

India Country Profiles Update (2008)

- Recent Development of Disaster Management System in India -

Government of India had had several institutional developments for disaster risk management since 2005: Evolution of National Disaster Management Authority (NDMA) and State Disaster Management Authorities (SDMAs), National Institute of Disaster Management (NIDM), National Disaster Response Force (NDRF) and their functions, roles and responsibilities and scope of work vis-à-vis Nodal Ministries.

1. National Disaster Management Authority (NDMA) of India



The National Disaster Management Authority (NDMA), headed by the Prime Minister of India, is the Apex Body for Disaster Management in India. The setting up of the NDMA and the creation of an enabling environment for institutional mechanisms at the State and District levels is mandated by the Disaster Management Act, 2005 (http://nidm.gov.in/DM_act2005.pdf).

India envisions the development of an ethos of Prevention, Mitigation and Preparedness and will strive to promote a National resolve to mitigate the damage and destruction caused by natural and man-made disasters, through sustained and collective efforts of all Government agencies, Non-Governmental Organisations and People's participation, by adopting a Technology-Driven, Pro-Active, Multi-Hazard and Multi-Sectoral Strategy for building a Safer, Disaster Resilient and Dynamic India.

2. National Institute of Disaster Management

The National Institute of Disaster Management (NIDM) functions as the nodal centre for Human Resource Development in the area of Disaster Mitigation and Response. It is a premier national organization working for human resource development at national level in the area of disaster mitigation and management. The NIDM came into existence since October 16, 2003 by a Government of India order upgrading the National Centre for Disaster Management (NCDM) located in New Delhi, and established by the Ministry of Agriculture, Department of Agriculture and Cooperation, Government of India, in March 1995.

The NIDM, in partnership with other research institutions has capacity development as one of its major responsibilities, along with training, research, documentation and development of a national-level information base. The NIDM networks with other knowledge-based institutions and function closely, within the broad policies and guidelines laid down by the NDMA, and assists in imparting training to trainers, DM officials, etc. It is also responsible for synthesizing research activities. The NIDM is geared towards emerging as a 'centre of excellence' at the national and international level.

The objectives of NIDM are as follows:

- To undertake quality research covering both natural and human induced disasters, with a multi-hazard approach
- To work as a National Resource Center for the central and state governments in the country through effective knowledge management and sharing of best practices
- To professionalise disaster risk reduction and emergency management in India and other neighboring countries by developing an independent cadre of professionally trained emergency and mitigation managers.
- To promote formal training and education for disaster management in India and in the region
- To build working partnerships with the Government, universities, NGOs, corporate bodies and other national and international Institutes of eminence.

- To link learning and action by building a synergy between institutions and professionals in the sector.

[Organization Structure]

(a) Departments of Learning

The NIDM has broadly the following departments of learning:

- Department of Policy Planning
- Department of Mitigation
- Department of Reconstruction and Recovery
- Department of Emergency Preparedness and Response
- Department of Knowledge Management, IT and publication

All the above-mentioned departments would be addressing natural, human induced disasters. Each department will have different centers which would be addressing different disasters such as earthquake, flood, cyclone, drought and human induced disasters so that multi hazard approach could be adopted. All the departments would work in close coordination with each other. Each department would undertake training, research, networking and documentation activities as part of the mandate.

Department of Policy Planning would be interacting with all the departments and would work on policy research along with the concerned sectors. Also, independent research would be conducted to address cross cutting themes such as Gender, development planning, organizational reforms, Insurance risk financing etc. the department would help the states in developing the policy framework and institutionalizing learning.

Department of Mitigation would try and create a culture of preparedness and mitigation with a multi hazard approach through quality research, documentation and training across various stakeholders and institutions

Department of Reconstruction and Recovery would try and build on the existing resources and skills and reorient the stakeholders in various approaches to reconstruction strategy

Department of Emergency preparedness and Response would work towards building professionalism in responding to disaster situations by cutting down response time by building efficient and effective systems

Department Of Training, Knowledge Management and Publications would aim at developing a knowledge hub including a knowledge bank. This network would be linked with international networks, i.e., Prevention Consortium, Relief Web, and Global Disaster Information Network. The department would document various disasters and manage the library.

(b) Administration and Accounts Wing

- Administration
- Accounts
- Establishment-Stores, Purchase, Housekeeping/Maintenance
- Personnel
- PR/ Media Coordination

(c) Management Committee of the Institute

A Management Committee looks after all Administrative and Financial matter related to the Institute. A Management Committee has been constituted under the Chairmanship of the Home Secretary, Government of India with the following Members:

Secretary/ Special Secretary in charge of Disaster Management in the Ministry of Home Affairs

- Joint Secretary (Disaster Management) and Central Relief Commissioner

- Financial advisor (Home)
- Joint Secretary dealing with Drought Management in the Department of Agriculture
- An Officer not below the rank of Joint Secretary in the Ministry of Finance (Department of Expenditure) to be nominated by Secretary (Expenditure)
- Executive Director, NIDM
- The Management Committee may co-opt any other Member (s) with the approval of the Home Secretary.

(d) Expert Committee of the Institute

To provide technical advice and to consider the project proposals to be undertaken by the Institute an Expert Committee has been constituted under the Chairmanship of the Secretary/Special secretary in charge of Disaster Management in the Ministry of Home Affairs with the following Members:

- Joint Secretary (Disaster Management) and Central Relief Commissioner
- Financial advisor (Home)
- An Officer not below the rank of Joint Secretary from the Central Water Commission and Department of Personnel & Training.
- An Officer not below the rank of Joint Secretary from the Department of Earthquake Engineering.
- Joint Secretary dealing with Drought Management in the Department of Agriculture
- Three Relief Commissioners of the State Government to be nominated by the Chairperson on annual rotation basis.
- Executive Director, NIDM

The Expert Committee may co-opt any other Member (s) as considered appropriate depending on the specific projects proposed to be discussed in any particular meeting of the Committee.

3. National Disaster Response Force (NDRF)

[Concept]

The Disaster Management Act has mandated the constitution of a Specialist Response Force to a threatening disaster situation or a disaster. This Force functions under the National Disaster Management Authority which has been vested with its control, direction and general superintendence. This is a multi-disciplinary, multi-skilled, high-tech force for all types of disasters capable of insertion by air, sea and land. All the eight battalions are equipped and trained for all natural disasters including four battalions in combating nuclear, biological and chemical disasters.

[Present Organizations]

Presently this Force is constituted of eight battalions, two each from the BSF, CRPF, CISF and ITBP. Each battalion will provide 18 self-contained specialist search and rescue teams of 45 personnel each including engineers, technicians, electricians, dog squads and medical/paramedics. The total strength of each battalion will be approximately 1,158

[Deployment]

These NDRF battalions are located at nine different locations in the country based on the vulnerability profile to cut down the response time for their deployment. During the preparedness period/in a threatening disaster situation, proactive deployment of these forces is carried out by the NDMA in consultation with state authorities.

4. Ministries Responsible for Various Categories of Disasters

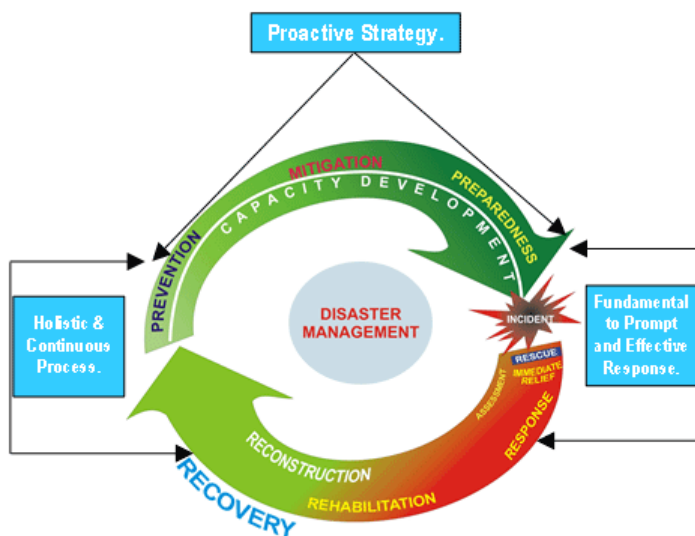
DISASTERS	MINISTRIES/DEPARTMENTS
Earthquakes and Tsunami	MHA/Ministry of Earth Sciences/IMD
Floods	MHA/Ministry of Water Resources/CWC
Cyclones	MHA/Ministry of Earth Sciences/IMD
Drought	Ministry of Agriculture
Biological Disasters	Ministry of Health and Family Welfare
Chemical Disasters	Ministry of Environment & Forests
Nuclear Disasters	Ministry of Atomic Energy
Air Accidents	Ministry of Civil Aviation
Railway Accidents	Ministry of Railways

5. Approach to Disaster Management

Till recently, the approach to Disaster Management has been reactive and relief centric. A paradigm shift has now taken place at the national level from the relief centric syndrome to holistic and integrated approach with emphasis on prevention, mitigation and preparedness. These efforts are aimed to conserve developmental gains as also minimize losses to lives, livelihood and property.

A typical Disaster Management continuum as shown below, comprising of six elements i.e., Prevention, Mitigation and Preparedness in pre-disaster phase, and Response, Rehabilitation and Reconstruction in post-disaster phase, defines the complete approach to Disaster Management.

DISASTER MANAGEMENT CONTINUUM



6. National Disaster Management Framework (2004)

National Disaster Management Framework has been developed in 2004. See Annex 1 for details.

7. India Disaster Resource Network (IDRN)

IDRN portal initiated by the Ministry of Home Affairs, Government of India was launched in September 2003 in collaboration with UNDP under the Government of India-UNDP Disaster Risk Management (DRM) programme to systematically build up the India Disaster Resource Network Inventory as an organized information system for specialist equipment and disaster expertise for disaster response, so that disaster managers can identify the location of the resources and will be able to access it for disaster response with the minimum loss of time.

The on-line inventory clearly lists out sequential details on specific equipments, types, their functions performed, human expertise in search and rescue operations and contact details of expertise and suppliers for prompt mobilization. IDRN was designed as a web enabled information system to provide updated inventory of related items every quarter, entered at two levels i.e at district and state level. The portal has been hosted to the central server at NIC National Information Centre, who is providing technical support to Ministry of Home Affairs. The portal has an on-line dual accessible interface system for users from state disaster management /relief & rehabilitation department officials (Relief Commissioners), district administrators (District Magistrate/Collectors) and other state and district nodal officers, corporate members and public who can browse the portal. The user can obtain catalogued information as well as query based data and list of resources available at district and state level.

The on line inventory user manual and details can be accessed at <http://www.idrn.gov.in> . Technical support was extended by UNDP to systematically formulate the resource inventory through an organized information system designed to collate and assimilate information from authorities in 563 district and 35 state/union territories.

Annex 1: NATIONAL DISASTER MANAGEMENT FRAMEWORK
INSTITUTIONAL MECHANISMS

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Nodal agency for disaster management at the national level with appropriate systems	(i) Constitution of National Emergency Management Authority with appropriate legal, financial and administrative powers. (ii) Roles and responsibilities of the NEMA: -Coordinating multi-hazard mitigation, prevention, preparedness and response programmes. - Policies for disaster risk reduction and mitigation -Preparedness at all levels. -Coordination of response -Coordination of post disaster relief and rehabilitation. -Amendment of existing laws, procedures, instructions.	Ministries/ Departments of Health, Water Resources, Environment and Forests, Agriculture, Railways, Atomic Energy, Defence, Chemicals, Science & Technology, Rural Development, Road Transport & Highways etc.
Creation of State Departments of Disaster Management	Departments of Relief & Rehabilitation to be re-designated as Department of Disaster Management with enhanced areas of responsibility to include mitigation, prevention and preparedness	State Governments/ UT Administration.
Setting up State Disaster Management Authorities	(i) State Disaster Management Authority to be headed by the Chief Minister. (ii) The Authority to lay down policies and monitor mitigation, prevention and preparedness as also oversee response.	Ministers for Agriculture, Home, Disaster Management, Water Resources, Health, Road & Transport, Civil Supplies, Environment & Forests, Rural Development, Urban Development and Public Health Engineering Departments as Members.

DISASTER MITIGATION/PREVENTION

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Disaster mitigation/prevention to be mainstreamed into the development process.	(i) Each Ministry /Department which has a role in mitigation /prevention will make appropriate outlays for schemes addressing mitigation/prevention (ii) Where there is a shelf of projects /schemes, projects / schemes contributing to mitigation to be given a priority. (iii) Wherever possible schemes/projects in areas prone to natural hazards to be so designed as to contribute to mitigation,	Ministries / Department of Govt. of India / State Governments /UT Administration

	and preparedness. (iv) Projects in vulnerable areas/areas prone to natural hazards to be designed to withstand natural hazards.	
Techno-legal regime	(i) regular review of building codes and its dissemination (ii) construction in seismic zones III, IV and V to be as per BIS codes/National Building Codes. (iii) Construction in areas vulnerable to cyclones to be so designed as to withstand the wind hazard as per BIS codes/National Building Codes. (iv) Comprehensive review and compliance of - Town and Country Planning Acts -Development Control Regulations -Planning and Building Standards Regulations (v)Put in place appropriate techno-financial regime (vi)Capacity enhancement of Urban Local Bodies to enforce compliance of techno-legal regimes	Bureau of Indian Standards/Ministry of urban Development State Urban Development Department / Urban Local Bodies State Urban Development Department / Urban Local Bodies State Urban Development Department / Urban Local Bodies State Urban Development Department / Urban Local Bodies State Urban Development Department / Urban Local Bodies State Governments
Land-use Planning and Zoning regulations	(i) Legal framework for Land-use planning and zoning regulations to be reviewed. (ii) Zoning regulations to be enforced.	Ministry of Urban Development Department of Land Resources[MORD] Ministry of Environment and Forests[GOI] State Governments
Plan schemes for vulnerability reduction and preparedness.	State Governments. to formulate Plan Schemes and submit to Planning Commission	State Governments

LEGAL/POLICY FRAMEWORK

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Disaster Management to be listed in List – III – [Concurrent List] of Seventh Schedule to the Constitution	(i) Bill to be drafted. (ii) Bill to be brought before Parliament	Ministry of Home Affairs/ Ministry of Law (Legislative Department)
State Disaster Management Acts	Model Act to be circulated to the States.	Ministry of Home Affairs State Governments

National Policy on Disaster Management	(i) Mainstreaming disaster management into planning and development process. (ii) Mandate safe construction. (iii) Coordinated action by all relevant Departments as per policy	Ministry of Home Affairs, Ministry of Finance, Planning Commission, Ministry of Environment & Forests, Rural Development, Urban Development and other relevant Ministries to be consulted.
States to enunciate Policy on Disaster Management	(i) Mainstreaming disaster management into planning and development process. (ii) Mandate safe construction. (iii) Coordinated action by all relevant Departments as per policy	State Governments
State Disaster Management Codes	Amendment of existing relief codes/scarcity codes/famine codes to incorporate mitigation, preparedness and planning measures at all levels from community to State, constitution of Emergency Support Teams /Disaster Management Teams /Committees /State Disaster Management Authorities, delegation of administrative and financial powers to disaster incident managers etc, protocol to update the inventory of resources and plans,	State Governments

PREPAREDNESS AND RESPONSE

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
National Emergency Response Force/ Specialist Response teams	(i) Designation of units for conversion into Specialist Response Teams. (ii) Designation of training centres. (iii) Training of trainers. (iv) Procurement of equipment (v) Training of teams.	Ministry of Home Affairs Central Industrial Security Force/ Indo-Tibetan Boarder Police/ Border Security Force/ Central Reserve Police Force
Specialized Response Teams at State level	(i) Designation of units for conversion into Specialist Response Teams. (ii) Designation of training centres. (iii) Training of trainers. (iv) Procurement of equipment using CRF resources (v) Training of teams.	State Department of Disaster Management/State Home Department State Police Training College/ State Fire Training Institute

NATIONAL NETWORK OF EMERGENCY OPERATION CENTERS [NNEOCs]

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Setting up Emergency Operations Centre[EOC] at National level	(i) Multi- hazard resistant construction. (ii) Communication system linkages. (iii) Mobile EOCs for on-site disaster information management	Central Public Works Department Department for Central Public Works Ministry of Home Affairs
State level EOC	(i) Multi- hazard resistant construction. (ii) Communication system linkages. (iii) Mobile EOC for on-site disaster management information	State Governments
District level EOC	(i) Multi- hazard resistant construction. (ii) Communication system linkages.	State Governments
Putting Incident Command System in Place	(i) Designate nodal training centres. (ii) Putting in place protocols/SOPs for Incident Command System.	Ministry of Home Affairs/ Department of Personal and Training/ Lal Bahadur Shastri National Academy of Administration / State Governments/ Administrative Training Institutes
Emergency Support Function Plan	(i) departments/agencies which perform emergency support functions to draw up ESF plans, constitute teams, and set apart resources in advance so that post-disaster response is prompt.	Central Government Ministries/ Departments State Governments
India Disaster Resource Network	(i) A web enabled GIS-based resource inventory listing out all the necessary resources for emergency response available at the district and State level throughout the country so that resources can be mobilized at short notice. (ii) Set up servers, draw up and install programmes, input data. (iii) Half yearly updating	Ministry of Home Affairs State Governments.
Communication linkages which will be functional even post-disaster.	(i) Draw up communication plan. (ii) Obtain sanctions. (iii) Put communication network in place.	Ministry of Home Affairs Directorate Coordination of Police Wireless State Governments
Regional Response Centres	(i) Identify location of Regional Response Centres. (ii) Identify caches of equipment required. (iii) Obtain sanctions. (iv) Put teams and caches of equipments in place.	Ministry of Home Affairs Border Security Force/ Indo-Tibetan Border Police /Central Reserve Police Force/ Central Industrial Security Force
Training in	(i) Draw up capsules.	Ministry of Home Affairs

response to be made a part of training curriculum of CPMFs and State Police Forces.	(ii) Train trainers	State Governments
State Disaster Management Plans	(i) Plan to be drafted under the supervision of the Chief Secretary. (ii) Plan will include mitigation, preparedness and response elements. (iii) The plan will be multi-disciplinary to be drawn up in conjunction/consultation with all relevant Departments concerned with mitigation, preparedness and response. (iv) Plan to be updated once a year.	State Governments/ State Disaster Management Authorities
District Disaster Management Plans	(i) To be drawn up under the supervision of District Magistrate/Collector and to include mitigation, preparedness and response. (ii) Emergency Support Functions by various Departments to be included. (iii) To be drawn up in consultation with all relevant Departments. (iv) District inventory of resources to be maintained.	State Governments/ State Disaster Management Authorities
Block Disaster Management Plans	(i) To be drawn up under the supervision of District Magistrate/Collector and to include mitigation, preparedness and response. (ii) Emergency Support Functions by various Departments to be included. (iii) To be drawn up in consultation with all relevant Departments. (iv) District inventory of resources to be maintained.	State Governments/ State Disaster Management Authorities / Block Development Administration
Community based mitigation, preparedness and response plans	(i) Enhance community capacity in multi-hazard prone States and districts to respond effectively to disasters-special attention to be given to empowering and capacity building of vulnerable communities and groups including women. (ii) Set up and train village/ Panchayat (for rural areas) and wards/municipal council/corporations (for urban areas) disaster management committees and disaster management teams e.g. -Identification of safe shelters and management -Stockpiling of relief materials etc. -early warning dissemination -first-aid and counselling -assist in search and rescue (iii) such plans to be made integral to annual development plan of local bodies (iv) mitigation plans of the community and Panchayats to receive priority under various	State Governments/ District Administration/ Panchayati Raj Institution /Urban Local Bodies

	rural development schemes administered by Panchayats and Urban local bodies	
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EARLY WARNING SYSTEMS

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
(i) State of the art sensors to be set up. (ii) Hazard monitoring, tracking and modelling.	(i) IMD/CWC to carry out a review of sensors available and draw up plans for strengthening the system. (ii) Models to be updated to improve prediction accuracy.	Indian Meteorological Department/ Central Water Commission/ National Centre for Medium Range Weather Forecasting
Warning Protocols	(i) Warning protocols to be user friendly. (ii) Warning to be communicated as quickly as possible to the States/districts/community. (iii) Protocols should be simple to understand. (iv) Districts to set up protocols for communication of early warning to the community. (v) Panchayats/local bodies to be used for early warning communication. (vi) Communication linkages for early warning.	Ministry of Home Affairs/ State Governments /Indian Meteorological Department/ Central Water Commission/ National Remote Sensing Agency/ Information and Broadcasting/ Doordarshan/ All India Radio

HUMAN RESOURCE DEVELOPMENT & CAPACITY BUILDING

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Training for services /cadres/ agencies involved in mitigation, preparedness or response.	(i) Training needs analysis/ Human Resource Development Plan (ii) Drawing up of capsule courses for training. (iii) Training of trainers. (iv) National Institute for Disaster Management to be strengthened. (v) Setting up /strengthening training institutions in state faculties of Disaster Management in Administrative Training Institutes	Ministry of Home Affairs State Governments
Training of IAS/IPS, State Administrative Service Officers/State Police.	(i) Training curriculum for IAS/IPS and State Administrative Service Officers/State Police Officers to include capsules in disaster management. (ii) Training of Block/Village level staff	Administrative Training Institutes /State Institutes of Rural Development and District Institutes of Education and Training to

	(iii) Training of PRIs.	be used.
Engineers/Architects	Curriculum for undergraduate engineering and B.Arch courses to be amended to include mitigation technologies in general and elements of earthquake engineering in particular	State Governments All India Council for Technical Education Indian Institute of Technologies Professional bodies
Health Professionals	Include crisis prevention, response and recovery and trauma management in the MBBS curriculum.	Ministry of Health and Family Welfare Medical Council of India
Youth organisation	NCC, NSS, Scouts & Guides to include disaster response, search and rescue in their orientation/training programmes.	Ministry of Youth and Sports Ministry of Defence
Masons	Mason training for safe construction	Ministry of Rural Development/ Department of Urban Development/ State Governments
School curriculum	To include disaster awareness.	Central and State Boards of Education
National mass media campaign for awareness generation	Design and develop a communication strategy for awareness campaign Use audio, visual and print medium to implement awareness campaign Development of resource materials on mitigation, preparedness and response	Ministry of Home Affairs /State Governments Ministry of Home Affairs /State Governments Ministry of Home Affairs
Non-government community-based organizations involved in awareness generation and community participation in disaster preparedness and mitigation planning	(i) Facilitate network of non-govt community based organizations at national/State/district levels (ii) Co-opted into the planning process and response mechanisms at all levels	Ministry of Home Affairs /National Institute for Disaster Management Ministry of Home Affairs /National Institute for Disaster Management
Corporate sectors involved in awareness generation and disaster preparedness and mitigation planning	Sensitisation, training and co-opting corporate sector and their nodal bodies in planning process and response mechanisms	Ministry of Home Affairs/ Federation of Indian Industries
Inter-state arrangements for sharing of resources during emergencies and lessons learnt	(i) Arrangements for inter-State sharing of resources to be incorporated in State Disaster Management Plans (ii) Inter-state exposure visits to be facilitated for learning from the experiences of other States	Ministry of Home Affairs/ State Governments Ministry of Home Affairs/ State Governments

RESEARCH AND KNOWLEDGE MANAGEMENT

Expected Outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Institutionalise knowledge and lessons learnt in the process of working on the national roadmap	(i) Assessment and evaluation of ongoing programmes and activities regular documentation of key lessons (ii) Establish India Disaster Resource Network as knowledge portal to pool and exchange information and knowledge among all concerned institutions and organization	Ministry of Home Affairs State Governments / National Institute for Disaster Management Ministry of Home Affairs
Develop national disasters database	(i) Systematic inventorization of disasters (ii) Trend analysis and reporting	National Institute for Disaster Management
Promote research in national, state and regional institutions in the areas of disaster risk reduction	(i) mitigation technologies for housing, roads and bridges, water supply and sewerage systems, power utilities, (ii) cost-effective equipments for specialized rapid response and preparedness in --temporary and transition shelter in post-disaster situations --search and rescue equipments --provision of drinking water, emergency health and sanitation in post-disaster situations -post-trauma stress management and care (iii) promote participation of corporate sector in finding out technological solutions for disaster risk reduction	Ministries / Departments of Central Government
Plan schemes for vulnerability reduction and preparedness.	State Governments. to formulate Plan Schemes and submit to Planning Commission	State Governments