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## **Disaster Management in India: Policy Review and Institutional Structure**

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### **Abstract**

*The paper discusses about the disaster management system in India vis-à-vis the change in approach in last over half century after independence. It analytically evaluates the different stages through which disaster management institutional structure has gone through and present system is reached in India. Handling disaster situations after independence started from indirect way of allocating funds through plans and schemes to prepare communities for extreme events in India. The Planning Commission, which is the one of the premier organisation dealing with development issue of the country, considered about the disaster mitigation and management after more than fifty years of independence in 2002 in Tenth Five year Plan. The three consecutive disasters in India related to Cyclone (1999), Earthquake (2001), and Tsunami (2004) made us realize about the urgent need of a comprehensive and holistic disaster management system and that the country is prone to different types of disaster, and ultimately paved the way for enactment of country's Disaster Management Act in 2005. Prime Minister of the country being the head of disaster management system in India signifies the importance being given by the constitution to the issue. The present system now envisages formation of Disaster Management Authorities and managing disaster situations at all levels of administration and provision of funds and even response teams for any crisis situation.*

**Keywords:** *Disaster Management Act, 2005; Disaster Management Authority; High Powered Committee (HPC); Re-active vs. Pro-active approach; Tenth Five Year Plan*

## Introduction

Civilizations have existed along with disasters, be it associated with earthquake, flood, drought, famine, cyclone, or volcanic eruptions. Development of civilizations along with technological initiatives has created infrastructures and permanent assets which are always vulnerable to hazards either natural or man-made, leading to disasters. It is observed in last couple of decades that the vulnerability of human population has also increased with respect to hazards. Even as substantial scientific and material progress is made, the loss of lives and property due to disasters has not decreased. In fact, the human toll and economic losses have mounted. The progressive increase in loss of life, property and deleterious effect on environment due to disasters has led the international community to think about disaster management in a new way. It was in this background that the United Nations General Assembly, in 1989, declared the decade 1990-1999 as the International Decade for Natural Disaster Reduction (IDNDR) with the objective to reduce loss of lives and property and restrict socio-economic damage through concerted international action, especially in developing countries. Reviews of the global scenario carried out in the 1990s in the wake of the “Yokohama Strategy” (UN-WCNR, 1994) brought home the fact that economic losses caused by natural disasters were increasing and that there is a need for an emphatic shift in the strategy for disaster mitigation. The “Yokohama Strategy and Plan of Action for a Safer World (1994)” (Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action was adopted by the Yokohama World Conference on Natural Disaster in 1994), provides landmark guidance on reducing disaster risk and the impacts of disasters. The new millennium began with the launch of International Strategy for Disaster Reduction (ISDR) (UN-ISDR, 2005). The ISDR was launched in year 2000 by the Economic and Social Council and the General Assembly as an inter-agency framework and mechanism (inter-agency task force on disaster reduction and an inter-agency secretariat) to serve as a focal point within the United Nations system with the mandate to promote public awareness and commitment, expand networks and partnerships, and improve knowledge about disaster causes and options for risk reduction, building on the Yokohama Strategy. Even after establishment of ISDR in 2000 it was noticed that the disaster continued to grow (UN-ISDR, 2007). In January 2005, 168 governments met in Kobe, Japan and agreed on a ten year plan of

action, the “Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters”, with the goal to substantially reduce disaster risks over that decade (UN-ISDR, 2005). The Hyogo Framework for Action (HFA) is the key instrument for implementing disaster risk reduction, adopted by the Member States of the United Nations. Its overarching goal is to build resilience of nations and communities to disasters, by achieving substantive reduction of disaster losses by 2015 – in lives, and in the social, economic, and environmental assets of communities and countries.

India is a large country vulnerable to number of natural and manmade disasters. 58.6% of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12%) is prone to floods and river erosion; of the 7,516 km long coastline, close to 5,700 km is prone to cyclones and tsunamis; 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches (NDMA, 2009). Vulnerability to disasters/emergencies of Chemical, Biological, Radiological and Nuclear (CBRN) origin also exists (NDMA, 2009). Super cyclone in Orissa in 1999, devastating earthquake in Gujarat in 2001, and Tsunami in Indian coasts in 2004 has changed the disaster management system in India for ever. The ‘re-active approach’ to disaster changed to ‘pro-active approach’. It is realized that the investment on preparedness, prevention and mitigation is more cost-effective compared to expenditure on relief and rehabilitation alone.

### **Policy review**

India with its federal system of Governance has specific roles for the Central and State Governments. However, the subject of disaster management does not specifically find mention in any of the three lists in the 7<sup>th</sup> Schedule of the Indian Constitution, where subjects under the Central and State Governments as also subjects that come under both are specified. Earlier on the legal front, there was no enactment either of the Central or of any State Government to deal with the management of disasters of various types in a comprehensive manner (NDMD, 2002a).

Although not specifically addressed in Five Year Plan documents after independence, the Government of India had a long history of using funds from the Plan for mitigating natural disasters.

Funds were provided under Plan schemes i.e., various schemes of Government of India, such as for drinking water, employment generation, inputs for agriculture and flood control measures (Planning Commission, 2002). Some important schemes in India that helped in reducing disaster vulnerability are Integrated Wasteland Development Programme (IWDP), Drought Prone Area Programme (DPAP), Desert Development Programme (DDP), Flood Control Programmes, National Afforestation & Eco-development Programme (NA&ED), Accelerated Rural Water Supply Programme (ARWSP), Crop Insurance, *Sampurna Grameen Rozgar Yojana* (SGRY), and Food for Work programme. These plan schemes dealt with the prevention and mitigation of the impact of natural disasters. External assistance for post-disaster reconstruction and streamlining of management structures also was a part of the Plan. Later on, the instruments which partially provided the legal framework and which assigned roles and responsibilities of different entities to disaster risk reduction in India were; a) The Disaster Relief Act, 1982, b) The National Building Code, that was launched in 1994, c) Model Town and Country Planning Act (1960) (Mehrotra, 2010) related to land use regulations and development, and which was later revised in to the Model Regional and Town Planning and Development Law (1985), and d) Guidelines on Urban Development Plan Formulation and Implementation (1991).

The Central Sector Scheme of Natural Disaster Management Programmes has been implemented since 1993-94 by the Department of Agriculture and Co-operation with the objective to focus on disaster preparedness with emphasis on mitigation and preparedness measures for enhanced capability to reduce the adverse impact of disasters (NDMD, 2002a). The predominance of famine relief actions, where the Central Government was called upon to assist, was the main reason why the Department of Agriculture was given the lead role of disaster management in India prior to 2003. Government of India, in recognition of the importance of disaster management as national priority, after the horrific experience of Latur earthquake in 1993 and Orissa Super Cyclone in October 1999, had set up a High Powered Committee (HPC) in 1999 and a National Committee on Disaster Management after the Bhuj Earthquake of 2001 for making recommendations on the preparation of Disaster Management Plans and for laying down the framework for disaster mitigation and management in India. The HPC submitted its Report in October 2001

(NCDM, 2001). The HPC took an overview of all the then recent disasters (natural as well as manmade) in the country and identified common response and preparedness mechanisms on the basis of a series of consultations with a number of government, non-government, national and international agencies and media organisations (NDMD, 2002a). Even while the recommendations of the HPC report were being analyzed by the Government, as an interim measure, the management of disasters was shifted from the Ministry of Agriculture to the Ministry of Home Affairs in year 2003, pending finalization of an arrangement at the National level. Indian Ocean Tsunami in 2004 acted as the catalyst and the Government of India (GoI) took a defining step in the legislative history of the country by enacting Disaster Management (DM) Act in year 2005 (Ministry of Law and Justice, 2005).

That, the disaster management is a development issue is realised by the policy makers of the country. Tenth Five Year Plan (2002-2007) (Planning Commission, 2002) included a chapter entitled “Disaster Management: The Development Perspective”, which states that “Five Year Plan documents have, historically, not included consideration of issues relating to the management and mitigation of natural disasters. The traditional perception has been limited to the idea of “calamity relief”, which is seen essentially as a non-plan item of expenditure. However, the impact of major disasters cannot be mitigated by the provision of immediate relief alone, which is the primary focus of current calamity relief efforts”. This approach has been translated into a “National Disaster Framework” (a roadmap) (NDMD, 2004) covering institutional mechanisms, disaster prevention strategies, early warning system, disaster mitigation, preparedness and responses and human development. Status Report of Disaster Management in India (NDMD, 2004) contains the National Government’ vision and mission statements for disaster management in the country: Vulnerability reduction to all types of hazards, be it natural or manmade - To build a safer and secure India through sustained collective effort, synergy of national capacities and peoples participation.

To build a safe and disaster resilient India by developing a holistic, proactive, multi-disaster oriented and technology driven strategy through a culture of prevention, mitigation, preparedness, and response, National Policy on Disaster Management (NDMA,

2009) was framed by National Disaster Management Authority and approved by the Union Cabinet on 22nd October, 2009 under the Ministry of Home Affairs, Government of India. As per this policy, Disaster Management is a continuum which comprises of six elements; the pre-disaster phase includes i) prevention, ii) mitigation, and iii) preparedness, while the post-disaster phase includes iv) response, v) rehabilitation, vi) reconstruction and recovery. The national policy thus envisages a holistic and integrated approach towards disaster management.

### **Change in Institutional Structure**

In India, relief work in the wake of natural calamities had been traditionally the principal focus of disaster management actions. The institutional and policy mechanisms for carrying out response, relief and rehabilitation have been well established in the country. In the recent past only through the Disaster Management Act, 2005 (Ministry of Law and Justice, 2005), the orientation for handling disaster situations has been changed from a relief-centric to a holistic, multi-dimensional and multi-disciplinary approach involving diverse scientific, engineering, social and financial processes. The new approach encompasses the entire gamut of disaster management activities, i.e. prevention, mitigation, preparedness, response, relief and rehabilitation. Disaster management plans on a multi-hazard basis at the state, district, and Block/*Anchalik Panchayat*, and *Gaon Panchayat* levels are prepared and institutionalized in conformity with the 73<sup>rd</sup> Constitution amendment for rural areas, and City/Town/Ward disaster management plans are prepared and institutionalized in conformity with the 74<sup>th</sup> Constitution amendment in urban areas (NDMD, 2007).

**Institution for DM before DM Act, 2005:** Before DM Act (2005), Cabinet Committee on Management of Natural Calamities (CCMNC) (Fig. 1) had been constituted to oversee all aspects relating to the management of natural calamities including assessment of the situation and identification of measures and programmes considered necessary to reduce its impact, monitor and suggest long-term measures for prevention of such calamities, formulate and recommend programmes for public awareness for building up society's resilience to them. Empowered Group of Ministers (Fig. 1) headed by Deputy Prime Minister had an important role in the disaster management followed by National Crisis

Management Committee (NCMC) under the chairmanship of the Cabinet Secretary (NDMD, 2002a). The Contingency Action Plan (CAP) was there to identify initiatives required to be taken by various Central Ministries and Public Departments in the wake of natural calamities. It used to sets down the procedures and determines the focal points in the administrative machinery to facilitate launching of relief and rescue operations without delay. The Central Relief Commissioner (CRC) in the Ministry of Home Affairs (MHA) was the nodal officer to coordinate relief operations for natural disasters through a Crisis Management Group (CMG). The nodal officer was responsible for preparing sectoral Action Plan/Emergency Plan for managing the disaster. The NCMC headed by a Cabinet Secretary used to give direction to the CMG. The Cabinet Committee on Security (CCS) which is still working in the present institutional system dealt (and deals) with issues related to Defense of the country, law and order and internal security, policy matters concerning foreign affairs that have internal or external security implications, and economic and political issues impinging on National security. A Control Room or Emergency Operations Center (EOC) used to function around the clock based on MHA, its main role was transmission of information among different parties involved. The policy arrangements for meeting relief expenditure related to natural disasters were, by and large, based on the recommendations of successive Finance Commissions. The two main windows present for meeting such expenditures were the Calamity Relief Fund (CRF) and National Calamity Contingency Fund (NCCF) (Fig. 3).

**Institution for DM after DM Act, 2005:** On 23 December 2005, the Government of India (GoI) in a defining step enacted the Disaster Management Act, 2005, which envisaged the creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister, State Disaster Management Authorities (SDMAs) headed by the Chief Ministers, and District Disaster Management Authorities (DDMAs) headed by the District Collector or District Magistrate or Deputy Commissioner to spearhead and adopt a holistic and integrated approach to disaster management (Fig. 2). It was a paradigm shift, from the erstwhile relief-centric response to a proactive prevention, mitigation and preparedness-driven approach for conserving development gains and to minimize loss of life, livelihood and property. The NDMA have the responsibility for

laying down the policies, plans and guidelines for disaster management for ensuring timely and effective response to disaster. The National Executive Committee (NEC) constituted by the Central Government assists the NDMA in the performance of its functions and have the responsibility for implementing the policies and plans of the NDMA and ensure the compliance of directions issued by the Central Government for the purpose of disaster management in the country (Ministry of Law and Justice, 2005). The NEC may also act as the coordinating and monitoring body for disaster management, prepare the national disaster management plan to be approved by the NDMA, coordinate and monitor the implementation of the National Policy, and lay down guidelines for preparing disaster management plans by different Ministries or Departments of the GoI and the state authorities etc. An important point to be noted in the DM Act, 2005 is that the NDMA is mandated to deal with all types of disasters; natural or man-made; whereas, such other emergencies including those requiring close involvement of the security forces and/or intelligence agencies such as terrorism (counter-insurgency), law and order situations, serial bomb blasts, hijacking, air accidents, CBRN weapon systems, mine disasters, port and harbour emergencies, forest fires, oilfield fires and oil spills will continue to be handled by the extant mechanism i.e., National Crisis Management Committee (NCMC) (Fig. 1). Although some themes from later areas such as to formulate guidelines and facilitate training and preparedness activities in respect of CBRN emergencies are handled by NDMA.

As per the DM Act (2005), every state government shall establish a State Disaster Management Authority (SDMA) consisting of Chief Minister as the Chairperson of SDMA (Fig. 2). The SDMA will have its own advisory committee consisting of experts in the field of disaster management, and may lay down the State Disaster Management Policy, approve the State Plan in accordance with the guidelines laid down by the NDMA, lay down guidelines, coordinate the implementation of the State Plan, and recommend provisions of funds for mitigation and preparedness measures. The state Government shall constitute a State Executive Committee (SEC) to assist SDMA (Fig. 2). SEC shall have the responsibility for implementing the National Plan and State Plan and act as the coordinating and monitoring body for management of disaster in the State. SEC may coordinate and monitor the implementation of the National Policy, the National Plan and the State Plan, examine the



vulnerability of different parts of the State to different forms of disasters and specify measures to be taken for their prevention or mitigation, lay down guidelines for preparation of disaster management plans by the departments of the Government of the State and the District Authorities; monitor the implementation of disaster management plans prepared by the departments of the Government of the State and District Authorities, evaluate preparedness at all governmental or non-governmental levels to respond to any threatening disaster situation or disaster, coordinate response in the event of any threatening disaster situation or disaster. The SEC also provides information to the NDMA relating to different aspects of disaster management (Ministry of Law and Justice, 2005).

Every State Government shall establish a District Disaster Management Authority (DDMA) for every district in the State with a Chairperson and a Co-chairperson (Ministry of Law and Justice, 2005) (Fig. 2). The DDMA shall act as the district planning, coordinating, and implementing body for disaster management and take all measures for the purposes of disaster management in the district. The DDMA may prepare a disaster management plan including district response plan for the district, coordinate and monitor the implementation of the National Policy, State Policy, National Plan, State Plan and District Plan, lay down guidelines, and monitor the implementation of disaster management plans. Every office of the Government of India and of the State Government at the district level and the local authorities shall, prepare a disaster management plan. It shall be the responsibility of every Ministry or Department of the Government of India to take measures necessary for prevention of disasters, mitigation, preparedness and capacity-building in accordance with the guidelines laid down by the NDMA. Also, every department of the State Government shall prepare a disaster management plan. Every Ministry or Department of the Government of India shall prepare a disaster management plan (Ministry of Law and Justice, 2005).

National Institute of Disaster Management (NIDM) constituted by Central Government develops training modules, undertake research and documentation in disaster management and organise training programmes. Keeping in view of the provision of the Disaster Management Act, 2005 and the recommendations of

Thirteenth Finance Commission (TFC) (Ministry of Finance, 2009), Government of India has framed guidelines for administration of National Disaster Response Fund (NDRF) at the National level and for State Disaster Response Fund at the State level. NDRF (under NDMA) is constituted for the purpose of specialised response to a threatening disaster situation or disaster. Every state has also been advised by MHA for constitution of State Disaster Response Fund. National Disaster Mitigation Fund is constituted for projects exclusively for the mitigation of disasters. The DM Act (2005) directs for the constitution of State Disaster Response Fund (under SEC), District Disaster Response Fund (under DDMA), State Disaster Mitigation Fund (under SDMA), and District Disaster Mitigation Fund (under DDMA). National Database for Emergency Management (NDEM) and National Spatial Data Infrastructure (NSDI) are Geographic Information System (GIS) based databases for hazard zonations, consequence mapping and vulnerability analysis (NDMA, 2009).

United Nations Development Programme (UNDP) in partnership with Ministry of Home Affairs, implemented a Disaster Risk Management Programme (DRM) from 2002-2007 (NDMD, 2002b). After the successful implementation of the DRM Programme in 176 multi-hazard districts spread over 17 States, the Government of India together with UNDP has launched a new programme for Disaster Risk Reduction (DRR). The Programme has two components: i) Institutional Strengthening & Capacity Building for Disaster Risk Reduction (DRR) and ii) Urban Risk Reduction (URR) (GoI-UNDP, 2011).

## **Conclusion**

It can be concluded that during post-independence period, mechanism for managing disasters were provisions in various plans and schemes which indirectly helped in preparing communities for any disaster. Later, the institutional mechanism in the form of calamity relief was only reactive approach of the system which provided logistic and financial relief after disasters. Three major disasters in India within five years (in 1999, 2001, and 2004) acted as a catalyst and brought out a sea change in the way we managed them. It is now realised that disasters have devastating effects on the economy; they cause huge human and economic losses, and can significantly set back development efforts of a region or a State.

Disasters cannot be separated from the development issue and thus its management was incorporated within the Tenth Five year Plan by the Planning Commission. Finally, in the year 2005, the Disaster Management Act established a three pronged institutional structure at national, state, and district level with Prime Minister at its apex for a multidimensional approach for managing disasters in India.

## Reference

- GoI-UNDP (Government of India-United Nations Development Programme), 2011, *State level programmes for Strengthening Disaster Management in India*, Ministry of Home Affairs, Government of India.
- Mehrotra, N., 2010, Disaster Management: Need of Revival in Policy Framework, *Institute of Town Planners, India Journal*, Vol. 7, No.2, pp. 98-102.
- Ministry of Finance, 2009, *Thirteenth Finance Commission 2010-2015*, Department of Economic Affairs, Government of India.
- Ministry of Law and Justice, 2005, *Disaster Management Act, 2005*, Legislative Department, Government of India.
- NCDM (National Center for Disaster Management), 2001, *The Report of the High Powered Committee on Disaster Management*, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India.
- NDMA (National Disaster Management Authority), 2009, *National Policy on Disaster Management*, Ministry of Home Affairs, Government of India.
- NDMD (National Disaster Management Division), 2002a, *Disaster Management-The Development Perspective, An extract of the Chapter in the Tenth Five Year Plan Document (2002-2007)*, Ministry of Home Affairs, Government of India.
- NDMD (National Disaster Management Division), 2002b, *Disaster Risk Management Programme (2002-2007), Community Based Disaster Reduction and Recovery Through Participation of Communities and Local Self Governments*, Ministry of Home Affairs, Government of India.
- NDMD (National Disaster Management Division), 2004, *Disaster Management in India- A Status Report*, Ministry of Home Affairs, Government of India.
- NDMD (National Disaster Management Division), 2007, *Additional provisions in development control regulations for safety & additional provisions in building regulations/bye-laws for structural safety -in natural hazard zones of India*, Committee of Experts, Ministry of Home Affairs, Government of India.

Planning Commission, 2002, *10th Five Year Plan (2002-2007)*, Government of India.

UN-ISDR (United Nations-International Strategy for Disaster Reduction), 2005, *Words into Action: A guide for implementing the Hyogo Framework, Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters*, United Nations.

UN-ISDR (United Nations- International Strategy for Disaster Reduction), 2007, *Reducing risks of disaster posed by climate change*, UN Joint Press Kit for Bali Climate Change Conference 3-14 December 2007, United Nations Secretariat of the International Strategy for Disaster Reduction.

UN-WCDDR (United Nations-World Conference on Disaster Reduction), 2005, *Report of the World Conference on Disaster Reduction Kobe, Hyogo, Japan, 18-22 January 2005*, World Conference on Disaster Reduction, A/Conf.206/6, Hyogo, Japan.

UN-WCDDR (United Nations-World Conference on Natural Disaster Reduction), 1994, *Yokohama Strategy and Plan of Action for a Safer World, Guidelines for Natural Disaster Prevention, Preparedness and Mitigation*, World Conference on Natural Disaster Reduction, Yokohama, Japan, 23-27 May 1994.

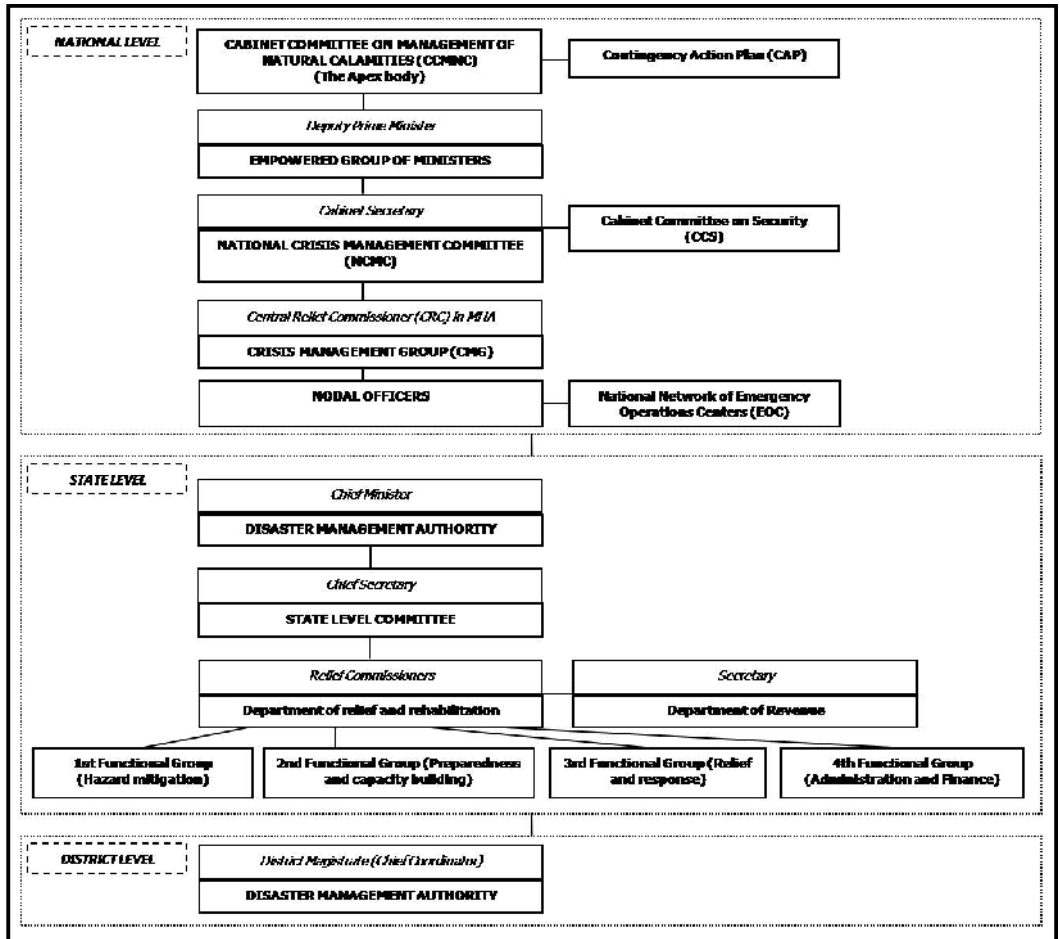


Fig. 1. Institutional structure for disaster management in India before the enactment of DM Act 2005

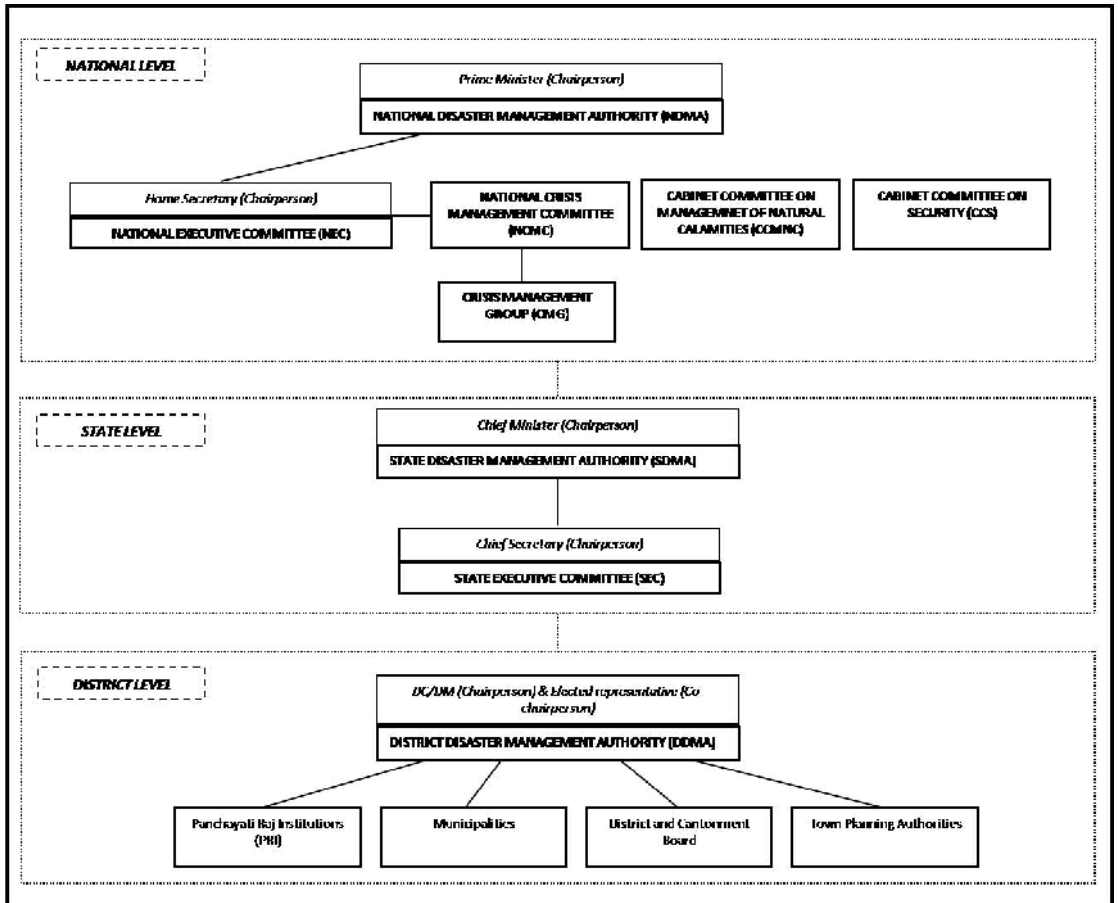


Fig. 2. Institutional structure for disaster management in India after the enactment of DM Act 2005

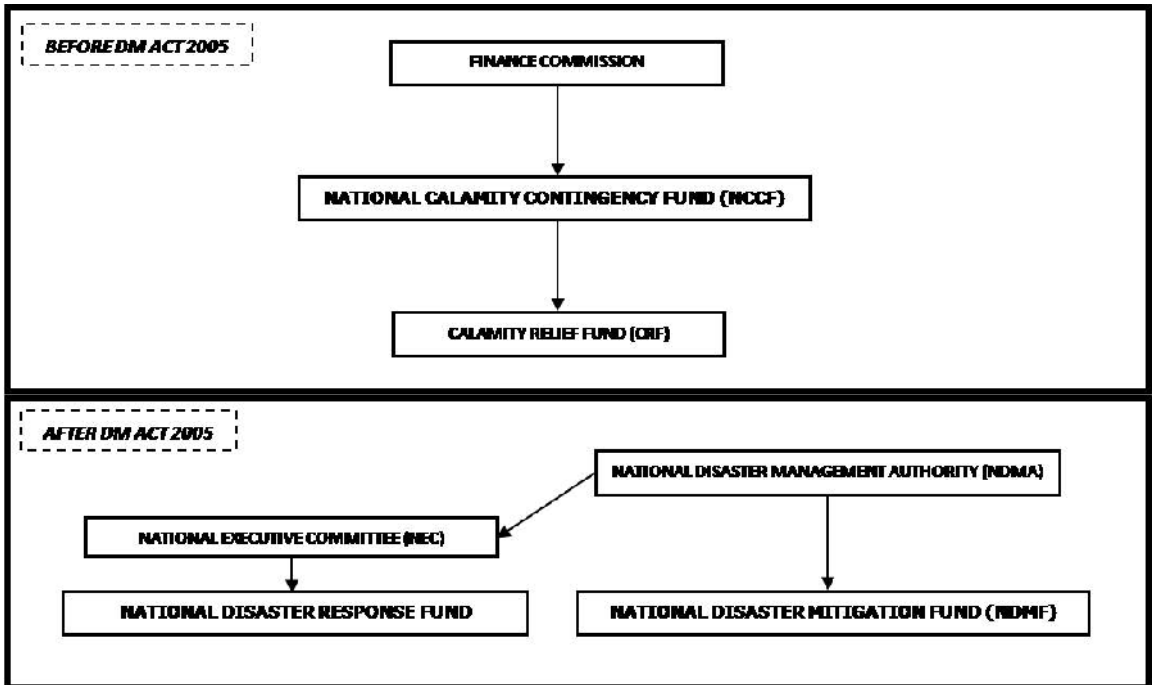


Fig. 3. Institutional structure for disaster management funds in India before and after the enactment of DM Act 2005