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DISASTER MANAGEMENT AND INSTITUTIONAL ARRANGEMENTS IN INDIA: CHALLENGES AND REFORMS

Praveen Ankalkoti[1], Dr.B.N.Yashodha[2]
[1]*Research Scholar, Department of Political Science and Public Administration Maharaja's College Mysuru*
[2]*Professor (Retd.) Department of Political Science and Public Administration Maharaja's College, University of Mysuru*

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ABSTRACT

Disaster management is an essential component of public administration, governance, and sustainable development. Its efficacy depends on a well-defined institutional framework, clear administrative responsibilities, adequate financial and human resources, effective interdepartmental coordination, and community participation. In India, the Disaster Management Act, 2005, established the legal framework for disaster management at national, state, and district levels. However, the existence of formal institutions does not automatically ensure effective implementation. The Comptroller and Auditor General of India (CAG), through its reports on civil disaster preparedness and disaster management in Karnataka, has examined institutional weaknesses relating to preparedness, planning, coordination, capacity building, and early warning systems. International research has also emphasised the importance of strengthening local-government authority and capacity for disaster risk reduction. This article analyses the institutional arrangements for disaster management in India, examines documented administrative challenges, and proposes measures to improve institutional performance. It argues that disaster governance must move beyond a predominantly relief-oriented approach towards an integrated, accountable, participatory, and risk-informed system.

KEYWORDS: *Disaster Management, Institutional Arrangements, Disaster Risk Reduction, NDMA, SDMA, DDMA, CAG, Public Administration, Disaster Governance.*

1. INTRODUCTION

Severe human casualties, infrastructure and property damage, livelihood disruption, and negative effects on social and economic advancement are all caused by disasters. Communities can be threatened by a variety of natural disasters, including heat waves, cyclones, earthquakes, floods, droughts, and diseases. Effective institutional responses are also necessary for human-induced catastrophes such as fires and industrial accidents.

A complete framework that includes prevention, mitigation, readiness, response, rehabilitation, rebuilding, and recovery has replaced the earlier approach to disaster management, which was mostly focused on providing aid following an incident. Institutions that can foresee hazards, coordinate administrative action, mobilise resources, and safeguard vulnerable people are needed for this shift.

The laws, rules, organisations, administrative practices, roles, and coordination systems put in place to handle catastrophes are referred to as institutional arrangements. They decide how choices are made, how resources are allocated, how information is shared, and how government organisations are held responsible.

The Central Government, State Governments, district administrations, local self-government organisations, specialist response organisations, and non-governmental parties are all involved in disaster management in India. Effective disaster management policy execution is still a major administrative challenge, notwithstanding the nation's formal institutional architecture.

Through performance audit reports, the Indian Comptroller and Auditor General has investigated disaster management and preparation. These studies offer a crucial foundation for comprehending institutional flaws and pinpointing places in need of administrative adjustment. To provide useful suggestions for improving catastrophe governance, such evidence must be examined.

2. OBJECTIVES OF THE STUDY

1. To assess India's institutional and legislative framework for disaster management.
2. To examine the functions and obligations of various administrative levels of disaster management organizations.
3. To determine institutional issues that are recorded in official audit reports and pertinent studies.
4. To make recommendations on ways to improve institutional arrangements and lower the risk of disaster.

3. METHODOLOGY

The methodology used in the article is analytical and descriptive, relying on secondary sources. The Disaster Management Act of 2005, government plans and strategies for disaster management, the Comptroller and Auditor General of India's performance audit reports, and publications from the United Nations Office for Disaster Risk Reduction are the main sources.

The CAG's Report No. 5 of 2013 on the Performance Audit of Civil Disaster Preparedness in India and Report No. 8 of 2025 on Disaster Management in Karnataka receive special consideration. The institutional and administrative problems found by government audits are examined in these reports.

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The article also incorporates studies from throughout the world on the capabilities and authority of local governments in disaster risk reduction.

The research does not include novel fieldwork findings; instead, it is based on documentation analysis. Therefore, its suggestions and findings should be interpreted as an institutional analysis based on the reports and literature that were mentioned.

4. LEGAL AND INSTITUTIONAL FRAMEWORK OF DISASTER MANAGEMENT IN INDIA

4.1 Disaster Management Act, 2005

The primary legislative foundation for disaster management in India is provided by the Disaster Management Act, 2005. It outlined institutional duties for planning, coordination, mitigation, readiness, and response, and it created disaster management authorities at the federal, state, and local levels.

The Act represents an important shift towards an organised and multi-level approach to disaster management. It provides the legal basis for integrating disaster risk reduction into public administration and development planning.

The Disaster Management (Amendment) Act, 2025, introduced further changes to the legal and institutional framework, including provisions concerning disaster management planning, institutional responsibilities, and urban disaster management authorities.

4.2 National Policy and Disaster Management Plans

The National Policy on Disaster Management, 2009, emphasises a holistic and proactive approach to disaster management. The National Disaster Management Plan, introduced in 2016 and revised in 2019, provides a framework for coordinating disaster management activities and incorporating disaster risk reduction into development programmes.

These policy instruments emphasise the importance of preparedness, institutional coordination, capacity development, and cooperation among government agencies and other stakeholders. However, the practical effectiveness of these instruments depends on their implementation, periodic review, resource availability, and the ability of institutions to translate policy objectives into operational activities.

5. INSTITUTIONAL ARRANGEMENTS FOR DISASTER MANAGEMENT

India follows a multi-level institutional structure in which national, state, district, and local institutions perform complementary functions.

5.1 National-Level Institutions

National Disaster Management Authority (NDMA)

The NDMA, chaired by the Prime Minister of India, is responsible for laying down disaster management policies, plans, and guidelines at the national level. It provides policy direction and promotes measures relating to prevention, mitigation, preparedness, and response.

Ministry of Home Affairs (MHA)

The Ministry of Home Affairs plays a major coordinating role in disaster management at the national level. It facilitates coordination among central ministries, state governments, and other relevant institutions.

National Disaster Response Force (NDRF)

The NDRF provides specialised disaster response capabilities, including search and rescue operations and assistance during major emergencies.

National Institute of Disaster Management (NIDM)

The NIDM supports research, training, documentation, and capacity development. It contributes to strengthening the knowledge and professional skills of officials and other disaster management stakeholders.

5.2 State-Level Institutions

The State Disaster Management Authority (SDMA), generally chaired by the Chief Minister, provides policy direction for disaster management within the state. The State Executive Committee and relevant departments support the implementation of disaster management policies, plans, and programmes. Departments responsible for health, agriculture, police, public works, transport, water resources, rural development, and fire and emergency services contribute according to their respective mandates. State-level institutions are responsible for coordinating administrative action, providing technical and financial support, strengthening district preparedness, and facilitating emergency response.

5.3 District-Level Institutions

The District Disaster Management Authority (DDMA) is responsible for coordinating and implementing disaster management activities at the district level. The District Magistrate, District Collector, or Deputy Commissioner generally serves as chairperson, subject to the applicable statutory provisions. The DDMA's responsibilities include preparing the District Disaster Management Plan, identifying vulnerable areas, coordinating departmental preparedness, facilitating early warning dissemination, mobilising resources, and supporting response, relief, rehabilitation, and recovery. The district administration plays a particularly important role because it connects state-level policies with local implementation. Effective functioning requires clear departmental responsibilities, trained personnel, adequate resources, and reliable communication.

5.4 Local Self-Government Institutions

Panchayati Raj Institutions and urban local bodies contribute to disaster preparedness and community-level implementation. Their responsibilities may include identifying vulnerable households, supporting evacuation, communicating warnings, participating in local risk assessments, and facilitating relief and recovery. Local institutions also possess knowledge of settlement patterns, community needs, infrastructure conditions, and vulnerable populations. Their involvement can improve the relevance of disaster management plans.

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5.5 Non-Governmental and Community Stakeholders

Non-governmental organisations, community-based organisations, volunteers, educational institutions, research organisations, private-sector agencies, and media organisations can support disaster management. Their contributions include awareness generation, training, technical assistance, emergency support, resource mobilisation, and rehabilitation. Effective institutional arrangements should establish clear mechanisms for integrating these stakeholders into official disaster management plans without creating duplication or confusion regarding responsibilities.

6. INSTITUTIONAL PROBLEMS IDENTIFIED IN AUDIT REPORTS AND RESEARCH

Institutional challenges should be examined using documentary evidence rather than general assumptions. Performance audit reports are particularly useful because they assess whether administrative arrangements and programmes are functioning as intended.

6.1 Weaknesses in Civil Disaster Preparedness

The Comptroller and Auditor General of India, in its Report No. 5 of 2013, examined civil disaster preparedness in India. The audit addressed institutional arrangements and preparedness, including coordination between the NDMA and nodal ministries and issues relating to the discharge of institutional responsibilities. The report provides an important reference for analysing the gap between formal institutional structures and effective administrative implementation.

6.2 Institutional and Capacity-Building Deficiencies

The CAG's Report No. 8 of 2025 on Disaster Management in Karnataka examined disaster management during the audit period 2018–23. It identified deficiencies relating to institutional functioning, planning, capacity building, and other aspects of disaster preparedness and implementation. Although this is a state-specific audit, its findings are useful for understanding the kinds of institutional weaknesses that can arise in the implementation of disaster management arrangements.

6.3 Shortcomings in Planning and Implementation

Disaster management plans are effective only when they are updated, approved, coordinated across departments, and implemented through specific activities. Audit findings relating to planning and implementation demonstrate the importance of examining not only whether plans exist but also whether they are operationally useful and supported by appropriate resources.

6.4 Early Warning and Operational Preparedness

Early warning systems require cooperation among technical agencies, government departments, district administrations, and local communities. Warning information must be communicated promptly and converted into practical action. Audit findings concerning preparedness and warning arrangements highlight the need to examine the reliability of forecasting systems, the availability of equipment, institutional readiness, and the communication of warnings to vulnerable communities.

6.5 Limited Local Institutional Capacity

International research by the United Nations Office for Disaster Risk Reduction has examined the powers and capacities of local governments in disaster risk reduction.Gencer's 2017 study highlights the importance of examining local-level authority and institutional capacity when assessing the ability of local governments to implement disaster risk reduction measures.

7. MAJOR INSTITUTIONAL CHALLENGES

Based on the institutional framework, official audit evidence, and relevant research, the following areas merit attention in disaster management.

7.1 Coordination among Departments

Disaster management involves multiple departments with different responsibilities. When information-sharing mechanisms are inadequate or responsibilities are unclear, administrative action may be delayed.

7.2 Shortage of Trained Personnel

Disaster management requires specialised skills in risk assessment, emergency planning, incident management, evacuation, relief administration, and recovery. Inadequate training or insufficient personnel can reduce the capacity of institutions to respond effectively.

7.3 Inadequate Financial and Material Resources

The availability of funds, equipment, transport, communication facilities, emergency supplies, and trained personnel is essential for operational preparedness. Resource planning should be based on identified hazards, vulnerable populations, and the operational requirements of each institution.

7.4 Weak Monitoring and Accountability

The existence of disaster management plans does not guarantee their implementation. Without monitoring, documentation, and accountability mechanisms, deficiencies may remain unresolved.

7.5 Insufficient Community Participation

Communities are often the first to experience disasters and may be the first to respond. Their participation in risk assessment, preparedness, and local planning can improve the effectiveness of disaster management.

7.6 Limited Integration of Disaster Risk Reduction into Development

Disaster risks can increase when infrastructure and development programmes do not adequately consider hazards and vulnerability. Disaster risk reduction should therefore be integrated into land-use planning, public infrastructure, environmental management, livelihood programmes, and local development planning.

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8. SUGGESTIONS FOR STRENGTHENING INSTITUTIONAL ARRANGEMENTS

The following recommendations are grounded in the institutional issues discussed above and the broader principles of disaster risk reduction.

8.1 Clarify Institutional Responsibilities

The responsibilities of national, state, district, and local institutions should be clearly defined. Standard operating procedures should specify who is responsible for decision-making, communication, resource mobilisation, evacuation, relief, and recovery. Regular coordination exercises can help identify overlaps and gaps in responsibility.

8.2 Strengthen Institutional Capacity

Government authorities should assess staffing and training requirements and provide regular professional development for disaster management personnel. Training should include risk assessment, emergency planning, early warning, incident coordination, relief management, and post-disaster evaluation.

8.3 Improve Disaster Management Planning

Disaster management plans should be updated periodically and linked to departmental and local-level plans. Plans should identify hazards, vulnerable populations, available resources, evacuation arrangements, emergency contacts, and procedures for coordination and communication. The implementation of plans should be reviewed regularly, and identified deficiencies should lead to corrective action.

8.4 Improve Early Warning and Communication

Authorities should strengthen cooperation between forecasting agencies, emergency operations centres, district administrations, and local institutions. Warning messages should be timely, clear, accessible, and appropriate for the communities receiving them. Regular drills should test whether warning systems lead to effective action.

8.5 Ensure Adequate Financial and Material Resources

Disaster management authorities should identify resource gaps and establish transparent procedures for resource allocation, procurement, maintenance, and deployment. Equipment and communication systems should be inspected periodically to ensure operational readiness.

8.6 Strengthen Local Governments

Local self-government institutions should be involved in disaster risk assessment, preparedness planning, awareness generation, and recovery. Their effectiveness can be improved through appropriate delegation of responsibilities, technical support, training, access to information, and adequate financial resources.

8.7 Establish Effective Monitoring and Evaluation

Authorities should develop measurable indicators to assess preparedness, response, and recovery. Possible indicators include the regularity of disaster management plan reviews, the completion of training programmes, the performance of mock drills, the readiness of equipment, and the timely communication of warnings. Monitoring findings should be documented and used to improve institutional performance.

8.8 Promote Community-Based Disaster Risk Reduction

Communities should participate in identifying hazards, preparing local emergency plans, conducting awareness programmes, and evaluating disaster management activities. Community volunteers, educational institutions, and civil society organisations can support local preparedness and public awareness.

8.9 Strengthen Learning from Audits and Disasters

Audit observations and post-disaster reviews should be converted into time-bound corrective action plans. Each responsible institution should document the measures taken, the resources required, and the progress achieved. This would help ensure that identified weaknesses are not merely reported but addressed.

8.10 Integrate Disaster Risk Reduction into Development Planning

Development programmes should consider disaster risks from the planning stage onwards.

Infrastructure, environmental management, public health, agriculture, water management, and urban development should incorporate suitable risk reduction measures. This approach can reduce future losses and improve long-term resilience.

9. DISCUSSION

The analysis indicates that institutional arrangements are essential but not sufficient for effective disaster management. Legislation establishes authorities and responsibilities, while administrative capacity determines whether these responsibilities are translated into practical action.

The CAG's reports provide an important basis for identifying institutional and operational weaknesses. The 2013 report addresses civil disaster preparedness at the national level, whereas the 2025 report provides state-specific evidence concerning disaster management in Karnataka. These reports should be used according to their respective geographical scope, audit periods, and documented findings. International research on local governments further demonstrates the importance of examining the authority and capacity available at the local level. Effective disaster management requires local institutions to be connected to broader administrative structures while retaining the capacity to respond to community needs. A central lesson is that disaster management should not be assessed only through the number of authorities established or plans prepared. It should also be assessed through implementation, coordination, operational readiness, accountability, and outcomes for vulnerable populations.

The combination of legal reform, administrative capacity building, resource allocation, community participation, and systematic evaluation can help strengthen institutional performance.

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10. CONCLUSION

Institutional arrangements are fundamental to disaster management in India. The Disaster Management Act, 2005, and subsequent legal and policy developments provide the basis for a multi-level disaster management system involving national, state, district, and local institutions. However, effective disaster governance requires more than formal institutional structures. It depends on clear responsibilities, effective coordination, trained personnel, adequate resources, reliable early warning systems, and accountable implementation. The CAG's performance audit reports and UNDRR research provide useful evidence and analytical perspectives for identifying institutional weaknesses and developing recommendations. Their findings also demonstrate the importance of examining the actual functioning of institutions rather than assuming that formal arrangements automatically produce effective outcomes. Strengthening disaster management therefore requires regular institutional assessments, timely corrective action, community participation, and the integration of disaster risk reduction into development planning. Such measures can contribute to a more proactive, transparent, and resilient disaster management system in India.

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