



NATIONAL DISASTER MANAGEMENT GUIDELINES

PREPARATION OF STATE DISASTER MANAGEMENT PLANS

July 2007



**NATIONAL DISASTER MANAGEMENT AUTHORITY
GOVERNMENT OF INDIA**

National Disaster Management Guidelines

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National Disaster Management Authority
Government of India

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Abbreviations

ATIs	Administrative Training Institutes
CBDM	Community Based Disaster Management
CBOs	Community Based Organisations
CSCs	Community Service Centres
DM	Disaster Management
DM ACT, 2005	Disaster Management Act, 2005
EOC	Emergency Operations Centre
GIS	Geographic Information System
GoI	Government of India
HPC	High Powered Committee
HRD	Human Resource Development
HR	Human Resources
IT	Information Technology
MIS	Management Information System
NCC	National Cadet Corps
NCDM	National Committee on Disaster Management
NDMA	National Disaster Management Authority
NDMRCs	National Disaster Mitigation Resource Centres
NDRF	National Disaster Response Force
NSS	National Service Scheme
NYK	Nehru Yuva Kendra
NGOs	Non-Governmental Organisations
NBC	Nuclear, Biological and Chemical
PRIs	Panchayati Raj Institutions
SDMA	State Disaster Management Authority
SEC	State Executive Committee
SOPs	Standard Operating Procedures

1.1 Background

India is vulnerable in varying degrees to a large number of natural as well as man-made disasters—58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12 per cent of land) 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. Further, the vulnerability to Nuclear, Biological and Chemical (NBC) disasters and terrorism has also increased manifold.

2.1 Disaster Risks in India

Disaster risks in India are further compounded by increasing vulnerabilities. These include the ever-growing population, the vast disparities in income, rapid urbanisation, increasing industrialisation, development within high-risk zones, environmental degradation, climate change, etc. Clearly, all these point to a future where disasters seriously threaten India's population, national security, economy and its sustainable development; therefore the urgency to issue the guidelines for the preparation of the State Plan for Disaster Management (DM) as mandated by the Disaster Management Act, 2005 (DM ACT, 2005). The DM plans will build in region and hazard specific management tools in the context of regional and multi-hazard vulnerabilities.

1.3 Past Initiatives

1.3.1 The High Powered Committee

The first initiative towards formulating a systematic, comprehensive and holistic approach to all disasters, was the setting up of a High Powered Committee (HPC) in August 1999 under the Chairmanship of Shri J.C. Pant. The HPC prepared comprehensive model plans for DM at the national, state and district levels.

1.3.2 The National Committee on Disaster Management

An all party National Committee on Disaster Management (NCDM) was set up after the Gujarat earthquake, under the Chairmanship of the Prime Minister and with representatives of national and state level political parties, for catalysing and enabling the preparation of DM plans and suggesting effective mitigation mechanisms.

1.3.3 The Disaster Management Act, 2005

On 23 December 2005, the Government of India (GoI) took a defining step towards holistic DM by enacting the DM ACT, 2005.

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Paradigm Shift

2.1 The DM Act, 2005—A Paradigm Shift

From a response and relief-centric approach to a proactive, and comprehensive mindset towards DM covering all aspects from prevention, mitigation, preparedness to rehabilitation, reconstruction and recovery.

It also provides for:

- The creation of a policy, legal and institutional framework, backed by effective statutory and financial support.
- The mainstreaming of multi-sectoral DM concerns into the developmental process and mitigation measures through projects.
- A continuous and integrated process of planning, organising, coordinating and implementing policies and plans in a holistic, community based participatory, inclusive and sustainable manner.

2.2 National Vision

The national vision is to build a safer and disaster resilient India by developing a holistic, proactive, multi-disaster and technology driven strategy for DM. This will be achieved through a culture of prevention, mitigation and preparedness to reduce the impact of disasters on people. The entire process will centre stage the community and will be provided momentum and sustenance through the collective efforts of all government agencies supported by Non-Governmental Organisations (NGOs).

2.3 Role of the National Disaster Management Authority (NDMA)

The DM Act mandates the NDMA to lay down policies and guidelines for the statutory authorities to draw their plans. In essence, the NDMA will concentrate on prevention, mitigation, preparedness, rehabilitation and reconstruction and also formulate appropriate policies and guidelines for effective and synergised national disaster response and relief. It will coordinate the enforcement and implementation of policies and plans.

3.1 The Role of the State Disaster Management Authority (SDMA)/ State Executive Committee (SEC) and the State Departments

Section 23 of the DM Act 2005 provides that there shall be a DM plan for every state. It outlines the broad coverage of the plan as well as the requirements of consultation in the preparation of the state plans. It also provides for annual review and updating of the state plan, and enjoins upon the state governments to make provisions for financing the activities to be carried out under the state plans. It provides for the departments of the state governments to draw up their own plans in accordance with the state plan. The state plans shall be prepared by the SEC in conformity with the guidelines to be issued on related matters by the SDMA having regard to the guidelines laid down in this regard by the NDMA, and after such consultation with local and district authorities and the people's representatives as the SEC may deem fit. The state plan prepared by SEC shall be approved by the SDMA.

information and knowledge, a plan should be formulated by every state and updated regularly adding fresh inputs on an ongoing basis. Pending detailed micro-level vulnerability assessment and risk analysis, information as currently available about the vulnerability profile of different areas of a state, including information contained in the *Vulnerability Atlas of India* published by the Ministry of Urban Development may be incorporated in the plan.

3.2 Need for Immediate Action

Ideally, state DM plans should be made after vulnerability assessment and risk analysis of a state have been undertaken. Guidelines issued by the NDMA will also need to be internalised in these plans. Even though this process has begun, it is likely to take some time. It is felt that the preparation of plans cannot, and should not, await the outcome of the disaster risk analysis. On the basis of extant

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Levels of Disasters

- The approach to the preparation of the state DM plan should be holistic and address all the hazards the state is vulnerable to. It should take into account past lessons and experiences, build on good existing systems at different levels. It should address the need to streamline the systems and develop operational and management procedures.
- The state plan may also adopt the generic categorisation of disasters with specific plans at the state level by various departments to handle different disasters.
- The levels of disasters have already been categorised and disseminated as L0, L1, L2 and L3, based on the ability of various authorities to deal with them. Various colour codes relating to the level of alerts have also been assimilated.
 - L0 denotes normal times which are expected to be utilised for close monitoring, documentation, prevention, mitigation and preparatory activities. This is the planning stage where plans at all levels from community to the State shall be put in place. Training on search and rescue, rehearsals, evaluation and inventory updation for response activities will be carried out during this time.
 - L1 specifies disasters that can be managed at the district level, however, the state and centre will remain in readiness to provide assistance if needed.
 - L2 specifies disaster situations that may require assistance and active participation of the state, and the mobilisation of resources at the state level.
 - L3 disaster situations arise from large-scale disasters where districts and the state may not have the capacity to respond adequately and require assistance from the central government for reinstating the state and district machinery.
- Even though there cannot be watertight compartmentalisation of responsibilities between states and the centre, especially in the case of man-made disasters, the participation by the Centre will normally be at the L3 level.

The aim of the state DM plan is to ensure that the following components of DM are addressed to facilitate planning, preparedness, operational, coordination and community participation. Flowing from the national vision and the aforementioned approach, the objectives guiding the policy formulation are:

- Promoting a culture of prevention and preparedness by ensuring that DM receives the highest priority at all levels.
- Ensuring that community is the most important stakeholder in the DM process.
- Encouraging mitigation measures based on state-of-the-art technology and environmental sustainability.
- Mainstreaming DM concerns into the developmental planning process.
- Putting in place a streamlined and institutional techno-legal framework for the creation of an enabling regulatory environment and a compliance regime.
- Developing contemporary forecasting and early warning systems backed by responsive and fail-safe communications and Information Technology (IT) support.
- Promoting a productive partnership with the media to create awareness and contributing towards capacity development.
- Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society.
- Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat.
- Undertaking recovery to bring back the community to a better and safer level than the pre-disaster stage.

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Key Responsibilities of Agencies

The key responsibilities of DM and emergency response system departments/agencies of the state government could be envisaged as:

- **Planning:** development of strategies and requirement analysis for resource utilisation. The establishment of structures, development of systems and testing and evaluation by organisations of their capacity to perform as per allotted roles.
- **Coordinated Execution of Plans:** Increased coordination, convergence and synergy among the departments and institutions should be promoted in order to promote sharing of resources, perspectives, information and expertise

through support of training centres, academic and applied research, education and awareness generation programme, etc.

- **Mainstreaming DM Concerns into Development Programmes:** This deals with integration of measures for prevention of disasters and mitigation into developmental plans and projects including mitigation projects and to facilitate provision of adequate funds for DM. Plans may be shown in three broad categories, viz. short, medium and long term. The structural and non-structural measures to be taken may be brought out in each category.

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Guiding Principles for the Preparation of State Plans

7.1 Participatory Approach

The plan preparation process essentially aims at strengthening the communities, elected local bodies and state administration's response and preparedness. The plans should be prepared through a participatory approach including identification of vulnerabilities and risks, and also be holistic, inclusive, sustainable and environment friendly. The plans should be sensitive to the special needs of vulnerable sections such as pregnant and lactating mothers, children, the elderly and physically and mentally challenged persons. The concerns of women may be specifically addressed.

7.2 Community Based DM

During any disaster, communities are always the first responders. Community participation ensures local ownership, addresses local needs, and promotes volunteerism and mutual help to prevent and minimise damage. Therefore, states should make all efforts to assist communities in understanding their vulnerabilities and the lead role that they can play in managing risks with less dependence on external entities, through robust campaigns. Also arrangements for community based disaster preparedness should form the basis for preparation of plans.

7.3 Guiding Principles—Themes Underpinning the Plans

- The vulnerability of different parts of the state to different kinds of disasters.
- The measures to be adopted for prevention and mitigation of disasters.
- The manner in which mitigation measures shall be integrated with development plans and projects.
- The capacity building and preparedness measures to be taken.
- The roles and responsibilities of each department of the government of the state in relation to the measures specified above.
- The roles and responsibilities of different Departments of the government of the state in responding to any threatening disaster situation or disaster.
- The state plan will be reviewed and updated annually.

- Appropriate provisions will be made by the state governments for financing the measures to be carried out under the state plan.
- Copies of the state plan will be made available to the departments of the government of the state and such department will draw up their own plans in accordance with the state plan.

NDMA has accordingly framed these guiding principles for the preparation of state DM plans. An outline to be followed by the states for preparing the plan has also been indicated.

8.1 The Framework

The framework of the plan should highlight the paradigm shift in DM from a relief-centric approach to a regime that anticipates the importance of preparedness, prevention and mitigation, and comprises three parts:

- General issues including broad vulnerability profile of the state. It will also comprise other thematic issues such as community based DM, medical preparedness, awareness generation, training needs analysis and development of a state Human Resources (HR) plan, knowledge management, early warning and forecasting system standards for relief, rehabilitation etc.
- Disaster specific issues and methodologies.
- Cross-cutting issues common to all situations in any disaster. It will specifically deal with implementation, monitoring and review arrangements.

It will be in conformity with disaster specific guidelines, which are being issued from time to time by the NDMA wherein the last chapter of each guideline will detail outlines of the plans to be made. The plan will also address cross-cutting activities in DM, the vertical and horizontal linkages requiring coordination between the union, state and local governments on the one hand and a host of government departments and agencies on the other.

8.2 Coordinating and Monitoring Mechanism

This should include a reference to the following, as part of the coordination and monitoring mechanism:

- The role of elders, senior citizens and locally respected leaders.
- The role of the NGOs, Self Help Groups and other Community Based Organisations (CBOs).
- The role of women as active participants in DM including risk reduction, mitigation, preparedness and awareness generation.
- The role of urban and rural local bodies particularly gram sabhas.

8.3 Sections of the Framework

The framework will comprise sections that deal with:

- Operational.
- Administrative.
- Financial.
- Legal Aspects.
- Process.

8.3.1 Operational

The plan should:

- i) Take into account the socio-cultural realities of the state, and should be equity based—recognising the differential needs of all sections of the society, including marginalised groups such as the elderly, pregnant and lactating mothers, children, physically and mentally challenged persons etc. It should specifically address the concerns of women.
- ii) Be in harmony with national, district, block, village and community level plans and should incorporate implementation strategies as well as indicate specific monitoring and evaluation mechanisms. The latter should also be able to capture the qualitative outcomes.

- iii) Develop a base line and identify the total risk and also agree on the minimum acceptable level of risk. It must capture all aspects of the DM cycle from preparedness to recovery. However, the initial plan formulation need not await completion of the risk assessment exercise.
- iv) Include a reference to the components of the state Human Resource Development (HRD) plan for DM, which specific emphasis on features specifically such as:
 - Training needs analysis.
 - Involvement, besides the Administrative Training Institutes (ATIs), of other sectoral training and educational institutions in the exercise.
- v) Contemplated professional training for micro planning, which should adopt the multi-hazard approach and develop inbuilt simulation techniques for the application of the plan.
- vi) Describe the role of the **Emergency Operations Centre (EOC)**: time bound action plans must be indicating for creating facilities for environment scanning, intelligence gathering, operations and logistics management under one roof for holistic and efficient management of disasters at the state and district level. Arrangements must be made and procedures must be laid down for manning the EOC on 24 X 7 X 365 basis. The plan must also cover in detail the indigenised

Incident Command System at the state, district and local body levels.

vii) Incorporate **Medical Preparedness and Mass Casualty Management**: The following points must be reflected in the state plan:

- Listing of all hospitals and primary health centres including private nursing homes and their capacities.
- Emergency casualty management plans at the local, district and state level.
- For effective management of big cities like Delhi and Mumbai, nearby medical facilities must also be built into plans.
- Availability of mobile hospitals and/or plans for acquiring the same.

viii) Outline various life-line structures/ infrastructure (e.g., bridges, roads, school buildings, hospitals, communication network etc.) and also highlight the arrangements for the maintenance and management of these structures during disasters.

ix) Take note of the fact that seven battalions of the National Disaster Response Force (NDRF), co-existing with the proposed National Disaster Mitigation Resource Centres (NDMRCs) have already been positioned at nine different locations to cover the entire country. These NDMRCs have been evolved to help the states in capacity

development, running of mock drills and facilitating the process of central assistance to the states. State governments should take all steps to upgrade and strengthen the Civil Defence and Home Guards, in sync with the efforts being made by the Gol in this regard.

- x) In major cities (with a population exceeding 10 lakhs), municipal corporations have a large administrative system including departments like engineering, public health and revenue, and sometimes fire services. These should provide a good mechanism for coordinated response in case of any crisis/disaster. Therefore, management of major cities should be planned as a unit. In metropolitan cities it is also advisable to make the urban metropolitan government directly responsible for DM.
- xi) Include the essentials of a scientific approach in damage assessment exercise so that timely and adequate relief can be provided.
- xii) Identify emergency management problems with spatial aspects appropriate for Geographic Information System (GIS). GIS can be part of the solution to many emergency management problems. Evaluation the costs of institutionalising GIS as an emergency management tool in terms of staffing, training, data collection, hardware and software.
- xiii) Lay due emphasis on the conduct of mock exercises and drills for different disasters. These exercises are essential for role clarity of the stakeholders concerned at the district

- level and for synergising coordination of various emergency support functions. In case of water and climate related hazards, exercises in different vulnerable areas of the state may be planned before the onset of the rainy season. For other kinds of disasters, exercises may be planned at regular intervals as considered appropriate.
- xiv) Describe the mechanism of convergence of existing national, state, district and local resources.
 - xv) Address logistic issues in preparedness, response, rehabilitation and recovery related matters.
 - xvi) Incorporate modalities for inter-state coordination as worked out in consultation with the neighbouring states.
 - xvii) Include details of inter-country coordination as worked out for states sharing common international boundaries in consultation with the central government and the NDMA.
 - xviii) Include requirements of infrastructure, communication, training and HRD in a phased manner.

8.3.2 Administrative

- i) As the formulation of the XIth Five Year plan is underway, the plan must be in accordance with the development plans of the state five-year plans. The plan should also be in conformity with the state DM policy.
- ii) The systems and institutions for implementation of the plans must be clearly identified and spelt out. The plan should explicitly take note of the available NDRF, Civil Defence, Home Guards, youth and students organisations etc., The National Cadet Corps (NCC), National Service Scheme (NSS) and Nehru Yuva Kendra (NYK) networks. Specific plans for capacity building and training should also be included in a separate chapter.
- iii) Public-Private Partnerships will be factored into the DM approach and the modalities through which these will work also need to be incorporated.
- iv) Knowledge Management—the following aspects will be covered in this section:
 - Establishment and operation of Community Service Centres (CSCs). The CSCs are an essential component of realising the goal of becoming a knowledge-driven society. These centres form the core for the use of ICT for rural development and are designed to build around several other initiatives and programmes, such as self help groups, skill building, micro-credit, micro-enterprises, markets, literacy and education, agriculture, health, governance and entitlements etc.
 - Measures for documenting the indigenous local practices for DM.
 - Regular updation of the resource inventory

- v) As disasters do not recognise man-made boundaries, inter-state, inter-district coordination issues will have to be prominently factored into the plan.
- vi) DM involves a multi-disciplinary approach of many initiatives converging at the district and local level. It is here that there is greater need for inter-disciplinary coordination and monitoring. The facilities of the DM cells in all administrative training institutes should be fully utilised and strengthened to contribute to the development of DM related skills.
- vii) Interface with Panchayati Raj Institutes/ CBOs, NGOs and the community at large and utilising their assistance should be clearly brought out.
- viii) A mechanism must be put in place to ensure that the plan is updated on a regular basis (at least once in a year) and is able to accommodate changes over time.
- ii) Incorporate details regarding building in DM concerns into developmental plans. Details of mitigation and capacity development measures must be spelt out.
- iii) Be a component sub-plan of the state's annual and five-year plans, indicating upfront the allocation of each of the departments involved along the lines of the tribal area sub-plan.
- iv) Reflect the provision of adequate funds for the requirements of relief material when disaster strikes, estimated on the basis of past experience. Care should also be taken to make full provision for the requirements of forces deployed on these occasions. Availability of funds for district and local authorities from the plans should be ensured.
- v) Furnish, while referring to external aid, details of the nodal arrangements for coordination.

8.3.3 Financial

The plan should:

- i) Be supported with necessary budget provisions for short, medium and long term activities. The DM Act, 2005 mandates the constitution of a State Disaster Response Fund at the state level and District Disaster Response Funds at the district level. The modalities for the creation of these funds as well as guidelines for their utilisation may be included in an annexure to the plan document. If it is not possible to put in place such a fund, in the near future, a reference to the establishment of these funds should be made in the plan.

8.3.4 Legal

This section will cover aspects such as:

- i) The responsibility of the SEC:
 - To coordinate and monitor the implementation of the national policy, the national plan and the state plan.
 - To provide information to the NDMA relating to various parameters of DM.
 - To earmark funds for prevention and integration of disasters in their development plans and projects.

- ii) Put in place techno-legal regimes; e.g., amending building bye-laws, bringing in flood plain zoning legislation etc.

8.3.5 The Process

This section will:

- i) Designate the nodal department for coordinating formulation of the state plan.
- ii) Identify the focal point in each relevant department; consisting of a core group of officers and provide for adequate training to professionalise their approach.
- iii) Involve administrative/technical institutions for providing technical support.
- iv) Describe nodal department(s) for involvement of NGOs, CBOs, corporate sector, youth organisations, educational institutions, Panchayati Raj Institutions (PRIs), urban local bodies, media and other stakeholders—and the modalities of such partnerships.
- v) Outline the logistics management in all aspects of DM from preparedness to recovery.
- vi) Describe the consultative process with local authorities, district authorities and people's representatives.

9

Suggested Outline

Part I: General

environment protection, population explosion etc.

Chapter I: Introduction

- State profile—social, economic and demographic
- Vision.
- Theme.
- Objectives.

Chapter II: Vulnerability Assessment and Risk Analysis

- History of vulnerability of the state to the disasters of different types.
- Hazard risk assessment and vulnerability mapping.
- The probable threat of man-made disasters.
- A hazard profile of the state together with maps and details of zonation, if any, undertaken. The district hazard profile in the GIS format should also be included, if available. The plan should also refer to emerging concerns such as urbanisation,

Chapter III: Preventive Measures

- Man-made disasters.
- Natural Disasters—specific to the state.
- Early warning and dissemination systems.
- Prevention and mitigation plans; short, medium and long term with structural and non-structural measures required to be taken together with identification of nodal department(s) for each activity.
- Training needs analysis and development of state HR plan (to be added as annexure).

Chapter IV: Mainstreaming DM Concerns into Developmental Plans/Programmes/Projects

- This includes economic and social infrastructure like irrigation, power, drinking water, sanitation, roads, buildings, schools and hospitals, housing, heritage monuments etc.
- Elements of impact assessment, risk reduction, and the “do no harm” approach.

To be build into the developmental plans of each department while building in DM concerns into such plans.

- Classification of disasters and residual agenda.
 - What will be done?
 - How it is to be done?
 - Who will do it?
 - By when?

[in a brief manner logistics management details to be incorporated in respective Standard Operating Procedures (SOPs)]

Chapter V: Preparedness Measures

- Resource availability—national and state resources: government, private, civil society:
 - Inventory of human and material resources should be included in IDRN/SDRN with modalities for regular updating on quarterly basis.
- Community Based Disaster Management (CBDM).
- Training, capacity building and other proactive measures:
 - Civil Defence.
 - Home Guards.

- NCC.
- NSS.
- NYK.
- Educational and training institutions.
- Civil society, CBOs, corporate entities.
- Fire brigade.
- State Disaster Response Force.
- Civil police.
- Media—electronic, print and through folk media, inter personal communication.
- Awareness generation.
- Outline an effective GIS process for collecting and analysing spatial data for emergency management problem solving.
- Techno-legal regime.
- Medical preparedness—nominate/ designate hospitals, doctors and paramedics to cover emergency health management including trauma and psycho-social care.
- Knowledge management:

- Take steps to inventorise Indigenous technological knowledge for combating disasters and validate it for appropriate use.
- Arrange for the use of ICT tools and resources such as Community Service Centres.
- Fail-safe communication including last-mile connectivity.
- Testing of the plans—through mock drills and rehearsals.
- Lessons learnt—to be incorporated at the time of updating of plan.
- The yearly schedule for the conduct of mock exercises for different disasters in different parts of the state at specified locations. Some exercises should be undertaken without prior intimation to enable a correct assessment of the level of preparedness.
- Procedure for the activation of plans—upon occurrence of any disaster.

Chapter VII: Partnership with other stakeholders

- The roles of academic institutions and scientific and technical organisations which have an important function in DM may be spelt out from early warning to recovery, together with names and designation of the nodal persons.
- Media.

Chapter VI: Response

The design of plans developed for immediate response which would be initiated on a trigger mechanism basis upon the occurrence of a calamity of extreme nature.

- Incident Command System (suitably modified/indigenised).
- Emergency Operation Centres.
- Alert mechanisms—early warnings etc.
- Disaster risk reduction framework, policy, act of the state/state road map for hazard risk management.
- Probabilistic scenario-building for different levels of various disasters to which different areas of the state are vulnerable.
- Arrangements for the funding of the components of the state plan.
- Provision of funds for specific mitigation projects aimed at improving prevention, preparedness, and mitigation in requirement of specific disasters at the national, state and district levels (these would have to be prioritised and phased over time).
- Steps taken for the constitution of the Disaster Response Fund and Disaster

Chapter VIII: Financial Arrangements

Mitigation Fund both at the state and district level which can also serve as a source for funding of various activities as mandated by the DM Act, 2005.

- Detailed SOPs of each department to make provision in its annual budget for funds to carry out the activities set out in its own DM plan and role and responsibilities of all other stakeholders.

periodicity, confirming that their components have been duly updated.

Chapter XIX: Coordination and Implementation

Coordination, as between and amongst the various agencies involved in DM and ensuring implementation of the tasks entrusted to them is an important statutory responsibility of authorities at various levels.

The plan should explicitly spell out the cross-cutting nature of activities that constitute DM and the vertical and horizontal linkages required between government departments, scientific and technical institutions, NGOs, CBOs and local bodies and describe how ensuring of implementation of their functions will be done by the SDMA/SEC/DDMA etc.

Coordination of efforts amongst various government departments and other stakeholders generates synergy and involves the bringing together of agencies and functionaries to ensure effective performance.

It is primarily concerned with the systematic acquisition and application of resources (personnel and equipment) in accordance with the requirements demanded by emergencies. Monitoring mechanisms incorporating, *inter alia*, quality and outcome indicators should also be spelt out.

Through the installation of a regular Management Information System (MIS), clear responsibilities should be cast upon the various agencies to report either to the SDMA/SEC/DDMA in regard to the subject matter to be reported upon, the authorities to whom the report has to be sent together with specific time lines, frequency and reporting formats. To focus attention on areas that are not functioning as required, the principle of management by exception should be followed.

Part II: Disaster Specific Action Plan

Chapter IX: Floods

Chapter X: Cyclone

Chapter XI: Earthquakes

Chapter XII: Landslides

Chapter XIII: Chemical Disasters (including emphasis on off site plans—preparation and rehabilitation)

Chapter XIV: Nuclear Disasters

Chapter XV: Biological Disasters

Chapter XVI: Oil Spills and Mine Disasters

Chapter XVII: Tsunami

Part III: Cross-cutting Issues

Chapter XVIII: Review and updation of plans

The plan should include a schedule for submitting Action Taken Reports at prescribed

Annexures to the Plan

- Relief codes—important government orders.
- Damage/need assessment format.
- Emergency telephone directory.
- The main state river basin/road/transport networks.
- List of NGOs at national, state and district/ sub-district level functioning in the state.
- List of training/technical institutions.

