



GOVERNMENT OF HIMACHAL PRADESH
DEPARTMENT OF REVENUE

HIMACHAL PRADESH
STATE POLICY
ON DISASTER MANAGEMENT
2011



HP STATE DISASTER MANAGEMENT AUTHORITY

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Approved by the State Cabinet on 27th March, 2012



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CONTENTS

Chapter	Title	Page
1.	Preamble	1
1.1.1	The context	1
1.2.1-1.2.8	Disaster Risk in Himachal Pradesh	1
1.3.1.1	Paradigm Shift in DM	3
1.4.1	District wise Disaster Vulnerability	6
2.	Gaps in Existing Capacity	10
2.1.1-2.1.2	Existing Capacity including infrastructure in the State	10
2.2.1	Gaps in Existing Capacity	10
2.2.1-2.3.3	Filling up the Gaps	11
3.	Approaches and Objectives	13
3.1.1	Vision	13
3.2.1	Aim	13
3.3.1	Disaster Management	13
3.4.1	DM Continuum	13
3.5.1	Approach	14
3.6.1	Objectives	14
4.	Institutional and Legal Arrangements	16
4.1.1-4.1.2	At the National Level	16
4.2.1	State Disaster Management Authority	16
4.3.1-4.3.2	State Executive Committee	17
4.4.1	State and District Crisis Management Group	17
4.5.1-3.5.3	District Disaster Management Authority	18
4.6.1	Local Authority	19
4.7.1	State Disaster Management Institute/ATI	19
4.8.1	State Disaster Response Force	19
4.9.1-4.9.2	State Government	20
4.10.1-4.10.2	Role of State Government Departments at State and District Level	20
4.11.1	District Administration	21
	Other Institutional Arrangement	21
4.12.1.	Armed Forces	21
4.13.1	Central Para Military Forces	21
4.14.1	State Police Forces and India Reserve Battalions	22
4.15.1	Civil Defence, Fire Services and Home Guards	22
4.16.1	Role of NCC, NSS, NYKS etc.	22
4.17.1	HP State DM Framework	22

5.	Financial Arrangement	20
5.1.1	Approach	23
5.2.1	Disaster Response and Mitigation Funds	23
5.3.1	Responsibilities of the state Departments and Agencies	23
5.4.1	Techno-Financial Regime	23
6.	Disaster Prevention, Mitigation and Preparedness	25
5.1.1	Disaster Prevention, Mitigation and Mainstreaming	25
6.1.2	Mainstreaming of Disaster Risk Reduction	25
6.2.1	Risk Assessment and Vulnerability Mapping	25
6.3.1	Management of Disasters in Urban Areas	26
6.4.1	Critical Infrastructure	26
6.5.1	Environmentally Sustainable Development	26
6.6.1	Climate Change Adaptation	27
6.7.1-6.7.2	Preparedness of Disaster Management Plans	27
6.8.1	Medical Preparedness and Mass Causality Management	28
6.9.1	Forecasting and Early Warning Systems	28
6.10.1-6.10.2	Communication and IT Tools in DM	29
6.11.1	Setting up and Strengthening of EOCs	29
6.12.1	Training, Simulation and Mock Drills	30
6.13.1	Community Based Disaster Preparedness	30
6.14.1	Mobilising Stakeholders' Participation	30
6.15.1	Corporate Social Responsibility and PPP	31
6.16.1	Media Partnership	31
7.	Techno-legal Regime	32
7.1.1	Techno-legal Regime	32
7.2.1	Land Use Planning	32
7.3.1-6.3.2	Hazard Resistant Safe Construction Practices	32
7.4.1	Compliance and Enforcement Mechanism	33
8.	Response	34
8.1.1	Approach	34
8.2.1	Role of State, District and Local Authorities	34
8.3.1	Role of Nodal and Other Depts. Of Govt.	34
8.4.1	Standard Operating Procedures	35
8.5.1	Levels of Disasters	35
8.6.1-8.6.4	Incident Response System	35
8.7.1	Key Responders	36
8.8.1	Medical Response	36
8.9.1	Reproductive and Emergency Obstetric Services	36
8.10.1	Animal Care	37

8.11.1	Information and Media Partnership	37
8.12.1	GO-NGO and IAG Coordination	38
9.	Relief, Reconstruction, Rehabilitation and Recovery	39
9.1.1-9.1.2	Approach	39
9.2.1-9.2.4	Relief	39
9.3.1	Owner Driven Construction	40
9.4.1	Reconstruction of Social Infrastructure	40
9.5.1	Socio-Economic Rehabilitation	41
9.6.1	Linking Recovery with Safe Development	41
10.	Training and Capacity Development	42
10.1.1	Approach	42
10.2.1-10.2.4	Training	42
10.3.1	Capacity Development	44
10.4.1	Institutional Capacity Development	44
10.5.1	Training of Communities	44
10.6.1	Professional Technical Education	45
10.7.1	DM Education in Schools	45
10.8.1	Training of Artisans	45
11.	Knowledge Management, Research and Development	46
11.1.1	Approach	46
11.2.1	Knowledge Institutions	46
11.3.1	Dissemination of Knowledge	46
11.4.1	Documentation of Best Practices and Research	46
11.5.1	Research and Development	47
11.6.1	The Road Ahead	47
Annexure - I	HP DM Framework	48
	Diagrams	
Diagram 1	Hazard Profile of Himachal Pradesh	3
Diagram 2	Disaster Management Continuum	14
	Maps	
Map 1	Earthquake Hazard Map of Himachal Pradesh	4
Map 2	Wind Hazard Map of Himachal Pradesh	5
Map 3	Landslide Hazard Zonation Map of India	6
Map 4	Overall Vulnerability Map of Himachal Pradesh	9
	Table	
Table 1	Hazard Vulnerability of Himachal Pradesh	8
	Abbreviations	60

CHAPTER - 1

Preamble

The Context

1.1.1 Disasters disrupt progress and destroy the hard-earned fruits of painstaking developmental effort, often pushing nations, in quest for progress, back by several decades. Thus, efficient management of disasters, rather than mere response to their occurrence, has in recent times received increased attention both within India and abroad. This is as much a result of the recognition of the increasing frequency and intensity of disasters, as it is an acknowledgement that good governance in a caring and civilized society, needs to deal efficiently with the devastating impact of disaster.

Disaster Risk in Himachal Pradesh

1.2.1 State of Himachal is prone to various hazards both natural and manmade. Main hazards consist of earthquakes, landslides, flash floods, snow storms and avalanches, droughts, dam failures, fires – domestic and wild, accidents – road, rail, air, stampedes, boat capsizing, biological, industrial and hazardous chemicals etc. The hazard which however, poses biggest threat to the State is the earthquake hazard. The State has been shaken more than 80 times by earthquakes having a magnitude of 4 and above on the Richter Scale as per the recorded history of earthquakes. As per the BIS seismic zoning map five districts of the State, namely Chamba (53.2%) Hamirpur (90.9%), Kangra (98.6%), Kullu (53.1%), Mandi (97.4%) have 53 to 98.6 percent of their area liable to the severest design intensity of MSK IX or more, the remaining area of these districts being liable to the next severe intensity VIII. Two districts, Bilaspur (25.3%) and Una (37.0%) also have substantial area in MSK IX and rest in MSK VIII. The remaining districts also are liable to intensity VIII.

1.2.2 Unfortunately, inspite of the probable maximum seismic intensities being high, the house types mostly fall under Category A, consisting of walls of clay mud, unburnt bricks or random rubble masonry without any earthquake resisting features. Now all such houses are liable to total collapse if intensity IX or more actually occurs in future and will have severe damage called “destruction” with very large cracks and partial collapses even in intensity VIII areas. Also, the burnt-brick houses, classified as Category B, as built in Himachal Pradesh do not have the earthquake resisting features, namely good cement mortar seismic bands and roof typing etc. therefore, they will also be liable to severe damage under intensity IX as well as in VIII when ever such an earthquake would occur. This became quite evident even in M 5.7 Dharamshala earthquake of 1986.

1.2.3 Another form of the natural hazards in the state is the frequent occurrences of landslides. The hills and mountains of Himachal Pradesh are liable to suffer landslides during monsoons and also in high intensity earthquakes. The vulnerability of the geologically young and not so stable steep slopes in various Himalayan ranges, has been increasing at a rapid rate in the recent decade due to inappropriate human activity like deforestation, road cutting, terracing and changes in agriculture crops requiring more intense watering etc. Although widespread floods problems do not exist in the state because of topographical nature, continuing attention is necessary to reduce flood hazards in the state, more particularly the flash flood hazard the incidences of which are increasing causing large scale damage. Besides, with the increase of road connectivity and number of vehicles plying on these roads in the State, the number of road accidents and loss of precious human lives is increasing day by day.

1.2.4 The forests of Himachal Pradesh are rich in vascular flora, which forms the conspicuous vegetation cover. Out of total 45,000 species of plants found in the country as many as 3,295 species (7.32%) are reported in the State. More than 95% of species are endemic to Himachal and characteristic of Western Himalayan flora, while about 5% (150 species) are exotic introduced over the last 150 years. Over the years the forest wealth of the State is being destroyed by the incidences of fire attributed to both anthropogenic and other reasons. The destruction of rich flora and fauna of the State due to forest fires will have serious repercussions on the ecological balance of the State. Besides, domestic fire incidents cause loss of property every day.

1.2.5 The State is known as land of Gods. Many famous temples are located in the State such as Sri Naina Devi, Baba Balak Nath, Sri Chintpurni, Ma Jawalaji, Ma Brajeshwari and Sri Chamunda Nandikeshwari Dham to name a few. Large number of devotees throng these places every year. A human stampede at the temple of Naina Devi occurred on 3 August 2008. 162 people died when they were crushed, trampled, or forced over the side of a ravine by the movement of a large panicking crowd. Possibility of such instances is always there if there is any laxity on the part of the management.

1.2.6 The State has two airports and more than 120 helipads/helicopter landing sites in the State. Punjab governor Surendra Nath and nine members of his family were killed when the government's Super-King aircraft crashed into high mountains in bad weather on July 9, 1994 in Himachal Pradesh. Sh. Nath was then acting Himachal governor also. Himachal has also one ropeway near Parwanoo which witnessed accidents few years back. More ropeways are in the offing in the state. Besides, paragliding activities also take place in Bir Billing every year. Accidents have also taken place during this activity.

1.2.7 Hundreds of people are killed and many more injured in road accidents every year. Few parts of State have rail network also. That makes the state prone to rail accidents too. Pong, Bhakara and Chamera are the three large water reservoirs in the

State. These reservoirs besides other river courses are used in the state for transportation purpose also. There is always possibility of boat capsizing during these transport activities. The cases of drowning and washing away in rivers/streams are very common in the State. Cases of snakebite and electrocution are significant during monsoon season.

1.2.8 The diagrammatic (Diagram 1) representation of hazard profile of Himachal is as under:-

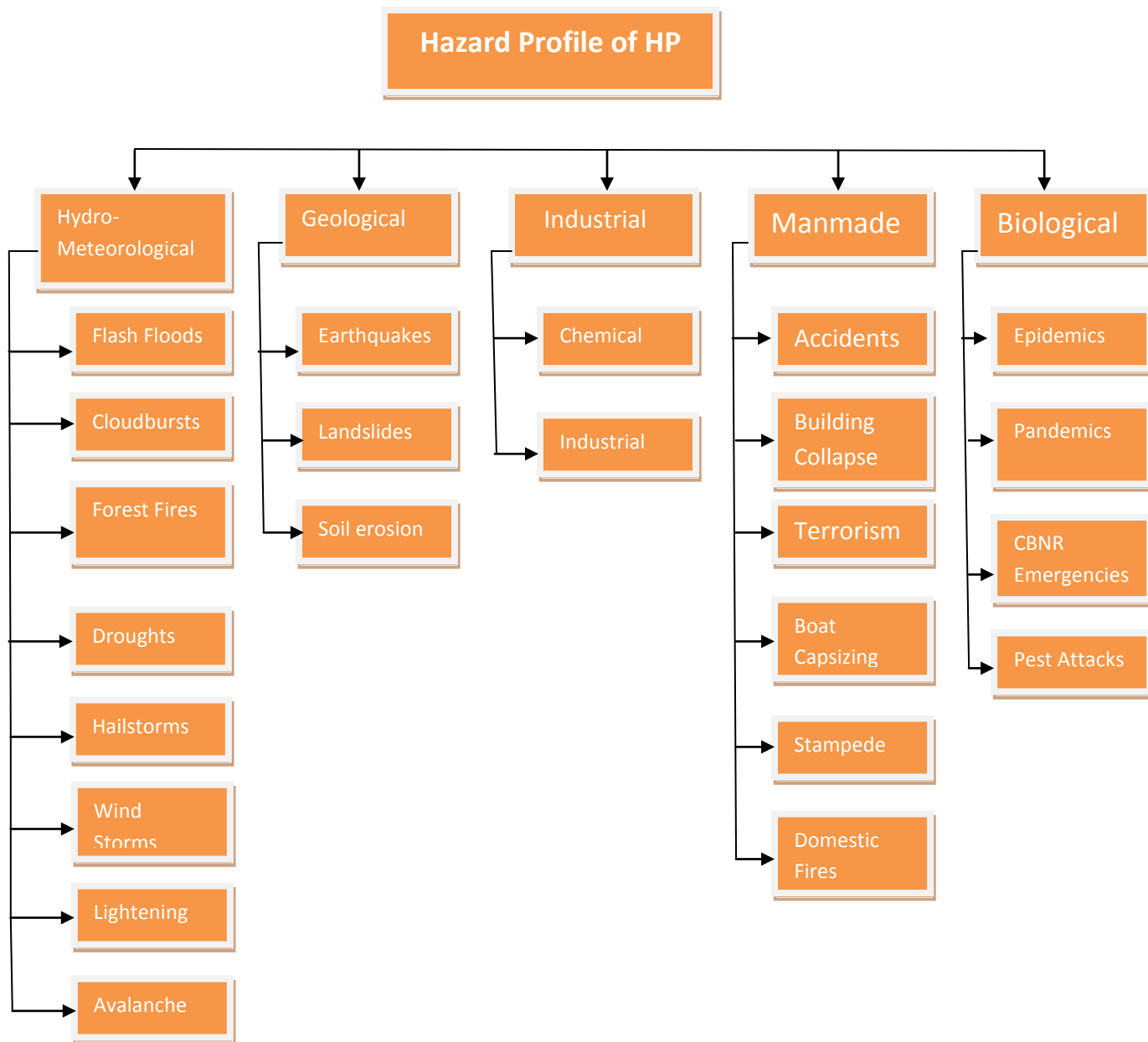


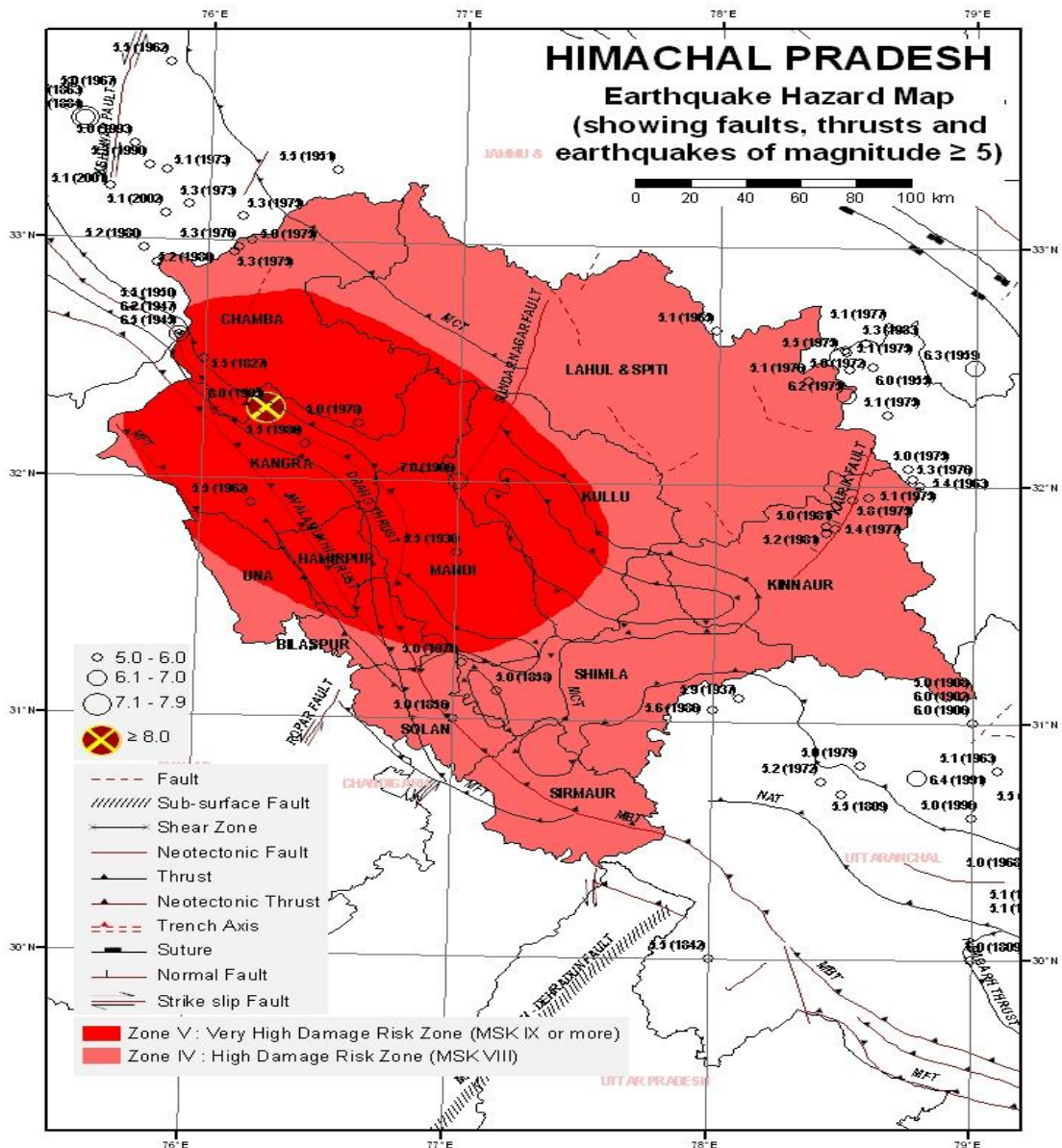
Diagram1: Hazard Profile of HP

Paradigm Shift in Disaster Management

1.3.1 On 23rd December, 2005, the Government of India took a defining step by enacting the Disaster Management Act, 2005, which envisaged creation of the National

Disaster Management Authority (NDMA) headed by the Prime Minister, State Disaster Management Authorities (SDMA) headed by the Chief Ministers, and District Disaster Management Authorities (DDMA) headed by the District Magistrates or Deputy Commissioners as the case may be, to spearhead and adopt a holistic and integrated approach to disaster management (DM). There will be 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.

Map 1

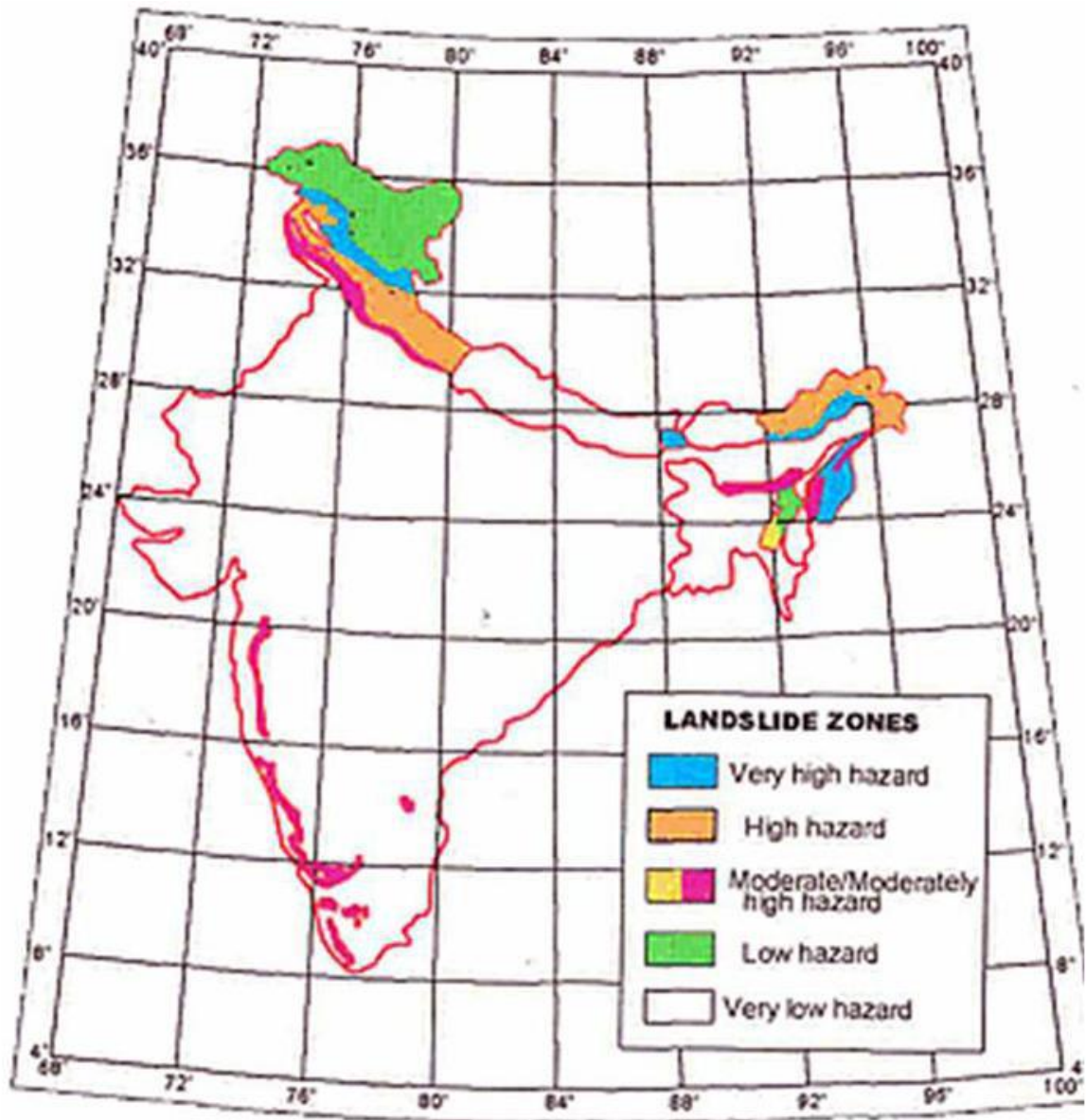


BMPC : Vulnerability Atlas - 2nd Edition; Peer Group, MoHSUPA; Map is Based on digitised data of SOI, GOI; Seismic Zones of India Map IS: 1893: 2002; Seismotectonic Atlas of India, GSI, GOI

Map 2



BMTPC : Vulnerability Atlas - 2nd Edition; Peer Group, MoH&UPA; Map is Based on digitised data of SOI, GOI ;
Basic Wind Speed Map, IS 875(3) - 1987;

Map.3

Landslide Hazard Zones in India

Source: <http://www.gsi.gov.in/lndslide/lhs.htm>

PRESENT STATUS IN TERMS OF VULNERABILITY OF THE STATE

DISTRICT WISE DISASTER VULNERABILITY OF THE STATE:

1.4.1 Considering the proneness of the state towards different kinds of natural hazards, a broad district wise vulnerable status was devised for the state depending upon the vulnerability towards different hazards. Vulnerability matrix was developed based on the qualitative weightage which was given in the scale of 0-5 for different

hazards such as earthquakes, landslides, avalanches, industrial hazards, construction type and density of population. District wise matrix was prepared by evaluating the risk severity. The evaluation also gives weightage to the density of population likely to be affected. The matrix also includes the evaluation of hazards likely to be induced on account of development of projects such as hydel projects, roads, industries etc. In case of earthquake vulnerability, the district Kangra, Hamirpur and Mandi falls in very high vulnerable category on the basis of the matrix devised. The districts which falls in high earthquake vulnerability are Chamba, Kullu, Kinnaur and part of Kangra and Shimla districts, where as the moderate and low vulnerable districts are Una, Bilaspur, Sirmour and Solan, Shimla and Lahaul & Spiti districts respectively. The landslide vulnerability in case of Chamba, Kullu, Kinnaur and part of Kangra and Shimla districts is high followed by Kangra, Mandi, Bilaspur, Shimla, Sirmour and Lahaul & Spiti districts falling in moderate vulnerable category. The areas falling in low vulnerable category are in the districts of Una, Hamirpur and Solan. The avalanche hazard vulnerability map suggests that the districts of Lahaul & Spiti and Kinnaur are very high vulnerable followed by Chamba, Kullu and part of Kangra and Shimla as moderate vulnerable areas where as the remaining districts fall in the category where avalanche hazards are nil. The flood hazard vulnerability map indicates that the areas falling in the districts of Chamba, Kullu, Una and Kinnaur fall in high vulnerable districts where as the Lahaul & Spiti, Mandi, Shimla, Kangra, Hamirpur, Bilaspur, Solan and Sirmour fall in moderate and low vulnerability areas. The overall vulnerability of the state on the basis of the matrix clearly suggests that the district Chamba, Kinnaur Kullu and part of Kangra and Shimla falls in very high vulnerable risk. Similarly district Kangra, Mandi, Una, Shimla and Lahaul and Spiti falls in high vulnerable risk status. The district Hamirpur, Bilaspur, Solan and Sirmour falls in moderate vulnerable risk status. The disaster management strategies and infrastructure required to be evolved by taking the above factors into consideration.

HAZARD VULNERABILITY OF HIMACHAL PRADESH

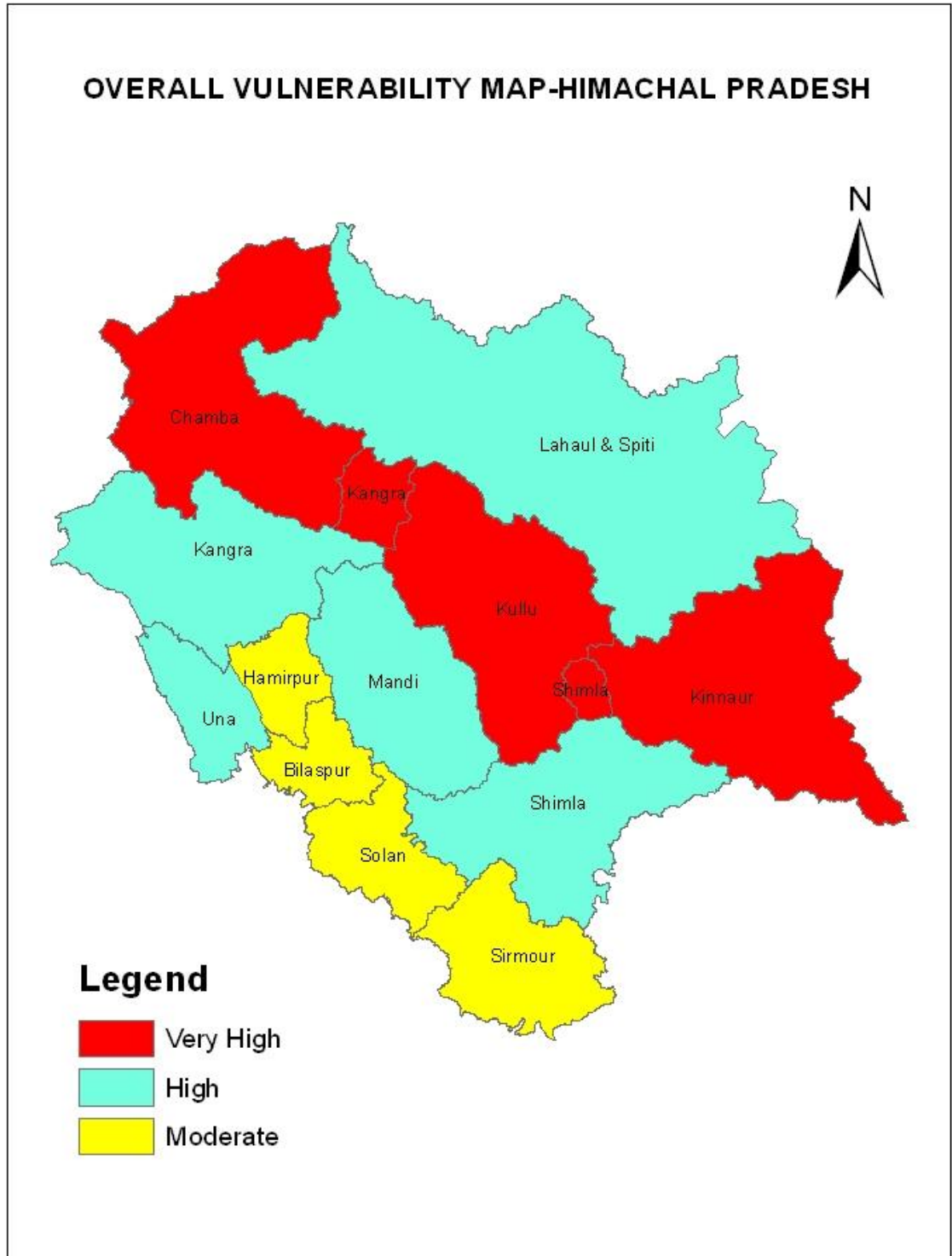
DISTRICT	E.Q.	LANDSLIDE	FLOODS	AVALANCHE	INDUSTRY	.CONST. TYPE & DENSITY	OVER ALL VULNERABILITY	
Kangra	VH	M	L	---	M	VH	H	
Chamba	H	H	H	M	M	H	VH	
Hamirpur	VH	L	L	---	---	H	M	
Mandi	VH	M	M	---	---	H	H	
Kullu	H	H	H	M	H	H	VH	
Bilaspur	M	M	L	---	M	M	M	
Una	M	L	H	---	H	M	H	
Sirmour	M	M	L	---	H	M	M	
Solan	L	L	L	---	H	M	M	
Kinnuar	H	H	H	VH	H	M	VH	
L&Spiti	L	M	M	VH	---	M	H	
Shimla	L	M	M		H	M	H	

Abbreviations: L- Low; M – Medium; H – High; VH – Very High

Source: HP State Council for Environment, Science and Technology

Table 1: Hazard Vulnerability of Himachal Pradesh.

Map.4



Source: HP State Council for Environment, Science and Technology

CHAPTER -2

Gaps in the Existing Capacity

Existing Capacity, including Infrastructure of the State

2.1.1 As described in detail in the previous chapter the State is prone to multi-hazards such as earthquake, landslide, cloudburst, flash flood, snow avalanche, fires – forest and domestic, road accident, dam burst, stampede etc. In order to effectively respond to these hazards there is lack of adequate infrastructure, planning, awareness, and institutional capacity.

2.1.2 Disaster Management Cell with provision of two faculty in DM is functional and imparting training on disaster management. Combined Home Guards and Civil Defence Training Institute at Shimla is currently training civil defence and home guard volunteers. The Fire Services in the state have been established in all the district headquarters. Recently under the NRHM 108 Emergency Services have also been introduced in the State.

Gaps in the Existing capacity

2.2.1 The gaps in existing capacity to respond to disaster can be summarized below:-

- i. Knowledge, aptitude and practices (KAP) of the stakeholder vis a vis various hazards is not known. Hence it is very difficult to launch effective awareness campaigns and design appropriate training material.
- ii. Hazard, vulnerability and risk profiles (HRVA) for various parts of the State are not known. Hence it is difficult to plan mitigation and preparedness measures. Without proper HRVA effective disaster planning is not possible.
- iii. Training in various disciplines in disaster management needs to be imparted for building capacities of various stakeholders such as doctors, engineers, architects, contractors, teachers, volunteers, government functionaries, masons, construction supervisors etc. These training can be imparted by various institutions. As on today there is no such capacity with other institutions to impart training to various stakeholders.

- iv. There is no emergency operation centres. And coordination for disaster response is very difficult. Roles and responsibilities have not been clearly laid down.
- v. Proper Disaster Management Plans (DMP) have not been formulated at the district and state level. The same require expert inputs and improvement.
- vi. Lack of adequate equipment for SAR and disaster response.
- vii. Early warning system is not adequate in the State.

Filling up the Existing Gap

2.3.1 The activities are required to be taken up in the State to fill up the existing gaps mainly consist of:-

- i. Conducting KAP Studies to ascertain the knowledge, aptitude and practices of various stakeholders so that awareness generation campaigns can be appropriately designed and launched. And training modules and material can be prepared.
- ii. Conducting HRVA of the State so that mapping of hazards can be done at the Tehsil level, elements of vulnerability can be ascertained and risk can be quantified. HRVA is must for taking up effective preventive, mitigation and preparedness measure.
- iii. Capacity building and strengthening of various institutes of the State Government Departments such as HP Family Welfare Training Institute, Civil Defence, Home Guards and Fire Institutes, Revenue Training Institute, ITIs, SCERT, DIETs, SIRD, Panchayati Raj Training Institute, police training institutes, Mountaineering Institute etc. so that they can prepare appropriate training material in the context of the State and provide training to various stakeholders and government functionaries.
- iv. Launching of IEC campaigns
- v. Preparation of DMPs for all the districts, selected blocks and Gram Panchayats. Preparation DMPs of departments of the Government has also been envisaged.

- vi. Setting up of EOCs and purchase of essential equipment for SAR and disaster response.
- vii. Setting up of knowledge centre (HPSDMA Website) for dissemination of IEC on disaster management.

2.3.2 The above list is illustrative and not exhaustive and activities would be taken up as per the need and requirement of the time and situation.

2.3.3 The existing institutional system for disaster management is relief centric and at present only few departments are involved in the process. But with the enactment of DM Act, 2005 a proactive and holistic approach to DM is required. In view of this the subject of DM has become multi-disciplinary and multi-sectoral. DM is now the subject matter of all departments both for disaster risk mitigation, integration of DM in development plans and policies, preparedness, response and rehabilitation. At the field level there is also functional vagueness vis a vis roles of various departments and stakeholders.

CHAPTER – 3

Approach and Objectives

Vision

3.1.1 To build a safe and disaster resilient Himachal Pradesh by developing a holistic, proactive, technological driven, and community based strategy through a culture of prevention, mitigation, preparedness and response.

Aim

3.2.1 The Policy has been prepared as per the provision of Clause (a) of Sub-Section (2) of Section 18 of the Disaster Management Act, 2005 and aims at providing guiding principles for reducing, preventing, mitigating disaster risk and creating a system for effective disaster response. The Policy also aims at providing guidelines for post disaster relief, rehabilitation and reconstruction codes and guidelines. The policy also aims at consolidating the existing practices and procedures in DM and to issue new directions keeping in view the provisions of Disaster Management Act, 2005. In nutshell the Policy aims at taking forward the Disaster Management Act, 2005.

Disaster Management (DM)

3.3.1 According to Section 2(d) of the Disaster Management Act, 2005 "disaster" means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area. And further Section 2 (e) defines "disaster management" as a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary or expedient for-

- (i) prevention of danger or threat of any disaster;
- (ii) mitigation or reduction of risk of any disaster or its severity or consequences;
- (iii) capacity-building;
- (iv) preparedness to deal with any disaster;
- (v) prompt response to any threatening disaster situation or disaster;
- (vi) assessing the severity or magnitude of effects of any disaster;
- (vii) evacuation, rescue and relief; and
- (viii) rehabilitation and reconstruction.

DM Continuum

3.4.1 A typical DM continuum comprises of six elements; the pre-disaster phase includes prevention, mitigation and preparedness, while the post disaster phase

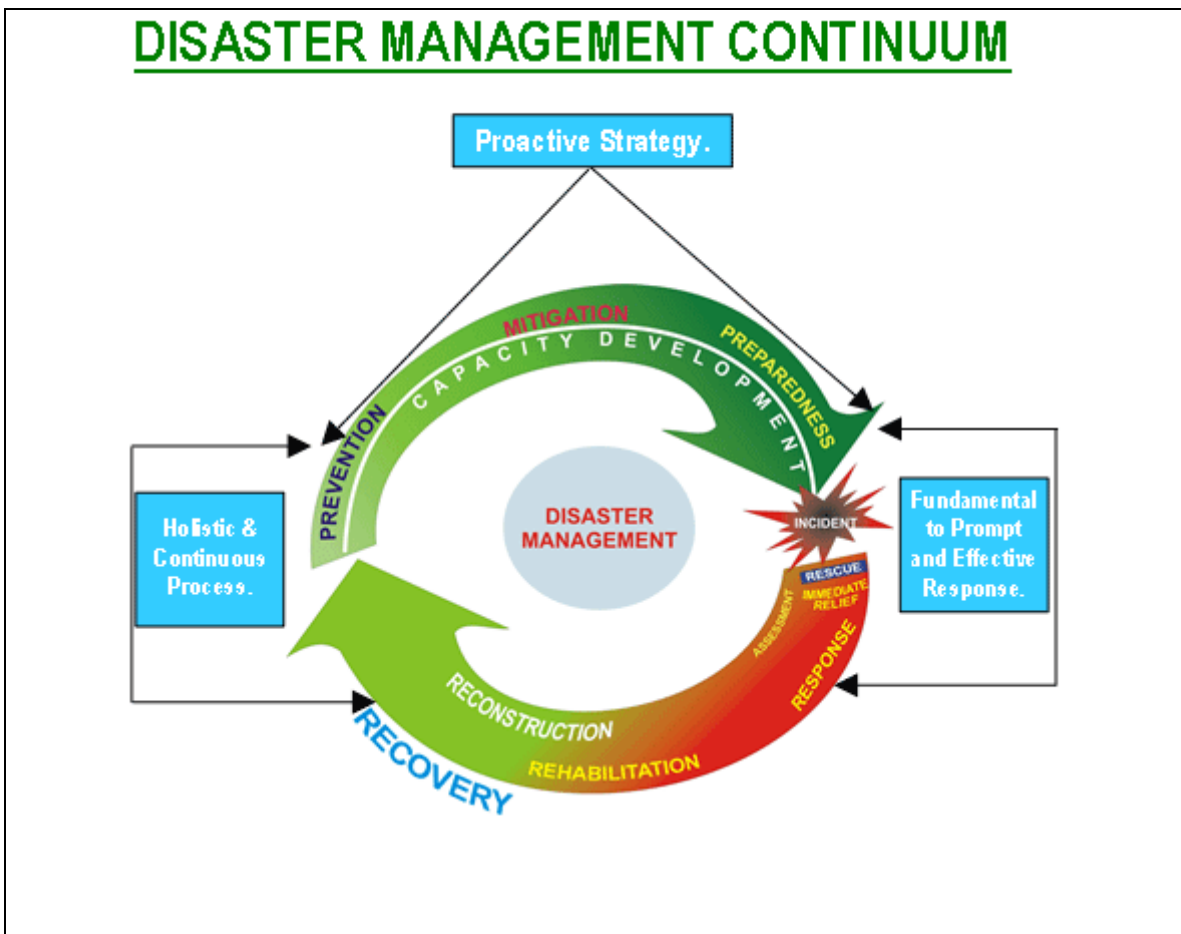
includes response, rehabilitation, reconstruction and recovery. A legal and institutional framework binds all these elements together (Diagram 1).

Approach

3.5.1 The policy aims at developing a holistic and integrated approach towards disaster management with emphasis on building strategic partnerships with stakeholders and knowledge institutions at various levels. The themes underpinning the policy are:

- i) Community based DM, including last mile integration of the policy, plans and execution.
- ii) Capacity development in all spheres and levels.
- iii) Consolidation of past initiatives and best practices.
- iv) Cooperation with agencies at local, district, state, national and international levels.
- v) Multi-sectoral approach and synergy.

Diagram 2



Source: National Policy on Disaster Management, 2009

Objectives

3.6.1 The objectives of the HP State Policy on Disaster Management are:

- i) Promoting a culture of prevention, preparedness and resilience at all levels through knowledge, innovation and education.
- ii) Engagement in activities that will build the capacities of stakeholders and local communities to cope with calamities.
- iii) Encouraging proactive mitigation measures based on technology, traditional wisdom and environmental sustainability.
- iv) Mainstreaming disaster management into the developmental planning and process.
- v) Addressing gender issues in DM with special thrust on empowerment of women towards long term disaster mitigation.
- vi) Establishing institutional and techno-legal frameworks to create an enabling regulatory environment and a compliance regime.
- vii) Encouraging techno-financial regime and risk transfer to reduce the burden on public exchequer.
- viii) Setting up and strengthening of Emergency Operation Centres (EOC) for effective communication and DM.
- ix) Ensuring efficient mechanisms for identification, assessment and monitoring of disaster risks.
- x) Developing contemporary forecasting and early warning systems backed by responsive and fail-safe communication with information technology support.
- xi) Develop and maintain inventory of resources, equipment, supplies for timely and effective mobilisation for search and rescue, relief and rehabilitation.
- xii) Putting in place an effective and well recognised disaster specific incident response system at all levels.
- xiii) Promoting and institutionalising unified response strategy in humanitarian crisis and mainstreaming emergency preparedness as an integrated development strategy.
- xiv) Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society.
- xv) Establishing GO-NGO coordination and developing a culture of “working together” during normalcy so that it works during emergencies.
- xvi) Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat for ensuring safer living conditions and environment.
- xvii) Using IEC for community awareness and preparedness in DM.
- xviii) Promoting a productive and proactive partnership with the media for disaster management.
- xix) Documenting best practices and making a system of providing the available knowledge to the target group.
- xx) Encouraging and promoting research and development in various aspects of disaster management.

CHAPTER – 4

Institutional and Legal Arrangements

At the National Level

4.1.1 The Act lays down institutional, legal, financial and coordination mechanisms at the National, State, District and Local levels. These institutions are not parallel structures and will work in close harmony. The new institutional framework is expected to usher in a paradigm shift in DM from erstwhile relief centric approach to a proactive regime that lays greater emphasis on preparedness, prevention and mitigation. The NDMA, as the apex body at national level for disaster management, is headed by the Prime Minister and has the responsibility for laying down policies, plans and guidelines for DM and coordinating their enforcement and implementation for ensuring timely and effective response to disasters. The general superintendence, direction and control of the National Disaster Response Force (NDRF) is vested in and will be exercised by the NDMA. The National Institute of Disaster Management (NIDM) works within the framework of broad policies and guidelines laid down by the NDMA. 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).

4.1.2 The Act also provides for the National Executive (NEC) at the National level. The NEC comprises the Union Home Secretary as Chairperson, and the Secretaries to the GoI in the Ministries/Departments of Agriculture, Atomic Energy, Defence, Drinking Water Supply, Environment and Forests, Finance (Expenditure), Health, Power, Rural Development, Science & Technology, Space, Telecommunications, Urban Development, Water Resources and the Chief of the Integrated Defence Staff of the Chiefs of Staff Committee as members. Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, Shipping, Road Transport & Highways, and the Secretary, NDMA will be special invitees to the meetings of the NEC. The NEC is the executive committee of the NDMA, and is mandated to assist the NDMA in the discharge of its functions and also ensure compliance of the directions issued by the Central Government. The NEC is to coordinate the response in the event of any threatening disaster situation or disaster.

State Disaster Management Authority (SDMA)

4.2.1 At the State level, the State Disaster Management Authority under the chairmanship of the Chief Minister has the responsibility of policies, plans and guidelines for DM and coordinating their implementation for ensuring timely, effective and coordinated response to disasters. The Chief Secretary is the Chief Executive Officer

of the SDMA. Besides, the SDMA has seven other members. The SDMA will, inter alia approve the State Plan in accordance with the guidelines laid down by the NDMA, approve DMPs prepared by the departments of the State Government, lay down guidelines to be followed by the departments of the Government of the State for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects, coordinate the implementation of the State Plan, recommend provision of funds for mitigation, preparedness measures, review the developmental plans of the different Departments of the State to ensure the integration of prevention, preparedness and mitigation measures and review the measures being taken for mitigation, capacity building and preparedness by the departments. The State Authority shall lay down detailed guidelines for providing standards of relief to persons affected by disaster in the State.

The State Executive Committee

4.3.1 The State Executive Committee (SEC) headed by the Chief Secretary and four other Secretaries as its members shall be there to assist the SDMA in the performance of its functions. The SEC will coordinate and monitor the implementation of the National Policy, the National Plan and the State Plan, examine vulnerability of different parts of the State to different forms of disasters and specify measure to be taken for their prevention and mitigation, lay down guidelines for preparation of disaster management plans by the department of the State, and the District Authorities, monitor the implementation of DMPs so prepared, monitor the implementation of the guidelines laid down by the State Authority for integration of measures for prevention of disasters and mitigation by the departments in their development plans and projects, evaluate preparedness at all governmental or non-governmental levels to respond to any threatening disaster situation or disaster and give directions, where necessary, for enhancing such preparedness, coordinate response in the event of any threatening disaster situation or disaster, promote general education, awareness and community training in regard to the forms of disasters to which different parts of the State are vulnerable, advise, assist and coordinate the activities of the Departments of the Government of the State, District Authorities, statutory bodies and other governmental and non-governmental organisations engaged in disaster management.

4.3.2 The SEC will further provide necessary technical assistance or give advice to District Authorities and local authorities for carrying out their functions effectively, advise the State Government regarding all financial matters in relation to disaster management, examine the construction, in any local area in the State and, if it is of the opinion that the standards laid for such construction for the prevention of disaster is not being or has not been followed, may direct the District Authority or the local authority, as the case may be, to take such action as may be necessary to secure compliance of such standards, lay down, review and update State level response plans and guidelines and ensure that the district level plans are prepared, reviewed and updated, ensure that communication systems are in order and the disaster management drills are carried out periodically. The SEC will also provide information to the NDMA relating to different aspects of DM.

State and District Crisis Management Group

4.4.1 The crisis management group at State and district level have been constituted for the State. The State Crisis Management Group (SCMG) is headed by the Chief Secretary. The SCMG shall normally handle all crisis situation and advise and guide the District Crisis Management Group (DCMG) also. The DCMG is headed by the District Magistrate and is responsible for on-scene management of the incident emergency.

District Disaster Management Authority (DDMA)

4.5.1 The DDMA will be headed by the District Collector, Deputy Commissioner or District Magistrate as the case may be, with the elected representative of the local authority as the Co-Chairperson. The DDMA will act as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will, inter alia prepare the District DM plan for the District and monitor the implementation of the National Policy, the State Policy, the National Plan, the State Plan and the District Plan. The DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures laid down by the NDMA and the SDMA are followed by all the Departments of the State Government at the District level and the local authorities in the District.

4.5.2 The DDMA will further ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are taken, ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all departments, lay down guidelines for prevention of disaster management plans by the department of the Government at the districts level and local authorities in the district, monitor the implementation of disaster management plans prepared by the Departments of the Government at the district level, lay down guidelines to be followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and monitor the implementation of the same, review the state of capabilities and preparedness level for responding to any disaster or threatening disaster situation at the district level and take steps for their upgradation as may be necessary, organise and coordinate specialised training programmes for different levels of officers, employees and voluntary rescue workers in the district, facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organisations, set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public, prepare, review and update district level response plan and guidelines.

4.5.3 The DDMA will also coordinate response to any threatening disaster situation or disaster, coordinate with, and provide necessary technical assistance or give advice to the local authorities in the district for carrying out their functions, examine the construction in any area in the district and issue direction the concerned authority to

take such action as may be necessary to secure compliance of such standards as may be required for the area, and identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places, establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice. The DDMA will encourage the involvement of non-governmental organisations and voluntary social-welfare institutions working at the grassroots level in the district for disaster management, ensure communication systems are in order, and disaster management drills are carried out periodically.

Local Authorities

4.6.1 For the purpose of this Policy, local authorities would include Panchayati Raj Institutions (PRI), Municipalities, District and Cantonment Institutional and Legal Arrangements Boards, and Town Planning Authorities which control and manage civic services. These bodies will ensure capacity building of their officers and employees for managing disasters, carry out relief, rehabilitation and reconstruction activities in the affected areas and will prepare DM Plans in consonance with the guidelines of the NDMA, SDMA and DDMA. Specific institutional framework for dealing with disaster management issues in cities/towns will be put in place.

State Institute of Disaster Management (SIDM)/Advanced Training Institute (ATI)

4.7.1 The SIDM/ATI, in partnership with other research institutions has capacity development as one of its major responsibilities, along with training, research, documentation and development of a State level information base. It will network with other knowledge-based institutions and function within the broad policies and guidelines laid down by the SDMA. It will organise training of trainers, DM officials and other stakeholders. Since large scale training programme will require to be carried out in the State, the SIDM/ATI will network with other National, State, District, and Private Sector institutions for mass training programmes. The SIDM/ATI will strive to emerge as a 'Centre of Excellence' in the field of Disaster Management in the State.

State Disaster Response Force

4.8.1 For the purpose of specialised response to a threatening disaster situation or disasters/ emergencies both natural and man-made such as those of CBRN origin, the Act has mandated the constitution of a National Disaster Response Force (NDRF). NDRF has been created at the national level and stationed at different parts of the country. The NDMA intends to encourage states to create response capabilities from within their existing resources. To start with, each State may aim at equipping and training one battalion equivalent force. The SDRF will be created as per the requirement of the State. They will also include women members for looking after the needs of women and children. NDRF battalions and their training institutions will be utilised to train the SDRF.

Adequate mitigation reserves would be placed at strategic locations to augment the resources of SDRF for enhancing their emergency response capabilities.

State Government

4.9.1 The primary responsibility for disaster management rests with the States. The institutional mechanism put in place at the Centre, State and District levels will help the States manage disasters in an effective manner. The Act mandates the State Governments inter alia to take measures for preparation of Disaster Management Plans, integration of measures for prevention of disasters or mitigation into development plans, allocation of funds, establishment of early warning systems, and to assist the Central Government and other agencies in various aspects of Disaster Management.

4.9.2 In accordance with the provisions of the Act, the State Government will take all such measures, as it deems necessary or expedient, for the purpose of DM and will coordinate actions of all Department/agencies. The Departments of the State Government will take into consideration the recommendations of the State Government while deciding upon the various pre-disaster requirements and for deciding upon the measures for prevention and mitigation of disaster. It will ensure that the State Government Departments and Agencies integrate measures for the prevention and mitigation of disasters into their developmental plans and projects, make appropriate allocation of funds for pre-disaster requirements and take necessary measures for preparedness and to effectively respond to any disaster situation or disaster. It will have the power to issue directions to SEC, State Government Departments or any of their officers or employees, to facilitate or assist in DM, and these bodies and officials shall be bound to comply with such directions. It will take measures for the deployment of the Armed Forces for disaster management. The State Government through Central Government will also facilitate coordination with the UN Agencies, International Organisations and Governments of Foreign Countries in the field of disaster management.

Role of State Government Departments at State and District Level

4.10.1 It shall be the responsibility of every department of the Government of a State to prepare DMP with respect to their respective departments as per the guidelines issued by the SEC and DDMA, take measures necessary for prevention of disasters, mitigation, preparedness and capacity-building in accordance with the guidelines laid down by the National Authority, the State Authority and the District Authority. The departments will inter alia integrate into its development plans and projects, the measures for prevention of disaster and mitigation, allocate funds for prevention of disaster, mitigation, capacity-building and preparedness, respond effectively and promptly to any threatening disaster situation or disaster in accordance with the DMP and direction issued by the SEC or the DDMA, review the enactments administered by it, its policies, rules and regulations with a view to incorporate therein the provisions necessary for prevention of disasters, mitigation or preparedness, provide assistance, as required, by the National Executive Committee, the State Executive Committee and District Authorities, for drawing up mitigation, preparedness and response plans,

capacity-building, data collection and identification and training of personnel in relation to disaster management, assessing the damage from any disaster, and carrying out rehabilitation and reconstruction.

4.10.2 The department will also make provision for resources in consultation with the State Authority for the implementation of the District Plan by its authorities at the district level, make available its resources to the National Executive Committee or the State Executive Committee or the District Authorities for the purposes of responding promptly and effectively to any disaster in the State, including measures for- providing emergency communication with a vulnerable or affected area, transporting personnel and relief goods to and from the affected area, providing evacuation, rescue, temporary shelter or other immediate relief, carrying out evacuation of persons or live-stock from an area of any threatening disaster situation or disaster, setting up temporary bridges, jetties and landing places, and providing drinking water, essential provisions, healthcare and services in an affected area and such other actions as may be necessary for disaster management.

District Administration

4.11.1 At the District level, DDMA's will act as the District planning, coordinating and implementing body for disaster management and will take all measures for the purposes of disaster management in the District in accordance with the guidelines laid down by NDMA and SDMA.

Other Institutional Arrangements

Armed Forces

4.12.1 Conceptually, the Armed Forces are called upon to assist the civil administration only when the situation is beyond their coping capability. In practice, however, the Armed Forces form an important part of the Government's response capacity and are immediate responders in all serious disaster situations. On account of their vast potential to meet any adverse challenge, speed of operational response and the resources and capabilities at their disposal, the Armed Forces have historically played a major role in emergency support functions. These include communication, search and rescue operations, health and medical facilities, and transportation, especially in the immediate aftermath of a disaster. Airlift, heli-lift and movement of assistance to neighbouring countries primarily fall within the expertise and domain of the Armed Forces. The Armed Forces will participate in imparting training to trainers and DM managers, especially in CBRN aspects, heli-insertion, high-altitude rescue, watermanship and training of paramedics. At the National level, the Chief of the Integrated Defence Staff to the Chairman Chiefs of Staff Committee has already been included in the NEC. Similarly, at the State and District levels, the local representatives of the Armed Forces may be included in their executive committees to ensure closer coordination and cohesion.

Central Paramilitary Forces

4.13.1 The Central Paramilitary Forces (CPMFs), which are also the Armed Forces of the Union, play a key role at the time of immediate response to disasters. Besides contributing to the NDRF, they will develop adequate disaster management capabilities within their own forces and respond to disasters which may occur in the areas where they are posted. The local representatives of the CPMFs may be co-opted/invited in the executive committee at the State level.

State Police Forces and India Reserve Battalions

4.14.1 The State Police Forces and the India Reserve Battalions are crucial for immediate responders to disasters. The existing Police Forces will be trained in advanced SAR and MFA techniques so that their services can be utilised in disaster situations/events. Training in DM, SAR and MFA would be incorporated at the induction level for new entrants.

Civil Defence, Fire Services and Home Guards

4.15.1 The mandate of the Civil Defence and the Home Guards will be redefined to assign an effective role in the field of disaster management. They will be deployed for SAR, community preparedness, conduct of mock drill and public awareness. A culture of voluntary reporting to duty stations in the event of any disaster will be promoted. The Fire Services will be upgraded to acquire multi-hazard rescue capability. The existing set up of these services would be strengthened to take up the new role more effectively.

Role of National Cadet Corps (NCC), National Service Scheme (NSS), Nehru Yuva Kendra Sangathan (NYKS), Scouts and Guides, Youth and Women Organisations.

4.16.1 NCC, NSS, NYKS, Scouts and Guides, Mahilla and Yuvak Mandals as organisations would be roped in DM. They will be trained in search and rescue (SAR) and medical first aid (MFA) and other aspects of DM as per the need. The potential of these organisations will be also be used for education and awareness generation in DM. The department of Education, NCC and NYKS would incorporate the subject of disaster management in the trainings of their respective organisations.

The DM Framework in the State

4.17.1 The DM framework of the State has been envisaged and placed at Annexure – I.

CHAPTER – 5

FINANCIAL ARRANGEMENTS

Approach

5.1.1 With change of paradigm shift in DM from the relief-centric to proactive approach of prevention, mitigation, capacity building, preparedness, response, evacuation, rescue, relief, rehabilitation and reconstruction, effort would be made to mainstream and integrate disaster risk reduction and emergency response in development process, plans and programmes of the Government at all levels. This would be done by involving all the stakeholders – Government organisations, research and academic institutions, private sector, industries, civil society organisation and community. SDMA and DDMA will ensure mainstreaming of disaster risk reduction in the developmental agenda of all existing and new developmental programmes and projects which shall incorporate disaster resilient specifications in design and construction. Due weightage will be given to these factors while allocating resources. Project which help in reducing the existing vulnerability of the area would be given preference over projects which are likely to enhance it.

Disaster Response and Mitigation Funds

5.2.1 State Disaster Response funds and State Disaster Mitigation funds would be constituted at the State level and District Disaster Response Funds and District Disaster Mitigation funds would be created at the District Level as mandated in the Act. The disaster response funds at the State and district level would be applied by the SDMA and respective DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines and norms laid down by the Government of India. The mitigation funds shall be applied by the SDMA and DDMA respectively for the purpose of mitigation.

Responsibilities of the State Departments and Agencies

5.3.1 All State Government Departments, Boards, Corporations, PRIs and ULBS will prepare their DM plans including the financial projections to support these plans. The necessary financial allocations will be made as part of their annual budgetary allocations, and ongoing programmes. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMA to the appropriate funding agency. The guidelines issued by the NDMA vis a vis various disasters may be consulted while preparing mitigation projects.

Techno-Financial Regime

5.4.1 Considering that the assistance provided by the Government for rescue, relief, rehabilitation and reconstruction needs cannot compensate for massive losses on account of disasters, new financial tools such as catastrophe risk financing, risk

insurance, catastrophe bonds, micro-finance and insurance etc., will be promoted with innovative fiscal incentives to cover such losses of individuals, communities and the corporate sector. In this regard, the Environmental Relief Fund under the Public Liability Insurance Act, 1991, enacted for providing relief to chemical accident victims is worth mentioning. Some financial practices such as disaster risk insurance, micro-finance and micro-insurance, warranty on newly constructed houses and structures and linking safe construction with home loans will be considered for adoption.

CHAPTER – 6

DISASTER PREVENTION, MITIGATION AND PREPAREDNESS

Disaster Prevention, Mitigation and Mainstreaming

6.1.1 Unlike man-made disasters, natural hazards like flash floods, earthquakes, and cloudbursts cannot be avoided. However, with mitigation measures along with proper planning of developmental work in the risk prone area, these hazards can be prevented from turning into disasters if we take preventive and mitigation measures in advance. This requires changes in the current development model, practices and priorities. Since disaster is a development problem, prevention and mitigation needs to be built in this process only. A multi-pronged approach needs to be adopted to undertake mitigation measures:

- i) Incorporating elements of mitigation and risk reduction into all the development projects and programmes.
- ii) Initiating state level mitigation projects in accordance with the guidelines issued by the NDMA for various hazard in high priority areas with the help of Government Departments and Agencies.
- iii) Developing a culture of safety and safe practices in the state.
- iv) Integrating the element of DRR into the development plans, policies and projects.
- v) According high priority to projects contributing to vulnerability reduction of the area.
- vi) Indigenous knowledge on disaster and coping mechanisms adopted by various States and sections of society will be given due weightage.

DRR Mainstreaming

6.1.2 The DRR issues would be mainstreamed in development plans, programmes and policies at all level by all the departments, organisations and agencies. It would be ensured that all the development programmes and projects that originate from or funded by Government are designated with evident consideration for potential disaster risks to resist hazard impact. That all the development programmes and projects that originate from or are funded by Government do not inadvertently increase vulnerability to disaster in all sectors: social, physical, economic and environment. It would also be ensured that all the disaster relief and rehabilitation programmes and projects that originate or are funded by Government are designed to contribute to development aims and to reduce future disaster risk.

Risk Assessment and Vulnerability Mapping

6.2.1 As a first step towards disaster prevention and mitigation, hazard zonation, mapping, vulnerability and risk analysis (HRVA analysis) in a multi-hazard framework will

be carried up to tehsil level and local level. In-depth studies of major towns and urban conglomerations would be required to be done for effective disaster management planning. The HRVA studies would be carried out using GIS and remote sensing data and other modern tools so that the study act as a decision support system (DSS) for disaster management. As per the National Policy on DM “the increasing use of GIS, remote sensing and applications of Global Positioning Systems (GPS) in DM, has made it imperative to set up a mechanism for sharing thematic and spatial data through a designated electronic clearing house. The NSDI has been set up by the Survey of India, to collect, compile, analyse and prepare value-added maps for use by various agencies in the field of DM for management of natural resources, industrial applications etc. The NSDI need to work towards interoperability of data and information sharing protocols to facilitate effective policy analysis. A two-way interoperable link will be established between NSDI and the proposed National Disaster Emergency Communication Network for easy and quick sharing. The programme designed to have spatial and non-spatial databases in a secure environment under the NDEM will derive the data sets through NSDI for addressing the information needs for disaster management”. Stress will be laid to store and back-up essential baseline geospatial datasets so that they can be used immediately once a disaster occurs.

Management of Disasters in Urban Areas

6.3.1 Disasters in urban areas are distinct in many ways and the intensity of damage is usually very high, warranting effective DM plans. Search and rescue efforts in the urban areas also require specialised training. Action plans for checking unplanned urbanisation and ensuring safer human habitat against all forms of disasters will be recognised as priority areas. The authorities of Urban Local Bodies concerned should accord priority for improving urban drainage systems with special focus on non-obstruction of natural drainage systems. Urban mapping of infrastructure of spatial resolution will be taken up for development of Decision Support System (DSS) for management of urban risks. Urban Local Bodies need to implement and enforce building codes and regulations and hazard resistant constructions within their respective jurisdiction.

Critical Infrastructure

6.4.1 It is of utmost importance that critical infrastructure like dams, power projects, roads, bridges, railway lines, power stations, water storage tanks, irrigation canals, river embankments, communication network, and other civic utilities are constantly monitored for safety standards in consonance with worldwide safety benchmarks and strengthened where deficient. The building standards for critical infrastructure need to be aligned to the safety norms and Departments/Authorities concerned would ensure the requisite actions and measures to ensure this.

Environmentally Sustainable Development

6.5.1 Himalayan mountains are very young and ecology is very fragile. Himalayas are also known as the water machines of the northern regions of the country. The

developmental activities taking place in this area has to take environmental consideration into account. The disposal of solid and industrial waste has to be dealt in a way that it does not pollute water sources. Restoration of ecological balance would be needed in areas where environmental degradations has taken place. Eco systems of forests, and rivers and the agricultural, urban and industrial environment are also to be considered for restoration of ecological balances and sustainable development. Zonal regulations must ensure the preservation of natural streams, forest areas and natural habitats.

Climate Change Adaptation

6.6.1 There are evidences to indicate that Himalayas are warming at a higher rate than the global average rate. It is a matter of great concern as the region has more snow and ice than any other region in the world outside the Polar caps, Himalayas are the maker of climate of much of the South Asia, and the Himalayas glaciers are receding faster than glaciers of the other parts of world. Alpine ecosystems are particularly vulnerable to warming. It may also affect recreational tourism like skiing. Many important forest species are likely to fail to regenerate if the synchrony between their seed ripening and commencement of monsoon rains is broken due to the climate change. Therefore, climate change is likely to impact our glacial reserves, water balance, agriculture, forestry, bio-diversity and human and animal health. There are definite indications that climate change would increase the frequency and intensity of natural disasters like cyclones, floods, cloudbursts, flash floods and droughts in the coming years. In order to meet these challenges in a sustained and effective manner, synergies in our approach and strategies for climate change adaptation and disaster risk reduction shall be encouraged and promoted.

Preparation of Disaster Management Plans

6.7.1 Communities are both victims and first responders to disasters. No response to DM can be effective if it is not based on the strengths of local communities. Besides, the district and local authorities will accord highest priority to build their own DM capabilities and State Government will try to provide necessary support to these authorities in this direction. The role of departments, local authorities, central government departments, IRBs, CPMFs and other stakeholders has to be defined and clearly laid down. DM Plans at all levels will be made in consonance with the guidelines and provisions in the DM Act, 2005. While the State Plan will be prepared by the SEC, the disaster and domain-specific plans will be made by the respective State Departments both at the State and district level as per the guidelines laid down by the SDMA at the State Level and DDMA at the district level respectively. The functional District plans will be prepared for their specific disaster related vulnerabilities in accordance with the provisions of DM Act, 2005 guidelines issued by the SDMA, and NIDM. The DMPs would be prepared in consultation with all stakeholders. **The element of DRR would be integrated and incorporated in the developmental plans, programmes and policies at all levels and disaster prevention, mitigation and preparedness would be made part of the development process.** A combination of top

down coordination and bottom up approach would be adopted for the preparation and operationalization of these plans.

6.8.1 In order to ensure smooth response emergency support functions (ESFs) would be identified and standard operating procedure guidelines for performance of ESFs would be developed. Each ESF department would appoint nodal officers with due delegation of powers to perform ESF functions at the State and district level.

Medical Preparedness and Mass Casualty Management

6.9.1 Medical preparedness is a crucial component of any DM Plan. There is need to develop DM plans for all the hospitals and medical colleges to handle mass casualty and incorporating training and capacity building of medical teams, paramedics in trauma and psycho-social care, mass casualty management and triage. The NDMA has formulated policy guidelines to enhance capacity in emergency medical response and mass casualty management and the department will use these guidelines for medical preparedness. The plans should inter-alia include safety of structural and non-structural elements in hospital, evacuation plan, provision of alternative hospital and identification of open spaces which could be used as open hospitals to handle the rush of disaster victims. The medical authorities will be encouraged to formulate appropriate procedures for treatment of casualties by private hospitals during disasters. The hospital DMPs will also address post-disaster disease surveillance systems, networking with hospitals, referral institutions and accessing services and facilities such as availability of ambulances and blood banks. The medical DMP will also have provision for mobile surgical teams, mobile hospitals and heli-ambulances for evacuation of patients. The Accident Relief Medical Vans (ARMVs) of the Ministry of Railways, stabled at stations every 100 km, will be utilised for emergency medical response by the State and District authorities in consultation with the Railways. The creation of additional bio-safety laboratories of level IV will be addressed by the Nodal Ministry. There is a need to focus on creating adequate mortuary facilities. Proper and speedy disposal of dead bodies and animal carcasses deserves due weightage. Web-enabled database of blood donors will be prepared to facilitate arrangement of blood supply chains during emergencies. For this purpose networking with Red Cross and NGOs would be worked out.

Forecasting and Early Warning Systems

6.10.1 Forecasting and early warning helps in mitigating the effects of disasters. The loss of life and property can be considerably reduced with accurate and timely warning. Climate-meteorological disaster such as flash floods, GLOF, avalanches etc. be predicted with certain degree of accuracy. The existing IMD, CWC and SASE network in the state requires strengthening. River basin wise early warning system requires to be established with last mile connectivity. Matter would be taken up with the concerned agencies for the establishment, upgradation and modernisation of forecasting and early-warning system in the state. The nodal agencies responsible for monitoring and carrying out surveillance, for specific natural disasters, will identify technological gaps

and formulate projects for their upgradation, in a time-bound manner. ICT tools need to be used for data receptions, forecasting and timely dissemination.

Communications and Information Technology (IT) Tools for DM

6.11.1 Use of modern communication and information technology tools is crucial for effective and efficient disaster management. The communication and IT tools would be utilised for compiling of information, dissemination, and for spread of forecasting and early warnings. The digital mapping of resources would be done and the same would be hosted in web-based portals for easy access and retrieval. These tools can be used in the following areas:

- a) Creating decision support system for the policy makers, disaster managers and responsible officers at all levels;
- b) Real time dissemination of early warning to the all the stakeholders –authorities, DMTs, QRTs, threatened community etc.;
- c) Information and broadcasting mediums such as television, radios, FM stations etc. can be used keeping in view their geographical reach and availability;
- d) Emergency communication system during disasters; and
- e) Collecting and collating information on damage and needs assessment.

6.11.2 The vision of national policy in this regard i.e. “communication and sharing of up-to-date information using state-of-the-art IT infrastructure remain at the heart of effective implementation of the disaster management strategy. Reliable, up-to-date and faster sharing of geo-spatial information acquired from the field or the affected areas is a pre-requisite for effective implementation of disaster management strategies. Efforts should be made for setting up IT infrastructures consisting of required IT processes, architecture and skills for quick upgradation and updation of data sets from the PRIs or the ULBs. A National Emergency Communication Network, involving contemporary space and terrestrial-based technologies in a highly synergistic configuration and with considerable redundancy, will be developed. This Network will ensure real time dissemination of warnings and information to the affected community and local authorities” would be the guiding principal for the state.

Setting up and Strengthening of the Emergency Operations Centres

6.12.1 In line with the national emergency communication plan and national disaster management information and communication system, emergency operation centres (EOCs) would be set-up at the State, and district level. Provision of mobile emergency operation vehicles may be made. EOCs at main towns can also be considered. The EOCs would have fail-safe communication network with multiple levels of built-in redundancy having communication to ensure voice, data and video transfer. Development of Ham Radios network in the state would be encouraged so that it can be utilised during emergency. For last mile connectivity and control of the operations at the disaster hit areas, availability of portable platforms will be catered for. Use of community radios,

FM Channels, bulk SMS system and voice messaging system would be made for the last mile connectivity.

Training, Simulation and Mock Drills

6.13.1 Efficacy of DMPs are tested and refined through training, seminars and mock drills. The SDMA, DDMA and Local Authorities in association with the NDMA will also conduct mock drills in different parts of the state to test the efficacy of the plans so prepared. District authorities will be encouraged to generate a culture of preparedness and quick response. Involvement of all the stakeholders and community at large numbers may be ensured to make the mock exercises as a means of awareness generation and community preparation. Gradually the capabilities with the SDMA and DDMA would be developed to undertake these exercises at regular intervals. The inputs and lessons learnt during the mock exercises will be utilised to upgrade and improve the DMPs.

Partnerships for Mitigation and Preparedness

Community Based Disaster Preparedness

6.14.1 As stated earlier communities are not only the first to be affected in disasters but also the first responders. Community participation ensures local ownership, addresses local needs, and promotes volunteerism and mutual help to prevent and minimise damage. The community participation for DM would be promoted on the motto of “self-help”, “help thy neighbour” and “help thy community”. The needs of the elderly, women, children and differently abled persons require special attention. Hence, the CBDR would integrate these concerns in DM planning, preparedness and response. Women and youth will be encouraged to participate in decision making committees and action groups for management of disasters. Networking of youth and women based organisation would be done and they will be trained in the various aspects of response such as first aid, search and rescue, management of community shelters, psycho-social counselling, distribution of relief and accessing support from government/agencies etc. Community plans will be dovetailed into the Panchayat, Block and District plans.

Mobilising Stakeholders’ Participation

6.15.1 The SDMA and DDMA will coordinate with Civil Defence, NCC, NYKS, NSS, sports and youth clubs, women based organisations, faith based organisations and local Non-Governmental Organisations (NGOs), CSOs etc. for DM. They will be trained in various aspects of DM more particularly in SAR and MFA. They will also be encouraged to empower the community and generate awareness through their respective institutional mechanisms. Efforts to promote voluntary involvement will be actively encouraged.

Corporate Social Responsibility (CSR) and Public-Private Partnership (PPP)

6.16.1 Historically, the corporate sector has been supporting disaster relief and rehabilitation activities. However, the involvement of corporate entities in disaster risk reduction activities is not significant. Corporate entities should redefine their business continuity plan to factor in hazards, risks and vulnerabilities. They should also create value in innovative social investments in the community. PPP between the Government and private sector would also be encouraged to leverage the strengths of the latter in disaster management. The SDMA and DDMA's need to network with the corporate entities to strengthen and formalise their role in the DM process for ensuring safety of the communities. The corporate sector also needs to be roped up for on-site and off-site emergency plans for hydro-power projects, industrial and chemical units. The role of corporate sector for awareness generation and local capacity building would also be important and efforts would be made to involve corporate sector in this effort.

Media Partnership

6.17.1 The media plays a critical role in information and knowledge dissemination in all phases of DM. The versatile potential of both electronic and print media needs to be fully utilised. Effective partnership with the media will be worked out in the field of community awareness, early warning and dissemination, and education regarding various disasters. The use of vernacular media would be harnessed for community education, awareness and preparedness at the local level. The Department of Information and Public Relations in consultation with the SDMA and DDPA's would take appropriate steps in this direction.

CHAPTER – 7

TECHNO-LEGAL REGIME

Techno-legal Regime

7.1.1 The State of HP falls in zone IV and V of BIS Seismic Zonation map and is highly vulnerable to seismic hazard. The BIS has prescribed building codes for these zones for safe and earthquake resistant constructions. The SEC has been given the responsibility under the Act to “examine the construction, in any local area in the State and, if it is of the opinion that the standards laid for such construction for the prevention of disaster is not being or has not been followed, may direct the District Authority or the local authority, as the case may be, to take such action as may be necessary to secure compliance of such standards” Similar responsibilities have also been cast upon the District Disaster Management Authorities (DDMA) and Local Authorities constituted under the Act. The Town and Country Planning Act, regulations issued under the ibid Act, Municipal Corporation and other Urban Local Bodies regulations and building bye-laws warranting amendments would be identified and brought in conformity with the DM Act, 2005. Safe construction guidelines would be formulated for the rural areas and suitable regulations will also be emphasized. In view of the construction boom and rapid urbanisation, municipal regulations such as development control regulations, building bye-laws and structural safety features need to be revisited. These regulations will be reviewed periodically to identify safety gaps from seismic, flood, landslide and other disasters and suitable modifications will be made to align them to the revised building codes of the Bureau of Indian Standards (BIS).

Land Use Planning

7.2.1 The land use planning is an important tool to avoid or mitigate disaster risk. It is important to main urban centres, high density areas settlements for safer location of habitat and other critical facilities. The land use planning and regulation in the state would be guided by the hazard, vulnerability and risk analysis and environmental considerations. The existing master development plans and zoning regulations would need to be reviewed and modified wherever needed in view of the HRVA analysis. The land use planning needs to be carried out using the modern IT tools and inventoring the database of various uses. The future land use is to be assessed keeping in view the anticipated intensity of development.

Hazard Resistant and Safe Construction Practices

7.3.1 Hazards like earthquakes do not kill people but inadequately designed and badly constructed buildings do. Ensuring safe construction of new buildings and retrofitting of selected lifeline buildings, as given in the Earthquake Guidelines, is a critical step to be taken towards earthquake mitigation. The design and specification of houses being constructed, under the Indira Awas Yojana (IAY), RAY, and other government welfare and development schemes, will also be re-examined to ensure hazard safety. Building

codes will be updated every five years as a mandatory requirement and also put in the public domain. Observance of the National Building Code should be made mandatory in all the State/ Municipal building bye-laws.

7.3.2 Training of engineers, architects, small builders, construction managers and artisans – black smiths, carpenters, wire binders – has already taking place under various programmes and needs to be intensified at the District and local level. Safe schools and hospitals (with large capacity) and National monuments besides other critical lifeline buildings will be regarded as a State priority. Enabling provisions shall be made in all the schemes to design school buildings/ hostels with earthquake resilient features and to equip them with appropriate fire safety measures.

Compliance and Enforcement Mechanism

7.4.1 There is a need for putting in place a sound compliance regime, with binding consequences, to ensure the effectiveness of techno-legal, land use regulations and techno-financial provisions. It is important to ensure that effective monitoring, verification and compliance arrangements are in place both at the State, district and local level. Appropriate compliance mechanism need to be developed to avoid undesirable practices compromising safety during disasters. Awareness and sensitisation of stakeholders – Government functionaries, enforcement agencies and community at large - would be done to ensure better compliance of building codes, regulations and safety norms. The public representatives, NGOs and CBOs can be of great help in sensitisation and seeking compliance. Financial incentive can be used as a mechanism for the enforcement agencies. Adoption of best management practices like self-certification, social audit, and an external compliance regime including audit by professional agencies, need to be encouraged through development and design of tools such as IT-enabled monitoring software to suit the DM systems in India, in consultation with various stakeholders and knowledge institutions for adoption after due trial and validation.

CHAPTER – 8

RESPONSE

Approach

8.1.1 Disaster response is a multi-agency function. Well-coordinated, prompt and effective response minimises loss of life and property. On the contrary, delayed response will multiply the ill effects of disaster event. The response can be prompt and effective only when there is advance planning. Planning needs testing through mock drills to improve it and make it better. The roles and responsibilities need to be defined well in advance and chain of command is defined and well understood. The institutional mechanism need to ensure an integrated, synergised and proactive approach in dealing with any disaster. This is possible through contemporary forecasting and early warning systems, fail-safe communication, anticipatory deployment of specialised response forces, stockpiling of some relief material, identification of relief camps and temporary shelters. A well-informed and prepared community can mitigate the impact of disasters.

Role of State, District and Local Authorities

8.2.1 The DDMA's and Local Authorities will monitor and assess any developing situation and respond to the situation and also keep the SDMA and SEC apprised of the same. They will also be responsible to constantly evaluate their own capabilities to handle that situation and project the anticipated requirements for the State/Central resources well in time. Inter-district assistance and cooperation will be encouraged. At the State level such tie up would be made with other states. The districts will be supported to develop their response potential progressively and complete the process at the earliest. This will comprise training and equipping of response forces, community preparedness, training and creation of response caches at the District level. District level preparations will provide the cutting edge to all response activities. Local authorities, PRIs and ULBs will play a significant role in the entire process, particularly in response and rescue operations, relief and rehabilitation, awareness generation and disaster preparedness, restoration of livelihood options and coordination with NGOs and civil society.

Role of Nodal and Other Government Department of the State and Centre

8.3.1 The nodal departments would be notified to deal with different disasters. The nodal departments so notified will chart out detailed response plans which would be integrated with the District and State Response Plan. The emergency support functions (ESFs) would also be notified at all levels. The respective departments would also appoint officers at various levels to perform the ESFs. Other departments (other than the ESF departments) will perform the task assigned to them by the Incident Commander or the Responsible Officer from time to time. Responsible Officer (s) may coordinate response through incident response system in the event of any threatening situation or disaster.

Standard Operating Procedures

8.4.1 All the departments of the State Government, District Authorities, Local Authorities and other stakeholders will prepare SOPs in consonance with the National State, District and Local Plans applicable to them. SOPs will be prescribed for activities like search and rescue, medical assistance and casualty management evacuation, restoration of essential services and communication at disaster sites, etc. The other important activities are provision of food, drinking water, sanitation, clothing and management of relief camps. Detailed SOPs will also be devised by all concerned for despatch, receipt and deployment of resources received from other sources.

Levels of Disasters

8.5.1 The SOPs for determining the levels of disasters and for issuing alerts to electronic messaging systems of various agencies about disasters have been formulated by MHA. These SOPs will be reviewed periodically for disaster response management in case of natural and man-made disasters. The state specific SOPs will also be issued.

Incident Response System

8.6.1 In view of the paradigm shift towards improved pre-disaster preparedness, there is an urgent need for a proper and a well prepared response system which would have a well thought out pre-designated roles for each member of the response team, systematic and complete planning process, system of accountability for the IRT members, clear cut chain of command, effective resource management, proper and coordinated communications set up, system for effectively integrating independent agencies into the planning and command structure without infringing on the independence of the concerned agencies; and integration of community resources in the response effort. It is with this view in mind that the Incident Response System (IRS) has been adopted for the country and NDMA has issued guidelines thereof.

8.6.2 The Incident Response System (IRS) is an effective mechanism for reducing the scope for ad-hoc measures in response. It incorporates all the tasks that may be performed during DM irrespective of their level of complexity. It envisages a composite team with various Sections to attend to all the possible response requirements. The IRS identifies and designates officers to perform various duties and get them trained in their respective roles. If IRS is put in place and stakeholders trained and made aware of their roles, it will greatly help in reducing chaos and confusion during the response phase. Everyone will know what needs to be done, who will do it and who is in command, etc. IRS is a flexible system and all the Sections, Branches and Units need not be activated at the same time. Various Sections, Branches and Units need to be activated only as and when they are required.

8.6.3 The IRS organisation will through Incident Response Teams (IRTs) in the field. In line with our administrative structure and DM Act 2005, Responsible Officers (ROs) have been designated at the State and District level as overall in charge of the incident response management. The RO may however delegate responsibilities to the Incident Commander (IC), who in turn will manage the incident through IRTs. The IRTs will be pre-designated at all levels; State, District, Sub-Division and Tehsil/Block. On receipt of Early Warning, the RO will activate them. In case a disaster occurs without any warning, the local IRT will respond and contact RO for further support, if required. A Nodal Officer (NO) has to be designated for proper coordination between the District, State and National level in activating air support for response.

8.6.4 The IRS system in the state would be grounded properly by imparting training to all the government functionaries and other stakeholders so that the response is coordinated and effective and devoid of chaos.

Key Responders

8.7.1 The role and importance of the community, village volunteers, village disaster management teams, village youth and women organisation, CSO, NGOs etc. under the leadership of the local authorities, PRIs and ULBs, being the bedrock of the process of disaster response, is well recognised. For their immediate support, there are other important first responders like the Police and Fire and Medical Emergency Services. Other important responders will be the Civil Defence, Home Guards and youth organisations such as NCC, NSS and NYKS. The deployment of the SDRF, NDRF and Armed Forces will also be organised on as required basis. However, the Armed Forces would be deployed only when the situation is beyond the coping capacity of the State Government, SDRF and NDRF.

Medical Response

8.8.1 Medical response has to be quick and effective. The execution of medical response plans and deployment of medical resources warrant special attention at the District level, Sub-Division and Local Level in most of the situations. The voluntary deployment of the nearest medical resources to the disaster site, irrespective of the administrative boundaries, will be emphasised. Mobile medical hospitals and other resources available with the centre will also be provided to the States/UTs in a proactive manner. Post-disaster management of health, sanitation and hygiene services is crucial to prevent an outbreak of epidemics. Therefore, constant monitoring of any such possibility will be necessary. The 108 Emergency Services and Red Cross will complement and supplement the efforts of the health department in medical emergency response.

Reproductive and Emergency Obstetric Services

8.9.1 The impact of an earthquake etc. on reproductive health care can be devastating. Communities in crisis are suddenly deprived of reproductive health (RH)

information and services. Access is cut off, yet needs persist, even escalate. People in distress find themselves with limited access to lifesaving RH care, and may suffer serious illness or die due to entirely treatable RH problems. Humanitarian actions generally tend to overlook emergency obstetric (EmOC) and reproductive health related services for pregnant women and adolescents in emergency settings. In order to take care of these issues, the health authorities will as soon as emergency response begins:-

- i) Plan for provision of comprehensive RH services as an integral part of primary health care;
- ii) Reduce HIV transmission through enforcement of universal precautions, ensuring the availability of free condoms and that blood transfusion is safe;
- iii) Provide medical care for survivors as well as culturally appropriate psychological support;
- iv) Provide for post-exposure prophylaxis (PEP) to survivors of rape to minimise HIV transmission;
- v) Provide for appropriate care to the victims of gender based violence;
- vi) To prevent maternal and new-born death, disease and injury through: - a) establishment of 24-hour referral system for women with obstetric complications; b) distribute clean delivery kits for use at home by mothers and midwives; and c) supply midwives delivery kits to health facilities to ensure clean, safe deliveries;
- vii) Prioritise family planning in emergencies and ensure uninterrupted supplies to ensure continuous access to all contraceptive methods including emergency conception;
- viii) Provide post-abortion care (PAC) and emergency management of incomplete abortion and potentially life-threatening complications and making a link between PAC and other RH care, such as family planning; and
- ix) Engage with the disease affected community in designing the service delivery programme.

Animal Care

8.10.1 Animals both domestic and wild are exposed to the effects of natural and man-made disasters. It is necessary to devise appropriate measures to protect animals and find means to shelter and feed them during disasters and their aftermath, through a community effort, to the extent possible. The Departments of the State such as the Department of Animal Husbandry, Dairying, & Fisheries, Social Justice and Empowerment and the PRI and ULB concerned should devise measures at all levels to protect and treat injured animals, find shelters for them, make provision to feed them.

Information and Media Partnership

8.11.1 Dissemination of accurate information through electronic and print media is very important during disasters and disaster situation to avoid panic and confusion. Regular press briefing by trained disaster management officials is essential. Training in information management and accurate reporting with sensitivity and respect for privacy and custom will be undertaken at all levels.

GO-NGO and IAG Coordination

8.12.1 Development of a database of NGOs at all levels working in the field of disaster management and emergency response focusing on geographic outreach and thematic capacities of the organisations will be prepared. Capacity of identified NGOs in disaster management and emergency response will be build. Inter-Agency Group (IAG) will be formed in the State with an objective to:-

- i) Promote and institutionalise unified response strategy in humanitarian crisis;
- ii) Mainstreaming the emergency preparedness as in integrated development strategy;
- iii) Systematise the emergency response mechanism;
- iv) Bringing in the culture of “working together” in emergencies and normalcy; and
- v) Engagement in activities that will build the capacities of stakeholders and local communities to cope with calamities.

8.12.2 The DM Act, 2005 and NDMA Guidelines on the Role of NGO in DM would be the guiding principles for GO-NGO and IAG coordination in the State.

CHAPTER – 9

RELIEF, REHABILITATION, RECONSTRUCTION AND RECOVERY

Approach

9.1.1 Relief, rehabilitation, reconstruction and recovery are important phases of post disaster response. Relief is no longer perceived only as gratuitous assistance or provision of emergency relief supplies on time. It is on the contrary, viewed as an overarching system of facilitation of assistance to the victims of disaster for their rehabilitation in States and ensuring social safety and security of the affected persons. The relief needs to be prompt, adequate and of approved standards. Guidelines defining minimum standards of relief will be prepared by the HP SDMA as per the guidelines laid down by the NDMA.

9.1.2 The recovery phase starts after the immediate threat to human life has subsided. During reconstruction it is recommended to consider the location or construction material of the property. The approach to the reconstruction process has to be comprehensive so as to convert adversity into opportunity. Incorporating disaster resilient features to 'build back better' will be the guiding principle. This phase requires the most patient and painstaking effort by all concerned. The administration, the stakeholders and the communities need to stay focused on the needs of this phase, as, with the passage of time, the sense of urgency gets diluted. The appropriate choice of technology and project impact assessment needs to be carried out to establish that the projects contemplated do not create any side effects on the physical, socio-cultural or economic environment of the communities in the affected areas or in their neighbourhood. The involvement of community in decision making is important. Systems for providing psychosocial support and trauma counselling need to be developed for implementation during the reconstruction and recovery phase. It is also important that recovery process is linked to livelihood.

Relief

9.2.1 The victims of disaster would need to be provided relief as per the relief code. Displaced population may require to be housed in temporary shelters. The DDMA's need to identify locations for setting up temporary camps and make an inventory in advance. Use of premises of educational institutions for setting up relief camps need to be discouraged as it hampers early recovery. Relief camps will have adequate provision of drinking water, and bathing, sanitation and essential health care facilities. The PRIs, ULBs, CSOs and CBOs may be trained in handling and running relief camps. The disaster affected population can also be roped in to manage community kitchens. Guidelines/SOPs for efficient governance of relief camps such as identification cards, rationing, entitlement, management of donations, procurement, packaging, transportation and storage etc. may be issued in advance. The stock-piling of essential

relief material at suitable locations is also important. Pre-contracting of relief supplies with agencies is important during pre-disaster phase.

9.2.2 In case of devastating disaster extreme weather conditions can be life threatening or when the period of stay in temporary shelters is likely to be long and uncertain, construction of site specific befitting the local environment, ecology and culture, immediate shelters with suitable sanitary facility will be undertaken to ensure a reasonable quality of life to the affected people. The DDMA in consultation with the SDMA will plan such shelters which are cost effective and as per the local needs with multi-use potential. Pre-identification of their availability, supply and testing in the local conditions will be done.

9.2.3 Existing standards of relief need to be reviewed to address the contemporary needs of communities affected by disasters. Relief Codes, manuals may be reviewed and DM Codes for prescribing norms and standards and criteria for provision of relief in conformity with the guidelines of NDMA. In nutshell, ensuring minimum standards of relief and speedy management of supplies are important features of relief operations.

The relief supplies should pay attention to the needs of special categories such as pregnant or lactating mothers, infants, new-borns, adolescents, and aged people.

Owner Driven Construction

9.3.1 Reconstruction plans and designing of houses need to be participatory process involving the affected community, NGO, corporate sector and the Government. Having a clear cut policy on entitlement, criteria for GIA and land ownership, relocation, exchange of land will facilitate speedy reconstruction. After the planning process is over, while the owner driven construction is preferred option, participation of NGO, corporate sector and technical experts will be encouraged to ensure safe and better reconstruction. Reconstruction programme will be within the confines and the qualitative specifications laid down by the Government. In order to have acceptability for the safe and quality standards it will be better if the safe construction norms, designs and guidelines are finalised during normalcy so that community is well aware of them. Services of CBO, CSOs, and faith based organisation may be taken for this purpose to gain acceptance. It is also important that the reconstruction is closely linked to the recovery process.

Reconstruction of Social Infrastructure

9.4.1 Essential services, social infrastructure and intermediate shelters/camps will be established in the shortest possible time. For permanent reconstruction, ideally, the work including the construction of houses must be completed within two to three years. State Government and Departments of State Government should create dedicated

project teams to speed up the reconstruction process. Involvement of PRIs and ULBs for reconstruction at local level will be encouraged.

Socio-Economic Rehabilitation

9.5.1 Disasters destroy development and livelihood sources. In the post disaster situation there is great need to generate temporary livelihood options for the affected community. The relief and reconstruction programmes should be used to generate livelihood options for the needy. Ongoing or new programmes may be launched which may help the affected community to earn their livelihood. It must be ensured that such programmes result in the creation of assets, infrastructure, and amenities for the community and equally important is that such assets are hazard resistant, durable, and sustainable. Disasters may also end up in destroying the existing village or housing sites and re-settlement in the existing locations may no longer be possible. Policies regarding relocation and resettlement of people needs to be incorporated in DM Codes.

Linking Recovery with Safe Development/Reconstruction – ‘Building back Better’

9.6.1 It will be ensured that the post disaster development/reconstruction does not end up in re-building the existing vulnerability. The reconstruction phase would be utilised to incorporate the building codes, safe construction practices, and zoning regulations. Contingency plans for reconstruction in highly disaster prone areas need to be drawn out during the period of normalcy, which may include architectural and structural designs in consultation with the various stakeholders. Emphasis will be laid on plugging the gaps in the social and economic infrastructure and infirmities in the backward and forward linkages. Efforts will be made to support and enhance the viability of livelihood systems, education, health care facilities, care of the elderly, women and children, etc. Other aspects warranting attention will be roads, housing, drinking water sources, provision for sanitary facilities, availability of credit, supply of agricultural inputs, upgradation of technologies in the on-farm and off-farm activities, storage, processing, marketing, etc.

CHAPTER – 10

TRAINING AND CAPACITY BUILDING

Approach

10.1.1 It is important to build effective capacity building of all the stakeholders and institutions in disaster management. This process comprises awareness generation, education, training, knowledge management, Research and Development (R&D), etc. It further addresses putting in place appropriate institutional framework, management systems and allocation of resources for efficient prevention and handling of disasters.

Training

10.2.1 The State Government through various departments will organise and coordinate specialised training programmes for different levels of officers, employees and voluntary rescue workers in the district and facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organisations.

10.2.2 Keeping in view the requirement of Act and for effective handling of disasters and building capacity at all level – Government machinery and other stakeholders - **training needs to be imparted at various levels according to the needs and requirement of respective departments and other stakeholders.** All departments irrespective of their roles will require to be trained in the following aspects of disaster risk reduction/DM. The training modules would be developed for different categories of employees depending upon their roles. The main areas where training inter alia would be provided are as under:-

- i) Awareness about the provisions of the Disaster Management Act, 2005.
- ii) Orientation and awareness on Disaster Management and its various aspects
- iii) Preparation of DMPs
- iv) Preparation of Response Plans
- v) Training to perform the ESF assigned to the departments
- vi) Training on integration of DRR into development plans and policies
- vii) Training on mitigation measures and plans
- viii) Community awareness and IEC
- ix) Damage and Needs Assessment
- x) Conduct of mock drills
- xi) Training of all the new entrants into Government Services at the training institutes and academies itself such as HIPA, PTC Daroh, Medical

Colleges, DIETs, B. Ed institutions, Revenue Training Institute, Patwar Schools etc.

10.2.3 Some of the key training subjects as per the description given above would be :-

- a) Training of Doctors on Hospital Preparedness, Mass Casualty Management and RH care in emergencies and emergency obstetric care.
- b) Training of engineers, architects and masons, wire binders, contractors, construction supervisors on hazard resistant technology.
- c) Training of State and District level officials on post disaster response and recovery.
- d) Training of various line department officials and district level officials on preparation and implementation of DM plans at various levels.
- e) Training on incorporation of DRR measures in building byelaws' and land use development regulations for ensuring structural safety in hazard prone areas.
- f) Training of State and District level Search and Rescue (SAR) Force and training of volunteers (NCC, NSS, NYKS, VDMTs, Mahilla and Yuvak Mandals etc.) in SAR and first aid.
- g) Training of teachers etc. on school safety.
- h) Training and orientation of departmental officials and other stakeholders in DM.
- i) Training of new entrants into Government Services at the training institutions according to their need and requirement of roles to be performed in future.
- j) Training of police forces in specialised SAR.
- k) Training of PRIs and ULBs to perform the roles assigned to them as per the DM Act, 2005.
- l) Training in mock drill – conduct and participation.

10.2.4 Other professional groups such as paramedics, social workers, CSOs, NGOs, plumbers, sanitary fitters and safety auditors also play a very important role in community based DM. These groups will also be provided training through suitable programmes. The above list is illustrative and not exhaustive. Large number of government officials and other stakeholders would require to be trained. It won't be possible for one institute to conduct such large number of trainings. It is therefore needed that in addition to HIPA which would be main institute and which would coordinate trainings in collaboration and consultation with the SDMA/Department of Revenue with other institutions. **The concerned departments would ensure imparting of training to their functionaries at all level in a time bound manner. They would also develop appropriate training material and modules in consultation with the SDMA.**

Capacity Development

10.3.1 In the field of capacity development, priority will be given to training on DM officials, functionaries, trainers and elected representatives and communities and community based organisations. DM training and orientation of professionals like doctors, engineers, and architects will be given due importance. Further, expansion of DM training in educational institutions at all levels including schools, with orientation towards practical requirements will be given due weightage. The approach to capacity development will include:

- i) According priority to training for developing community based DM systems for their specific needs in view of their requirement and multi-hazard vulnerabilities.
- ii) Conceptualisation of community based DM systems at the State level through a consultative process involving the districts and other stakeholders with the Local level authorities in charge of implementation.
- iii) Identification of knowledge –based institutions with proven performance.
- iv) Promotion of National, interstate and Regional cooperation.
- v) Adoption of traditional and global best practices and technologies.
- vi) Laying emphasis on table-top exercises, simulations, mock drills and development of skills to test the plans.
- vii) Capacity analysis of different disaster response groups at District/Sub-Division/Local levels.

Institutional Capacity Development

10.4.1 The DM Cell at HIPA will play an important role in developing and facilitating the implementation of the State training schedule for DM. It will be strengthened with financial assistance and such efforts as will be required to handle the load of training in DM. Also, the Police Academies, State Institutes of Rural Development, District Battalion Training Institutions of Home Guards, Combined Home Guard and Civil Defence Training Institute, Shimla, Health and Family Welfare Training Institute, ABV Institute of Mountaineering and Allied Sports Manali, Fire Training Institute, Revenue Training Institute Joginder Nagar, State Council for Education, Research and Training and all other training institutions of department will be strengthened so that they can also contribute most significantly in developing DM related skills. The capacity of existing departmental training institutes needs to be upgraded in accordance with Regional and Local requirements. Tie up with specialised training institutions such as CBRI Roorkee, NIT Hamirpur, National Academy of Construction, Hyderabad, Civil Defence College Nagpur and other designated specialised training institutions will be done to train a cadre of Master Trainers in the State.

Training of Communities

10.5.1 Building the capacity of communities, as they are the first responders to disasters, is a significant part of the capacity development process. It will include

awareness, sensitisation, orientation and developing skills via a vis SAR, MFA, relief distribution, management of relief camps, psycho-socio care etc. of communities and community leaders. Assistance from Civil Defence and NGOs/other voluntary organisations such as the Red Cross and Self-Help Groups will be encouraged. The community based organisation such as Mahilla Mandals, Yuval Mandals, Market Association, and faith based organisation will be targeted in SAR and MFA training. The overall responsibility to give impetus to leadership and motivation will rest with local authorities, PRIs and ULBs under the overall guidance of State and District authorities.

Professional Technical Education

10.6.1 The curricula of graduate and postgraduate level courses in architecture, engineering, earth sciences and medicine will be reviewed by the competent authorities to include contemporary knowledge related to DM in their respective specialised fields. The role of the NCC, NSS, NYKS and Boy Scouts may also be included in schools and colleges for disaster management related work. At the State level, the Department of Education will encourage the development of DM as a distinct academic discipline, in the universities and institutes of technical excellence.

DM Education in Schools

10.7.1 The introduction of the subject of DM, by the Department of Education, in the curriculum through the HP State Board of School Education, will be extended to all schools. At the lower level colouring books and at the higher level text books or project based work on DM will be prescribed. The education content will inculcate skill based training, psychological resilience and qualities of leadership. The role of the NCC, NSS and Boy Scouts may also be included in schools and colleges for disaster management related work. Disaster education will aim at developing a culture of preparedness and safety, besides implementing school DM plans.

Training of Artisans

10.8.1 The upgradation of the skills of artisans is another crucial component of the capacity building process. The guidance of Indian Institutes of Technology (IITs), National Institutes of Technology (NITs), Central Building Research Institute (CBRI) and National Academy of Construction, Hyderabad etc. will be sought to plan these programmes. The implementation will be assisted by HP State Council for Environment, Science and Technology, Polytechnics, Industrial Training Institutes (ITIs) and other Training Institutes having expertise in this field. To ensure widespread participation, these programmes will be made available at the local level. Private builders, contractors and NGOs are expected to play a significant role in utilising trained artisans.

CHAPTER – 11

KNOWLEDGE MANAGEMENT, RESEARCH AND DEVELOPMENT

Approach

11.1.1 There is a need to create a network of knowledge institutions in the field of DM, to share their experiences and knowledge. While knowledge creation will be primarily carried out in specialised domains by nodal institutions, the DM Cell at HIPA in close consultation with SDMA and other similar institutions like HP State Council for Environment, Science and Technology will play an important role in knowledge synthesis, data management and dissemination amongst its clientele groups, especially other training institutions.

Knowledge Institutions

11.2.1 The DM Cell at HIPA and other institutions will collaborate and bring together academic and training institutions at the National, Regional and International levels. These institutions will form the knowledge repository in DM, and also strive to enhance the knowledge base. Tie up with NITs, IITs, CBRI, SASE, ICIMOD, GSI, CWC, IMD, Wadia Institute of Himalayan Geology Dehradun etc., UN Agencies and other national and international agencies dealing with emergency response will be done to utilise their experience and knowledge for DM in HP.

Dissemination of Knowledge

11.3.1 In acknowledgment of the need for a knowledge sharing platform on DM, and to facilitate interaction and dialogue with related areas of expertise, the India Disaster Knowledge Network Portal has been set up. The portal will serve as a tool to collect, collate and disseminate information related to DM. It will connect all Government Departments, statutory agencies, research organisations/institutions and humanitarian organisations to share collectively and individually their knowledge and technical expertise. ICT would be utilised to disseminate knowledge to the stakeholder so that they can benefit from it.

Documentation of Best Practices and Research

11.4.1 The indigenous technical knowledge would be documented and promoted. And in the immediate aftermath of any disaster or incident, field studies will be carried out, with the help of experts wherever needed, as an institutional measure. These studies will concentrate on identifying gaps in the existing prevention and mitigation measures and also evaluate the status of preparedness and response. Similarly, the lessons of past disasters will also be compiled and documented. The recovery and reconstruction process will also be analysed for further refining the DM processes and training needs.

Research and Development

11.5.1 The entire DM architecture needs to be supported by a solid foundation of frontline R&D efforts, offering sound and state-of-the-art science and technology options in a user friendly manner. A proactive strategy to enhance mutual reinforcement and synergy amongst the various groups and institutions working in the field of DM will be recognised. Pooling and sharing of perspectives, information and expertise will be promoted by encouraging such efforts. The identification of trans-disciplinary concerns through a process of 'integration' of the talent pool groups will be facilitated and addressed by a standing mechanism at the National and State level. Indigenous knowledge and practices would be tested and validated. Close interaction with all the stakeholders will be maintained for the identification of needs and promotion of research. The research on cross-cutting themes including technological and man-made disasters will be promoted in addition to natural disasters. Research and Development in areas such as construction technologies, SAR equipment, micro-zonation and scenario development based on simulation studies will also be encouraged to assess the short-term and long-term consequences of these disasters.

The Road Ahead

11.6.1 The enunciation of this policy represents merely the first step in the new journey. It is an instrument that hopes to build the overarching edifice within which specific actions need to be taken by various department, institutions and individuals at all levels. A destination has been described, and hopefully, a direction shown. The stage has been set, and the roadmaps now need to be rolled out. The central theme is the belief that a disaster intelligent and resilient community, duly empowered by a newly created DM Structure, working in cohesion multi-sectorally, will help realise the State vision.

Annexure – I

HP DISASTER MANAGEMENT FRAMEWORK
DEPARTMENT OF REVENUE

1. Institutional and Legal Structure

Expected Outputs	Areas of Intervention	Agencies/Sectors to be involved and Resource Linkages
Nodal agency for disaster management at State level with appropriate systems.	<ol style="list-style-type: none"> 1. Constitution and setting up of State Disaster Management Authority with appropriate legal, financial and administrative powers. 2. Roles and responsibilities of the SDMA <ul style="list-style-type: none"> • All kinds of disasters • Policies for disaster reduction and Mitigation. • Preparedness at all levels. • Response coordination. • Relief and rehabilitation coordination • Amendment of existing laws, procedures, instructions. 	Revenue, Health, PWD, I & PH, Home, Education, Town and Country Planning Urban Development, Fire & Emergency, Home Guards and Civil Defence, HIMUDA, Power, Environment and Forest, Finance, Agriculture, Horticulture, Environment, Science and Tech, IMD etc.
Constitution of District Disaster Management Authority under District Magistrate	State Govt. to constitute and set up District level DM Authorities.	As Above.
Constitution of Disaster Management Committees at the Local Level	District Magistrate to constitute DM Committees at the local level	DDMAs
State Disaster Management Code.	Amendment of existing emergency relief manuals etc. to incorporate planning, mitigation and preparedness at all level.	Department of Revenue

II. Disaster Prevention and Mitigation

Hazard, Risk and Vulnerability assessment and dissemination	Disaster specific multi-hazard risk zonation up to district/tehsil level on regular	Engagement of Consultants/ Specialists/Expert Agencies/ Govt. Departments in order to
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	<p>basis</p> <p>Multi-hazard vulnerability mapping on regular basis</p> <p>Risk and vulnerability awareness campaign.</p>	<p>conduct these studies.</p> <p>Universities & Research institutes need to undertake risk and vulnerability studies.</p> <p>Department of Environment, Science and Technology and HIPA.</p> <p>I & PR Department - mass communication - print and electronic media; Department of education-curriculum of schools and colleges.</p> <p>Development of IEC resource materials and dissemination by SDMA, DDMA through all line departments at district levels, local self Govt. bodies, State, district and local NGOs.</p> <p>Network of State, District and Local level NGOs to be involved.</p>
<p>Preventive structural measures to be developed and incorporated in all public and private development initiatives</p>	<p>Development and enforcement of guidelines, regulations and codes for earthquake, flood, fire, landslide for all zones.</p> <p>Safe housing atlas/designs/guidelines for the rural areas.</p> <p>Dissemination of techno-legal, land use zonations and construction regulations.</p>	<p>A committee of Chief Engineer (Design) PWD, Chief Engineer, HIMUDA, Chief Architect PWD, State Town and Country Planner, CFO to develop these norms.</p> <p>Empower state, district, Local-self-government institutions to develop and enforce codes/norms and regulations.</p> <p>User-friendly atlas with design details for various risk zones in vernacular languages.</p> <p>I & PR Department -mass Communication-print and electric media.</p> <p>Dept. of Education-curriculum of schools, colleges, universities</p>

		<p>and technical institutes.</p> <p>Development of IEC resource materials and dissemination by SDMA, DDMA through all line departments at district levels, local self Govt. bodies, State, district and local NGOs.</p> <p>To be included in the basic /initial training curriculum of all senior and middle civil services in the State.</p>
<p>Development of specific disaster prevention/mitigation action plans for each zone.</p>	<p>Engagement of specialists for development of mitigation plans/projects including alternate approaches.</p> <p>Cost-benefit appraisal of these plans based on minimum losses criteria</p> <p>Financing of structural and non-structural measures (e.g. relief shelters, dams/barrages etc.</p>	<p>National and international consultants to be entrusted with this task for high risk and vulnerability zones.</p> <p>State/district teams to be constituted for drawing up plans for moderate risk/vulnerable zones.</p> <p>Financing of the viable plans with plan funding as well as central/external funding.</p>
<p>Disaster Mitigation, prevention and preparedness to be mainstreamed into the development process.</p>	<p>Each department which has a role in mitigation, prevention and preparedness, will make appropriate outlays for schemes addressing mitigation.</p> <p>Where there is a shelf of projects/schemes, projects/schemes contributing to mitigation to be given priority.</p> <p>Projects/schemes in areas prone to natural hazards to be designed as to contribute to mitigation and preparedness.</p> <p>Projects in vulnerable areas prone to natural hazards to be designed to withstand natural hazards.</p>	<p>Departments of Planning and Finance will ensure that.</p> <p>All Departments of the State Government incorporate DRR in their programmes.</p> <p>All Local Authorities.</p>

<p>Community/village/ Panchayat/ Block/district, State and national disaster mitigation/ reduction strategy and plans.</p>	<p>Strong social mobilization and awareness campaigns.</p> <p>Increased participation in decentralized planning</p> <p>Disaster appraisal to be one of the integral components of the development plan Identified and prepare mitigation projects for inclusion in the development plans and implementation with earmarked allocation.</p>	<p>Ongoing central/state schemes to have “disaster mitigation” component - PWD, RD, UD, Health, Education, Forest, I & PH, Social Welfare, Deptt. of Environment etc.</p> <p>Integrated Mitigation Approach in Development Plan.</p> <p>Support from donor agencies and Banks.</p>
<p>Techno-legal Regime</p>	<p>Regular review of building codes and their dissemination.</p> <p>Making all construction to be as per BIS codes prescribed for Zone IV and V.</p> <p>Comprehensive review and compliance of:</p> <ul style="list-style-type: none"> - TCP Act. - Development control and regulations. - Risk sensitive land use zonation and regulations. - Building bye-laws. <p>Capacity enhancement of ULBs and PRIs to enforce compliance of techno-legal regime.</p>	<p>Department of TCP, UD, RD, PWD, HIMUDA and Revenue.</p>
<p>Land Use Planning and Zoning Regulations</p>	<p>Legal framework for land-use planning and zoning to be reviewed.</p> <p>Zoning regulations to be notified and enforced for entire state.</p> <p>Zoning regulations to be based on HVRA studies.</p>	<p>Department of TCP, UD, RD and Revenue.</p>

III. Early Warning System

Putting in Place EWS	Carry out review of sensors, radars and equipment necessary for EWS in weather-meteorological related hazards such as cloud burst, hailstorm, snow and avalanche, flash floods etc.	IMD, SASE, CWC, and Deptts of I & PH, Agriculture, Horticulture and Environment and Revenue.
State level	Hazard warning -vulnerability modeling for each district. State-of-the-art Emergency Operations Centre (EOC) at the state HQ with a stand-by facility at another location.	IMD, SASE, CWC, Departments of Irrigation, Power, Agriculture, Horticulture, IP & H, Forest, Revenue, SDMA etc.
District level	State-of-the-art Emergency Operations Centre (EOC) at the district HQ with a stand-by facility at another location.	Communications links with all revenue, police and Block offices - VHF/HF networks. Promote HAM clubs. Use of electronic and print media and use of traditional means. Use of modern technology such as bulk messaging services, voice messaging etc. for dissemination of early warning.
Local (Community)level	Panchayats/urban bodies to disseminate early warning through DMT group in the village (s).	Capacity building of LSG members and DMTs. Promote HAM in rural areas and establishing a system of effective early warning system in place.

IV. Disaster Preparedness and Response

Community based village preparedness mitigation and response plans.	Enhance community capacity in all multi-hazard prone districts, tehsils and sub-tehsils to respond effectively to disasters in future.	Setting up DMCs and DMTs in each village in hazard prone areas. Train them to develop their preparedness and response plans through Home Guards/civil Defence for:- - Safe shelters
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		<ul style="list-style-type: none"> - SAR equipment - stock piling of relief Materials - evacuation plan - Medical first Aid - SAR - Psychological counseling - Running of relief camps - Damage assessment - Relief distribution etc. <p>Mainstream these plans with annual development plans of all Panchayats and local bodies. Train Youth/Volunteers in all response functions such as early warning dissemination, search and rescue, first aid, trauma management, shelter and livelihood loss prevention techniques etc.</p> <p>Mainstream capacity building of the teams/volunteers with extension programmes of line departments. Mock drills of the community and Panchayats at regular intervals.</p> <p>(Local level NGOs/ Institutions may be involved in the preparation of community level preparedness response plans).</p>
<p>DM Plans for All the Places visited by /housing large number of people.</p>	<p>DM Plans to be in place for all the major temples in state.</p> <p>All the major buildings visited by/housing large number of people such as Secretariat, Mini Secretariats, Directorates, Collectorates, Medical Colleges and Hospitals, medical institutions, hotels to have DM and evacuation plan.</p> <p>Regular mock drills to test the</p>	<p>Department of Language, Art and Culture.</p> <p>All the Departments of the State.</p> <p>District Administration.</p>

<p>District Disaster Management Plans</p>	<p>plans to be conducted.</p> <p>District Plans to be based on HRVA.</p> <p>Elements of prevention, mitigation and preparedness to be part of the plan.</p> <p>Plans should aim at enhancing the capacity of the district team to respond to disasters:</p> <ul style="list-style-type: none"> - District preparedness and response plans; - District inventory of resources and gaps; - Stockpiling strategy and Warehousing; - Constitution and training of District DMT; and - Local and district response teams for designated areas” for evacuation, search and rescue, road and debris clearance, health, trauma management etc. <p>Effective response plans based on IRS.</p>	<p>District Magistrate and departments.</p> <p>Specialized training of the members of the DMT at district and sub-division levels. Mock drills at regular intervals.</p> <p>One company each of the Armed Reserve Police to be trained as rapid response teams with other members drawn from Health, PWD, Fire, Home Guards for:-</p> <ul style="list-style-type: none"> - Water rescue - Collapsed structure Rescue -Fire rescue
<p>State Disaster Management Plan.</p>	<p>To be based on HRVA.</p> <p>Elements of prevention, mitigation and preparedness to be incorporated.</p> <p>Plan should aim at enhancing the capacity of the state administration to respond to disasters:-</p> <ul style="list-style-type: none"> - State preparedness and response plans; - State inventory of resources and gaps; - Constitution of State DMT and training; - State response teams for 	<p>Department of Revenue and other departments of the State.</p> <p>Constitution of State Disaster Response Force with one company of the Armed Reserve Police of all Battalion to be trained as rapid response teams with other members drawn from Home Guards, health, PWD, Forest, Fire:-</p> <ul style="list-style-type: none"> - Water rescue - Collapsed structure rescue - Fire rescue

	evacuation, search and rescue, road and debris clearance, health, trauma management etc.	
Web-enabled and easy—to-access inventory of resources	Link all Inventories at all levels through a web-link to be designated as State Inventory of Disaster Equipment, shelters, facilities etc.	NIC connectivity to be used for the purpose or a dedicated link between national and state DMAs could be used. Periodical census and updating of inventories including using secondary data.
State Network of Emergency Operation Centres (EOCs)	<p>Setting up EOCs at the State and District HQs and Mobile EOC for on-site disaster management information.</p> <p>To be housed in multi-hazard resistant structures.</p> <p>To have fail-safe communication network and linkages.</p> <p>To provide DSS to the Responsible Officer and ESFs.</p>	Department of Revenue, Police, Fire and Emergency Services.
Incident Response System	<p>Putting in place protocol/SOPs for IRS.</p> <p>Designation of Officers at all level for IRS</p>	Department of Revenue and Responsible Officers.
Emergency Support Functions (ESFs) and Standard Operating Procedures (SOPs).	<p>Defining the ESF Plan and SOP for the same at the State, District and local level.</p> <p>Departments and agencies which perform ESFs to constitute teams at all levels to perform these functions and follow SOPs for effective disaster response.</p>	<p>State Government Departments.</p> <p>District Administration.</p> <p>Local Authorities.</p>
Regional response centres.	<p>Identify locations within the state as regional response centres.</p> <p>Identify caches of equipment required.</p>	DG (Civil Defence, Fire & Emergency Services and Home Guards), DG Police, Department of Revenue and District Magistrates.

	Put teams and caches of equipment in place.	
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V. Human Resource Development

State capacity building plan as a state agenda	Development of capacity building plans including state training plan (STP)- need assessment of the skill sets and quantity and their availability	Bring all state/national training institutions including corporate/ private sector training facilities together in a network. Mainstreaming disaster management training with all induction courses
Specialized training facilities set up/identified.	-do-	Identify existing specialized training institutes- NIDM, NISA, NCDC, NFSC etc. - include corporate sector training facilities as well.
Training for service/cadres /agencies involved in mitigation, preparedness and response.	Training Needs Analysis and development of Human Resource Plan; Drawing up of capsule courses for training; Development of training manuals and material; and Training of trainers.	Department of Disaster Management, Civil Defence, Home Guards, Fire and Emergency Services, HIPA, SIRD, SIHFW, SC S T and Env. etc.
Training of IAS/IPS/HAS/HPS/IFS etc.	Initial recruitment training to include modules on DM in all state training institutes such as HIPA, ATI, PTC, SIRD and other administrative institutes etc. for these services.	Include the same in refresher and promotion course.
Health professionals.	Include crises prevention response and recovery, and trauma management in MBBS curriculum.	Working with AICME and ICMR and Medical Colleges, Department of H & FW.
Engineers, Planners and Architects.	Include multi hazard resistant construction and mitigation technologies including knowledge of all techno-legal provisions in degree and PG courses.	Working with AICTE and CSIR, IIT Mandi, NIT Hamirpur, Department of Technical Education etc.
Agriculture universities	Include crisis prevention	ICAR and Agriculture

	response and recovery in livelihood sector in degree and PG course	Universities Palampur, Dr. YS Parmar University Nauni.
All Govt. functionaries at all levels receive basic training in preparedness and response functions.	Create centers for training of trainees; and Create facilities in all post recruitment training institutions for categories of staff.	HIPA, PTC Daroh, BTCs Home Guards, Civil Defence Training Institute, Fire Training Institute, IRB Training Centres, Revenue, SCST & E, Training Institute, and all the departmental training facilities etc.
DM in School curriculum	DM awareness and preparedness to be included in the school curriculum.	Department of Education, HPBSE, NCERT, etc.
District cadres	All district cadre staff-village extension officers, health workers, agriculture extension workers, revenue functionaries etc. have to undergo training in DM functions at the time of their induction training.	State Training Institutes and institutes of respective departments.
Local self-government representatives and staff	All elected representatives and staff of LSGs to be provided training in DM at the time of their assumption of office along with basic training.	Need for refresher training programmes especially in high-risk zones.
Youth/Women Organizations such as Mahilla Mandals, Yuvak Mandals, NCC/NSS/Scout & Guides, NYKS, Sports Clubs etc.	The members of youth and women organizations and the students should be provided training in SAR, MFA, emergency response and public awareness generation.	Home Guards, Fire & Emergency Services and Civil Defence to take lead in association with relevant department/ agencies such as Education, YSS, RD & PR etc.
Training of Construction Supervisors, Masons, Wire Binders, Black smiths and Private Contractors.	Hands on training in safe and hazard resistant construction practices and retrofitting techniques.	CBRI Roorkee, NIT Hamirpur, Department of PWD, I& PH, HIMUDA, RD, UD, Education, Health, Forest, Polytechnics, ITIs, etc.
Public awareness and community preparedness training.	Awareness generation of the local community. Capacity building of the community at local level by imparting skill training like mock drills, rehearsals etc.	Among various alternatives, print media, visual media like cable, television and film can be utilized in public awareness generation. Specific programmes on

		<p>disaster management may be telecast on various local TV channels, cable networks etc.</p> <p>The media professionals of local press, Doordarshan and private TV channels etc. can be sensitized and encouraged to integrate DM components in different programmes for public awareness.</p> <p>Involvement of NGOs, CBOs and faith based organizations in community awareness and preparedness.</p> <p>Involvement of Private Section under CSR in sharing of resources and expertise.</p>
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VI. GO-NGO Coordination

<p>GO-NGO Collaboration and Inter Agency Coordination</p>	<p>Facilitate networking of NGOs, CSO, CBOs at State, district and local level.</p> <p>Involvement of the above organisations in planning, mitigation, preparedness and response mechanisms at all level.</p> <p>Training, capacity building and orientation of the above organisations in emergency response.</p> <p>Establishing inter-agency coordination mechanism at the normal time so that it functions smoothly during emergencies.</p>	<p>Department of Revenue, SDMA, DDMA and Local Authorities.</p> <p>Indian Red Cross.</p> <p>Department of Civil Defence, NCC, Education, RD etc.</p> <p>UN Agencies, INGOs, NGOs, and donors.</p>
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VII. Research and Knowledge Management

<p>Institutionalize knowledge and lessons learnt.</p>	<p>Assessment and evaluation of ongoing programmes and activities and regular documentation of key lessons.</p> <p>Documentation of the best practices.</p> <p>Establishment of State Disaster Knowledge Network to pool and exchange information and knowledge among institutions and organisations.</p>	<p>Department of Revenue, HIPA, Districts, Research and academic Institutions.</p>
<p>Development of State Disaster Database.</p>	<p>Systematic inventorisation and documentation of disasters and disaster events.</p> <p>Trend analysis and reporting.</p>	<p>Department of Revenue, SEOC, DEOCs, Deptt. of Environment, Science and Technology etc.</p>
<p>Promote research in the area of disaster risk reduction.</p>	<p>Hazard resistant and Mitigation technologies for housing and infrastructure sector.</p> <p>Mitigation strategies for other hazards such as earthquake, cloudburst, landslide, flashfloods etc.</p> <p>Cost effective equipment for specialized rapid response:-</p> <ul style="list-style-type: none"> - Temporary shelters - SAR equipment - Provision of drinking water, emergency health and sanitation in post disaster situations 	<p>Department of Housing, Public Works.</p> <p>Public health engineering.</p> <p>IMD, GSI.</p> <p>Academic and Research Institutions.</p> <p>Involvement of Private Sector.</p> <p>Department of Industries.</p> <p>Deptt. of Environment, Science and Technology.</p> <p>Universities.</p> <p>ICIMOD</p> <p>IITs, NIIT etc.</p>

Abbreviations

ARMVs	–	Accident Relief Medical Vans
BIS	–	Bureau of Indian Standards
CBOs	–	Community Based Organisations
CBRN	–	Chemical, Biological, Radiological and Nuclear
CSR	–	Corporate Social Responsibility
CRF	–	Calamity Relief Fund
CWC	-	Central Water Commission
DDMA	–	District Disaster Management Authority
DCMC	-	District Crisis Management Committee
DM	–	Disaster Management
DMC	-	Disaster Management Cell
GIS	–	Geographic Information System
GSI	-	Geological Survey of India
GoI	–	Government of India
GPS	–	Global Positioning System
HPC	–	High Powered Committee
HIPA	-	Himachal Institute of Public Administration
IAY	–	Indira Awas Yojana
IAG	-	Inter Agency Coordination
ICIMOD	-	International Centre for Integrated Mountain Development
IRS	–	Incident Response System
ICT	–	Information and Communication Technology
IDRN	–	India Disaster Resource Network
IDKN	–	India Disaster Knowledge Network
IMD	-	Indian Meteorology Department
IITs	–	Indian Institutes of Technology
IT	–	Information Technology
ITIs	–	Industrial Training Institutes
ITK	–	Indigenous Technical Knowledge
MFA	-	Medical First Aid
MHA	–	Ministry of Home Affairs
NCC	–	National Cadet Corps
NCCF	–	National Calamity Contingency Fund
NDEM	–	National Database for Emergency Management
NDMA	–	National Disaster Management Authority
NDMF	–	National Disaster Mitigation Fun
NDRF	–	National Disaster Response Force
NEC	–	National Executive Committee
NGOs	–	Non-Governmental Organisations
NIDM	–	National Institute of Disaster Management
NITs	–	National Institutes of Technology
NSDI	–	National Spatial Data Infrastructure

NSS	–	National Service Scheme
NYKS	–	Nehru Yuva Kendra Sangathan
PPP	–	Public-Private Partnership
PRIs	–	Panchayati Raj Institutions
R&D	–	Research and Development
RH	-	Reproductive Health
SAARC	–	South Asian Association for Regional Cooperation
SAR	-	Search and Rescue
SASE	-	Snow and Avalanche Study Establishment
SCMC	-	State Crisis Management Committee
SDMA	–	State Disaster Management Authority
SDRF	–	State Disaster Response Force
SEC	–	State Executive Committee
SOPs	–	Standard Operating Procedures
ULBs	–	Urban Local Bodies
UN	–	United Nations

