this centralization is cemented by the Central Government's new power to direct state disciplinary action against officers, reinforcing a central command structure over state administration.

The attempt at operational devolution—notably through the inclusion of Autonomous District Councils and the creation of the Urban Disaster Management Authority (UDMA, G2)—is welcomed but viewed with skepticism regarding implementation. While 61.5% agreed that UDMA's are a good step, 38.5% noted pertinent issues concerning jurisdiction, authority, and financial devolution. The correlation analysis confirms this, showing a link between the establishment of new urban authorities and the risk of “overlapping jurisdictions”. Similarly, 34.6% of experts raised doubts over the capacity building and resources necessary for the newly included Autonomous District Councils to be effective. This highlights the risk that these new structures may become unfunded mandates, thereby failing to achieve genuine localized empowerment.

9.2. Policy Gaps in Climate Change and Technical Feasibility

A major criticism levelled by the expert cohort is the Bill's failure to translate conceptual acknowledgment of climate risks into actionable policy mandates. Although the Bill introduces terminology recognizing “emerging disaster risks” from extreme climate events, 76.9% of respondents agreed that the Bill was a “perfect opportunity to integrate the pressing issues of climate change but unfortunately the opportunity is now missed”. This critique is centered on the Bill's reluctance to expand the list of notified disasters to include highly frequent, severe, climate-induced hazards such as heatwaves, despite significant reported mortality. This omission creates a regulatory disconnect, preventing the automatic triggering of standardized relief and funding protocols for rapidly escalating climate emergencies.

The mandate to create centralized “Disaster Databases” and “Risk Registers” is seen as highly ambitious but resource-intensive. 58.3% of experts believe that many states lack the necessary “adequate resources (human and financial) to maintain such database or register”. This technical impracticality is statistically reinforced by a positive correlation between the practicality of the Risk Register and the administrative burden placed on executive committees and resource availability. Furthermore, 57.7% of experts felt the introduced term “Disaster Assessment” is technically ambiguous, potentially leading to confusion between post-disaster needs assessment and proactive disaster risk assessment.

9.3. Ambiguity in Relief, Law Enforcement, and Administrative Standards

The amendments related to penal and relief frameworks introduce significant statutory ambiguities that challenge principles of equity and administrative certainty. The Bill's deliberate omission of the term “compensation” and the deletion of provisions mandating minimum standards of relief signals a policy retreat from establishing disaster support as a codified legal entitlement. While 42.3% of respondents preferred the

continuation of the ‘ex gratia’ model, the overall ambiguity challenges the standardization of assistance and risks perpetuating disparities in support across states.

The explicit statutory exclusion of “law and order related matter or situation” from the definition of man-made causes was considered a major drawback by 50% of respondents, who predicted it “might lead to further issues in the future”. This exclusion correlated with the contention over relief classification, implying that experts foresee unresolved friction where disaster events intersect with underlying social or governance issues, leading to “usual fall outs between communities and the government ex post”.

53.8% of the professional cohort strongly objected to the Bill’s frequent, non-standard use of terms like “severe” or “major” disasters. These terms lack alignment with the existing, operational nomenclature (such as L1, L2, L3 severity classifications). Furthermore, the relaxation of the planning cycle—reviewing National and State Plans every three years and updating at least once every five years—was deemed inadequate by 46.2% of respondents, who argued that the current “riskscape is too volatile and dynamic” for such an infrequent revision schedule.

9.4. Administrative Feasibility and the Inverse Professional Correlation

The statistical findings concerning professional experience offer a critical lens on the Bill’s administrative feasibility. A statistically significant inverse correlation was found between an expert’s age/experience and their level of agreement with the proposed changes. This is manifest in the overall impression, which was negatively correlated with almost all 18 tested parameters.

This trend indicates that experienced practitioners and older professionals, possessing deep, practical exposure to the complexities of implementation, are the most skeptical of the amendments. Their “more stern view” compared to academics suggests a reality check on the administrative burden and resource shortfalls inherent in the Bill. Conversely, while young professionals showed significant “cohesion in thought,” mid-career professionals displayed “more diversified opinions,” reflecting the complex bureaucratic and political compromises encountered as experts ascend to management and policy execution roles.

9.5. Empirical Evidence of Unfinished Transition

The correlational and descriptive findings collectively substantiate the core argument that the DM Amendment Bill 2024 represents an unfinished transition from reactive Disaster Governance to proactive Disaster Risk Governance. The results reveal a clear policy-action discordance where the language of DRR is adopted, but the operational and fiscal architecture still favours the traditional (colonial) paradigm.

The findings related to fiscal control and response mechanisms show the institutional priority remains inclined towards governing disasters, through a centralized, resource-intensive, post-event approach. This is juxtaposed against the expert skepticism towards the steps being taken towards fostering disaster risk governance. For example, Risk Registers, which are essential for risk-informed planning, are deemed impractical due to resource scarcity. The proposal for setting up UDMA, which are vital for context-specific risk reduction, are feared to become futile mandates due to ambiguous financial and jurisdictional clarity, drowned with the burden of not having skilled human resources. And last but not the least, climate change inclusion, the most significant risk factor requiring adaptive planning, was overwhelmingly cited as a missed opportunity.

The negative correlation of the overall expert impression (IMP) with almost all parameters analytically links these failures. Experts recognize that without adequate funding for devolution, lack of skilled resources and dedicated action on climate risks, the proactive rhetoric of the Bill cannot overcome the reactive administrative reality it reinforces. The empirical data thus demonstrates that while the legislative frame is attempting to pivot towards DRG, the deep-rooted institutional priorities and capacity gaps perpetuate the existing reactive policy dichotomy.

10. Conclusions

The Structured Expert Elicitation (SEE) on the DM Amendment Bill, 2024, validates that while the legislative intent is progressive, embracing the letters of DRR but not its spirit. The proposed architecture is critically undermined by an unresolved policy dissonance, manifesting as a *pervasive inverse correlation* between professional experience and policy agreement. The data compels a definitive conclusion that the Bill is not a true paradigm shift, but an incremental structural refinement that perpetuates key systemic vulnerabilities identified in the foundational DM Act, 2005.

The central policy failure is rooted in the Centralization-Devolution Paradox. The Bill streamlines centralized fiscal authority and regulatory control, risking the flexibility and autonomy required for adaptive local action. This

structural flaw is starkly evidenced in the skepticism surrounding new decentralized entities, such as the Urban Disaster Management Authority (UDMA). The correlation between aspirational data mandates through Risk Registers & Disaster Databases confirms that the Bill risks imposing unfunded & resource-scarce mandates and high administrative burdens without the necessary fiscal provisioning or technical (human) resource availability for local execution.

Furthermore, the statutory gaps concerning climate change and victim entitlements are scientifically indefensible. The deliberate omission of “compensation” and minimum standards for relief signals a retreat from establishing disaster support as a codified legal entitlement, challenging the standardization and equity of assistance. Concurrently, the failure to operationally integrate climate change concerns, which 76.9% of experts cited as a missed opportunity, confirms a lack of adaptive capacity in the face of accelerating climate volatility, rendering the new triennial/quinquennial review cycle fundamentally inadequate.

For the DM Bill 2024 to successfully transition towards effective and efficient disaster risk governance, subsequent rulemaking must surgically address these implementation deficits. The convergence of expert opinion dictates that legislative efficacy requires mandated, ring-fenced fiscal devolution to local authorities, definitive alignment of terminologies with scientific and technical backing and explicit legal clarity guaranteeing minimum standards of assistance. Until these administrative and resource ambiguities are resolved, the DM Amendment Bill risks reinforcing the existing policy-action discordance, limiting its impact on genuine national resilience.

Author Contributions

R.K.: conceptualization, methodology, analysis; P.M.: writing—original draft preparation; J.M.: transcription of survey data, analysis and review; T.G.: doctrinal analysis of Act and Bill. All authors have read and agreed to the published version of the manuscript.

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Full disclosure of data usage was given and informed consent was obtained from all experts involved for the purpose of survey in the study.

Data Availability Statement

Survey data collected for the purpose of this study would be made available on request.

Conflicts of Interest

The authors have no relevant financial or non-financial interests to disclose. The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

Use of AI and AI-Assisted Technologies

No AI tools were utilized for this paper.

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