



# DISTRICT DISASTER MANAGEMENT PLAN

## Shimla

HIMACHAL PRADESH





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# 1. INTRODUCTION

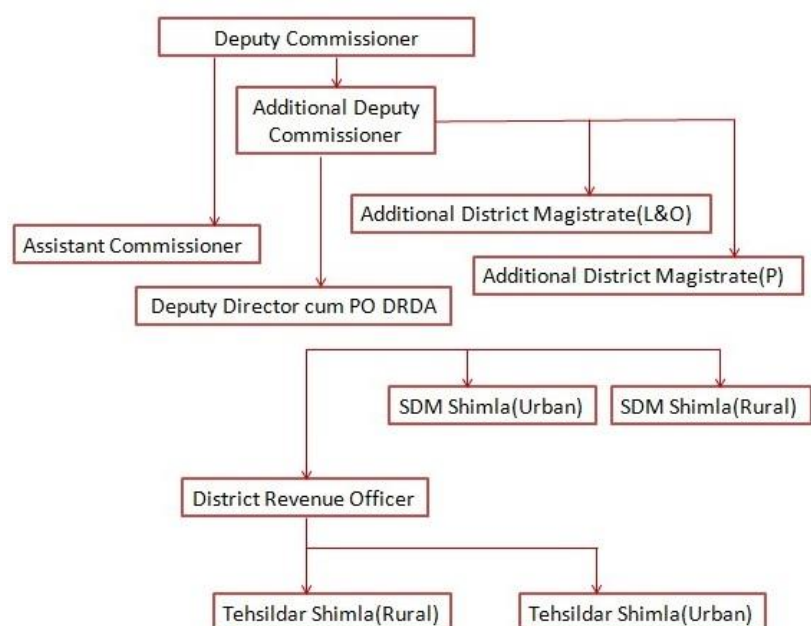
## 1.1 RATIONALE

The geographical location of Himachal Pradesh is such that it lies in Himalayan region between latitude 30° 22.40' N to 33° 12.20' N and longitude 75° 45.55' E to 79° 04.20' E. Himalaya being a nascent mountain range and due to the continuous ongoing movement of tectonic plates, the Himalaya is still rising making this region vulnerable to the earthquake. The whole area of Himachal Pradesh falls into two earthquake zones viz. Zone IV and Zone V as per the BIS Zoning map of the Himachal Pradesh. Consequently the Shimla District is also located in the Zone IV and V (about 99.62% area falls in Zone IV and 0.38% falls in Zone V) making the region liable to experience the earthquake of intensity MSK VIII or more. Consequently rendering the human lives and property situated in this district more vulnerable to the disaster. In addition to it, river Satluj, Giri, Pabbar and their tributaries flow through this district and hence the population living on the banks of these rivers are susceptible to floods which can occur naturally or due to human activities. Now a day due to the increasing developmental activities like construction of roads, houses and other developmental infrastructural activities like hydropower projects, industrial hubs, big industrial institutions, the unscientific construction methods and ways used for the disposal of debris, the landslides are on the rise causing huge loss to human life and property.

Shimla District lies between the longitude 77°-0" and 78°-19" east and latitude 30°-45" and 31°-44" north. It is bounded by Mandi and Kullu in the north, Kinnaur in the east, the state of Uttarakhand in the south, Sirmour, district in the west. The elevation of the district ranges from 300 to 6000 metres. The topology of the district is rugged and tough. Shimla district derives its name from Shimla town which was once a small village. Shimla district in its present form came into existence from 1st Sept, 1972 on the reorganisation of the districts of the state. Further the Shimla District being enriched with the green cover, during summers the incidents of forest fire have increased manifold and hence irreparable loss is being caused to the natural resources of the state every year. Hence there is a need to prevent, mitigate the danger or threat of such disasters and to prepare the community by way of capacity building to respond in a better way to such disastrous situation if arises at any time. Shimla district derives its name from Shimla town, the district headquarters and now state capital of Himachal Pradesh

The Shimla District comprises of 7 Sub-Divisions, 12 Tehsils and 6 Sub Tehsils.

### Administrative Setup the Shimla District



## 1.2 LEGAL MANDATE

Disaster Management (DM) Act 2005 in Section 31 mandates that there shall be a District Disaster Management Plan for the each district. The proposed DDMP complies with the National Disaster Management Plan (NDMP) of 2016, State Disaster Management Plan 2012 and conforms to the provisions of the DM Act making it mandatory for the Government of India and various central ministries to have adequate DM plans. While the district plan will pertain to the disaster management for the whole of the district, the hazard specific nodal ministries and departments notified by the Government of India and State Government will prepare detailed DM plans specific to the disaster assigned. As per Section 32 of the DM Act, every office of the Government of India and of the State Government at the district level and the local authorities shall prepare comprehensive DM plans detailing how each of them will contribute to the national efforts in the domains of disaster prevention, mitigation of risks, preparedness, response, and recovery.

## 1.3 SCOPE

As per the DM Act 2005, the District Plan shall include:-

- The areas in the district vulnerable to different forms of disasters;
- The measures to be taken, for prevention and mitigation of disaster, by the Departments of the Government at the district level and local authorities in the district;
- The capacity-building and preparedness measures required to be taken by the Departments of the Government at the district level and the local authorities in the district to respond to any threatening disaster situation or disaster;
- The response plans and procedures, in the event of a disaster, providing for- (i) Allocation of responsibilities to the Departments of the Government at the district level and the local authorities in the district; (ii) Prompt response to disaster and relief thereof; (iii) Procurement of essential resources; (iv) Establishment of communication link; and (v) The dissemination of information to the public; e) Such other matters as may be required by the State Authority.

## 1.4 AIMS AND OBJECTIVES OF THE DDMP

**Aim:** The overall aim of this plan is to facilitate actions by different stakeholders to prevent / mitigate disaster and climate risk, and enhance preparedness and develop capacities for effective disaster management in the district. It further seeks to identify and clarify the roles and responsibilities of the internal and external stakeholders throughout the entire cycle of disaster management, i.e. pre-disaster, during disaster and post disaster phases.

**Objectives of the DDMP:** The specific objectives of the DDMP are:

- To identify and map disaster risk,
- To strengthen institutional arrangements in the district by identifying roles and responsibilities of different stakeholders,
- To facilitate enhanced level of preparedness of different stakeholders and develop their capacities, preparation and implementation of action plan for disaster risk mitigation, strengthen mechanism for early warning, response & relief, guide rehabilitation & recovery and facilitate mechanism for monitoring, evaluation, revision and updation.

- To clarify Authority, Responsibility and Relationships as to who is responsible for ensuring that the work gets done, distributing and decision making authority among the team members and the existing organizational units, and establishing formal lines of communication.
- To facilitate mobilization of resources, funds, personnel, supplies and equipment necessary for doing the required activities.
- To establish communication and information management system
- To facilitate Monitoring, Evaluation and updation of the plan from time to time

The District Disaster Management Plan (DDMP) is the guide for achieving the objective related to disaster mitigation, preparedness, response and recovery. This Plan will help in disaster response in a planned way to minimize human, property and environmental loss.

## 1.5 AUTHORITY FOR DDMP: DISASTER MANAGEMENT ACT 2005 (DM ACT)

As per provisions in Chapter-IV of the DM Act, each State Government shall establish a District Disaster Management Authority for every district in the State with such name as may be specified in that notification. 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 State Government shall appoint an officer not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner, as the case may be, of the district to be the Chief Executive Officer of the District Authority. 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 DM plan for the District and monitor the implementation of the all relevant national, state, and district policies and plans.

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 district-level offices of the various departments of the State Government. Moreover, the "District Plan" means the plan for disaster management for the district prepared under section 31. There shall be a plan for disaster management for every district of the State. It shall be prepared by the District Authority, after consultation with the local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority. Authoritatively DDMP has following characteristics, Plans by different authorities at district level and their implementation.-Every office of the Government of India and of the State Government at the district level and the local authorities shall, subject to the supervision of the District Authority,

- Prepare a disaster management plan setting out the following, namely:-
  - Provisions for prevention and mitigation measures as provided for in the District Plan and as is assigned to the department or agency concerned;
  - Provisions for taking measures relating to capacity-building and preparedness as laid down in the District Plan;
  - The response plans and procedures, in the event of, any threatening disaster situation or disaster;
- Coordinate the preparation and the implementation of its plan with those of the other organizations at the district level including local authority, communities and other stakeholders;
- Regularly review and update the plan.

- The copies of the District Plan referred to in sub-sections (2) and (4) shall be made available to the Departments of the Government in the district. Submit a copy of its disaster management plan, and of any amendment thereof, to the District Authority.
- The District Authority shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

## 1.6 EVOLUTION OF DDMP IN BRIEF

Preparation of the District Disaster Management Plan is the responsibility of the District Disaster Management Authority of the district. The first draft plan is to be discussed in the DDMA. The main steps involved in the development of this plan are:

- Training to develop the DDMP as per NDMA template by State and UNDP official.
- Data collection from all line departments.
- Data analysis.
- Discussion with experts.
- Reference of national and international literature.
- Preparation of action plans for all line departments.
- Preparation of draft plan document.
- Mock drill to check the viability and feasibility of the implementation methodology.
- Wide circulation for public and departmental comments.
- Preparation of the final plan document.

## 1.7 STAKEHOLDERS AND THEIR RESPONSIBILITIES

District Shimla being the hub of the state administrative heads in the Capital city of Shimla the DDMP need to be more specific to how these departments and their departmental plans are incorporated for enhancing the preparedness, mitigation, response & rehabilitation. DDMA may consult following stakeholders for development of the District Disaster Management Plan and their responsibilities in detail are given in following chapters.

Table - 1.1 Stakeholder of District Shimla and Their responsibilities

#	Stakeholders	Responsibilities
1	DDMA - Shimla	<ul style="list-style-type: none"> <li>• Updation and implementation of DDMP.</li> <li>• Conducting meetings on disaster management.</li> <li>• Building capacity by trainings and awareness through IEC material development and distribution</li> <li>• Managing all resources at district level in consultation their respective State level directorates / offices</li> <li>• Coordinating with stakeholders and liaisoning with the district as well as state offices</li> <li>• Enable local authorities to establish contact with the state authorities and Other departments</li> <li>• Coordinate planning procedures between district, the state and the center;</li> <li>• Provide ready formats for all formal reporting procedures as a standby</li> </ul>
2	DEOC Shimla	<ul style="list-style-type: none"> <li>• Receive and process disaster alerts and warnings from nodal agencies and EWS providers</li> <li>• Corresponding narrowly with the SEOC Shimla for information sharing so that the decision makers at the state level are well aware of the situation and help in further resource mobilization</li> <li>• Other sources and communicates the same to all designated authorities.</li> <li>• Monitor emergency operations.</li> <li>• Facilitate coordination among primary and secondary ESFs / Departments / Agencies</li> <li>• Requisitioning additional resources during the disaster phase.</li> <li>• Issuing disaster / incident specific information and instructions specific to all concerned.</li> <li>• Consolidation, analysis, and dissemination of damage, loss and needs assessment data.</li> <li>• Forwarding of consolidated reports to all designated authorities.</li> </ul>
3	HPSDMA, Shimla	<ul style="list-style-type: none"> <li>• Coordination with the National Disaster Management Authority (NDMA)</li> <li>• Coordinating DRR activities and implementation thereof.</li> <li>• Facilitating resources on demands rise by administration.</li> <li>• Enhancement of Capacity building and trainings at state and district level</li> </ul>
4	NDRF 7 <sup>th</sup> Battalion, Bhatinda & the NDRF unit at Nurpur, Kangra	<ul style="list-style-type: none"> <li>• Carrying out search and rescue on requisition by District as well as state administration.</li> <li>• Strengthening the response mechanism through trainings and awareness in Lo state.</li> </ul>
5	Armed Forces	<ul style="list-style-type: none"> <li>• Coordinate with administration in response as well as capacity building.</li> <li>• Facilitate administration with the key resources in disaster.</li> </ul>
6	Himachal Police Shimla for Law & Order	<ul style="list-style-type: none"> <li>• Creation of Disaster Management dedicated wireless channel</li> <li>• Training to DEOC staff to use and record the information over VHS</li> </ul>

		<ul style="list-style-type: none"> <li>• Having sound communication and security plan in place to coordinate law &amp; order issues;</li> <li>• Training to security personnel in handling issues of disaster situations</li> </ul>
7.	Department of Irrigation & Public Health (Drinking & potable water)	<ul style="list-style-type: none"> <li>• Procurement of clean drinking water;</li> <li>• Transportation of water with minimum wastage;</li> <li>• Special care for women with infants and pregnant women;</li> <li>• Ensure that sewer pipes &amp; drainage are kept separate from drinking water facilities.</li> </ul>
8.	HPSEB Ltd. "Electricity"	<ul style="list-style-type: none"> <li>• Provide and coordinate with State and support until the local authorities are prepared to handle all power related problems;</li> <li>• Identify requirements of external equipment required such as DG sets, generators etc;</li> <li>• Damage Assessment</li> </ul>
9	HP PWD - Shimla	<ul style="list-style-type: none"> <li>• Emergency clearing of debris to enable reconnaissance; Clearing of roads;</li> <li>• Identifications of the hotspots of different seasonal disasters</li> <li>• Get the GIS &amp; Landslide zone mapping of roads and bridges in vulnerable areas done</li> <li>• Assemble casual labour; provide a work team carrying emergency tool kits, depending on the nature of disaster, essential equipment such as Towing vehicles, Earth moving equipment, Cranes etc.</li> <li>• Construct temporary roads; Keep national and other main highways clear from disaster effects such as debris etc.</li> <li>• Coordination with private services providers for supply of earth moving equipment etc.</li> </ul>
10	Fire Services Shimla	<ul style="list-style-type: none"> <li>• To strengthen community response through trainings and awareness camps.</li> <li>• To train first responders at village / Panchayat level in firefighting.</li> <li>• To mitigate the fire risk by auditing and inspection and fighting fire disaster.</li> <li>• To take the responsibility as the first responder for SAR and further support other Search and rescue teams.</li> </ul>
11	Public Health (CMO, MS IGMC, Shimla, MS District Hospital, Red Cross Society)	<ul style="list-style-type: none"> <li>• To coordinate, direct and integrate State level response and activation of medical personnel, supplies and equipment;</li> <li>• Provide human services under the Department of health;</li> <li>• To prepare, keep and check ready Mobile Hospitals, stocks of equipment and drugs;</li> <li>• To network with private health service providers;</li> <li>• To provide ready ambulances and transform other vehicles into ambulance to meet the transportation requirement at mass level.</li> <li>• To provide improvised as well as ready medical resources.</li> <li>• To provide resources for mass level water decontamination</li> </ul>
12	Municipal Corp. Shimla	<ul style="list-style-type: none"> <li>• Land Usage &amp; promotion of Disaster Resilient housing</li> <li>• Solid/ liquid waste treatment and management</li> <li>• Make arrangement for proposal disposal of waste in their respective areas;</li> </ul>



		<ul style="list-style-type: none"> <li>• Arrange adequate material and manpower to maintain cleanliness and hygiene</li> </ul>
13	PRI's	<ul style="list-style-type: none"> <li>• Strengthening the community based response by awareness and implementation of DM policy and guidelines</li> <li>• Preparing the Community as first responder and local authorities as per Village Disaster Management Plan.</li> </ul>
14	(HRTC & RTO for Transportation)	<ul style="list-style-type: none"> <li>• Overall coordination of the requirement of transport in implement emergency related response and recovery functions, search and rescue and damage assessment;</li> <li>• Make an inventory of vehicles available for various purposes;</li> <li>• In response to disasters catering the need of transportation through buses and other vehicles;</li> <li>• Providing drivers and other skilled manpower for repair and maintenance.</li> </ul>
15	Civil Defence, Home Guards, and Emergency Services (Search and Rescue)	<ul style="list-style-type: none"> <li>• Establish, maintain and manage search and rescue response system;</li> <li>• Coordinate search and rescue logistics during field operations;</li> <li>• Provide status reports of S&amp;R updates throughout the affected areas.</li> </ul>
16	DFSC for Food & Civil Supplies	<ul style="list-style-type: none"> <li>• Identify requirement of food and clothing for affected population;</li> <li>• Control the quality and quantity of food, clothing &amp; basic medicines</li> <li>• Ensure the timely distribution of food and clothing to the people;</li> <li>• Ensure that all food that is distributed is fit for human consumption as per minimum standards of relief.</li> </ul>
17	Media, information and communication (Department of Public Relations office)	<ul style="list-style-type: none"> <li>• To provide and collect reliable information on the status of the disaster and disaster victims for effective coordination.</li> <li>• Coordinate with all TV and radio networks to send news flashes for specific do's, don'ts &amp; needs.</li> <li>• To disseminate the updates and directions to public through radio broadcasting.</li> <li>• Respect the socio-cultural and emotional state of the disaster victims while collecting information for dissemination.</li> </ul>
18.	Forest (DFO for Removal of trees & fuel wood & forestation)	<ul style="list-style-type: none"> <li>• Removal of fallen trees and Afforestation or shifting of trees.</li> <li>• Ensuring the mainstreaming of DRR ensured by tin the development of the roads</li> <li>• To provide fuel wood for the relief camps and public;</li> <li>• Have adequate storage of fuel wood and make arrangement for distribution thereof;</li> <li>• To provide fuel wood for cremation.</li> </ul>
19	Education	<ul style="list-style-type: none"> <li>• Building capacity at school/college level through various competitions and awareness campaign.</li> <li>• Safekeeping of infrastructure of schools converted into shelters</li> </ul>

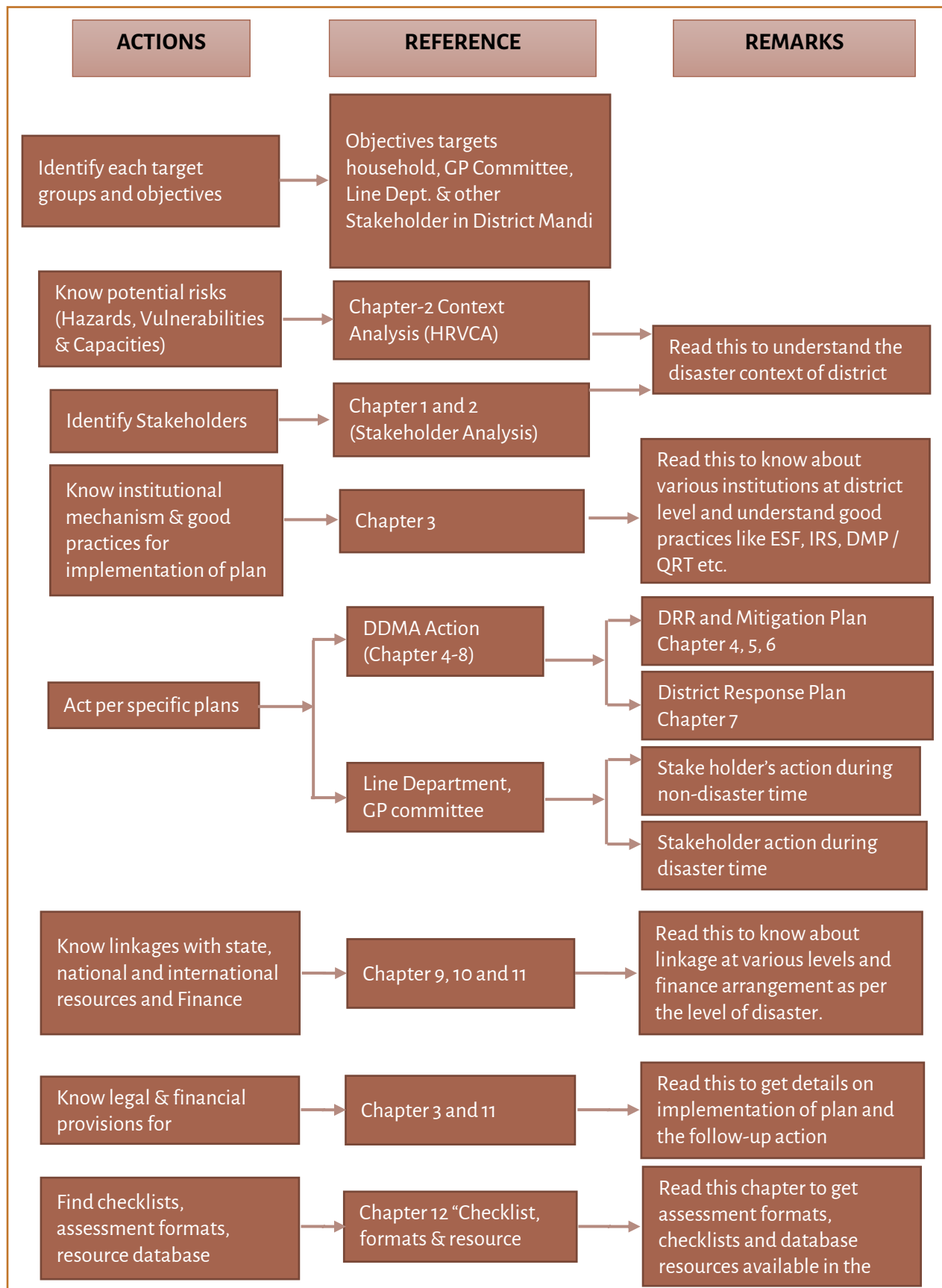
		<ul style="list-style-type: none"> <li>• To train the volunteers through NCC/ NYKS/ NSS etc. in Firefighting, First aid, and other disciplinary &amp; volunteering.</li> </ul>
20	DRDA, Revenue, Agriculture & Horticulture	<ul style="list-style-type: none"> <li>• Gathering damage reports from the ground through PRI's and Patwaris.</li> <li>• Providing details for the relief and other resources</li> <li>• Implementation of VDMP's</li> </ul>

## 1.8 APPROVAL MECHANISM OF DDMP: AUTHORITY FOR IMPLEMENTATION (STATE LEVEL / DISTRICT LEVEL ORDERS)

The DM Act 2005 enjoins central and state governments to make provisions for the implementation of the disaster management plans. In this respect, the sections of the DM Act 2005 applicable for national, state, and district DM plans are 11, 23, and 31. The Chapters V and VI of the DM Act spell out the responsibilities of the central, state, and local governments with respect to disaster management. The DM Act states that every Ministry or Department of the Government of India shall make provisions, in its annual budget, for funds for the purposes of carrying out the activities and programmes set out in its disaster management plan.

The Act mandates that every Ministry and Department of the Government of India and every state must prepare a DMP in accordance with the NDMP. Annually, respective DM authorities must review and update their DM plans. Central ministries and state governments will integrate DRR into their development policy, planning and programming at all levels. They must adopt a holistic approach and build multi-stakeholder partnerships at all levels, as appropriate, for the implementation of the DM plans. Depending on its nature, different components of the NDMP will be implemented within a span of five, ten, or fifteen years. The plan is highly ambitious and the complete implementation of all elements across the country may take a very long time. Nevertheless, both central and state governments have already made considerable progress and they are expected to make sincere efforts for the implementation of the DM plans. The NDMA has prepared and published hazard-specific guidelines covering various aspects of disaster management and including a separate one for response.

## 1.9 HOW TO USE DDMP SHIMLA: BRIEF FRAMEWORK



## 1.10 DDMP REVIEW AND UPDATION:

**Plan review and updating:** Periodicity Plan is reviewed every six months and updated every year before onset of monsoon, i.e., in the month of May. There are following activities has been involved during DDMP review and updation.

**Training:** After developing a plan, it must be disseminated and managers must be required to train their personnel so that they have the knowledge, skills and abilities needed to perform the tasks identified in the plan. Personnel should also be trained on the organization-specific procedures necessary to support those plan tasks.

**Exercise the Plan:** Evaluating the effectiveness of plan involves a combination of training events, exercises and real-world incidents to determine whether the goals, objectives, decisions, actions and timing outlined in the plan led to a successful response. The purpose of an exercise is to promote preparedness by testing polices plans and training personnel.

**Revise and Maintain:** Planning teams should establish a process for reviewing and revising the plan. Reviews should be a recurring activity. Review on an annual basis is considered minimum. It should be mandatory to consider reviewing and updating the plan after the following events:

- A major incident.
- A change in operational resources (e.g., policy, personnel, organizational structures, Management processes, facilities, equipment).
- A formal update of planning guidance or standards.
- Each activation and major exercises.
- A change in the district's demographics or hazard or threat profile.
- The enactment of new or amended laws or ordinances.

## 2. HAZARD VULNERABILITY CAPACITY AND RISK ASSESSMENT

### 2.1 HAZARD PROFILE OF DISTRICT SHIMLA

Shimla district of Himachal Pradesh, lies between the longitude 77.00” and 78.19” East and latitude 30.45” and 31.44” North, having its headquarters situated at Shimla. It is surrounded by Mandi and Kullu in the North, Kinnaur in the East, Uttarakhand in the South-East, Solan to the South-West and Sirmaur in the South. The elevation of the district ranges from 300mt. (984ft) to 6000mt. (19,685ft). The climate of district Shimla is predominantly cool during winters and moderately warm during summer. Temperature typical ranges from 4 degree to 31 degree centigrade over the course of year. The average temperature during summer is 19degree and 28degree centigrade, and in winter 1degree and 10 degree centigrade. Monthly precipitation varies from 15ml in November to 434ml in August.

It is typically around 45ml per month during winter and spring, 175ml in June. The average total precipitation is 1575ml which is less than other hill stations. Snowfall in this region, has taken place in the month of December and January. But it has been happening in January or early February every year for the last. The unique Geo Climatic conditions of the District Shimla make it vulnerable to various kinds of natural hazards / disasters which have been compounded by increasing human interventions with the nature. There is need to identify and delineate the Hazard Risk zones of the District (areas vulnerable to various hazards) which will provide the necessary information to work on micro-level and to map the active and dormant processes of the hazards. The disasters, which generally occur in this district and its various areas prone / vulnerable to various kinds of disasters, are as under:

## 2.1.1. NATURAL HAZARDS

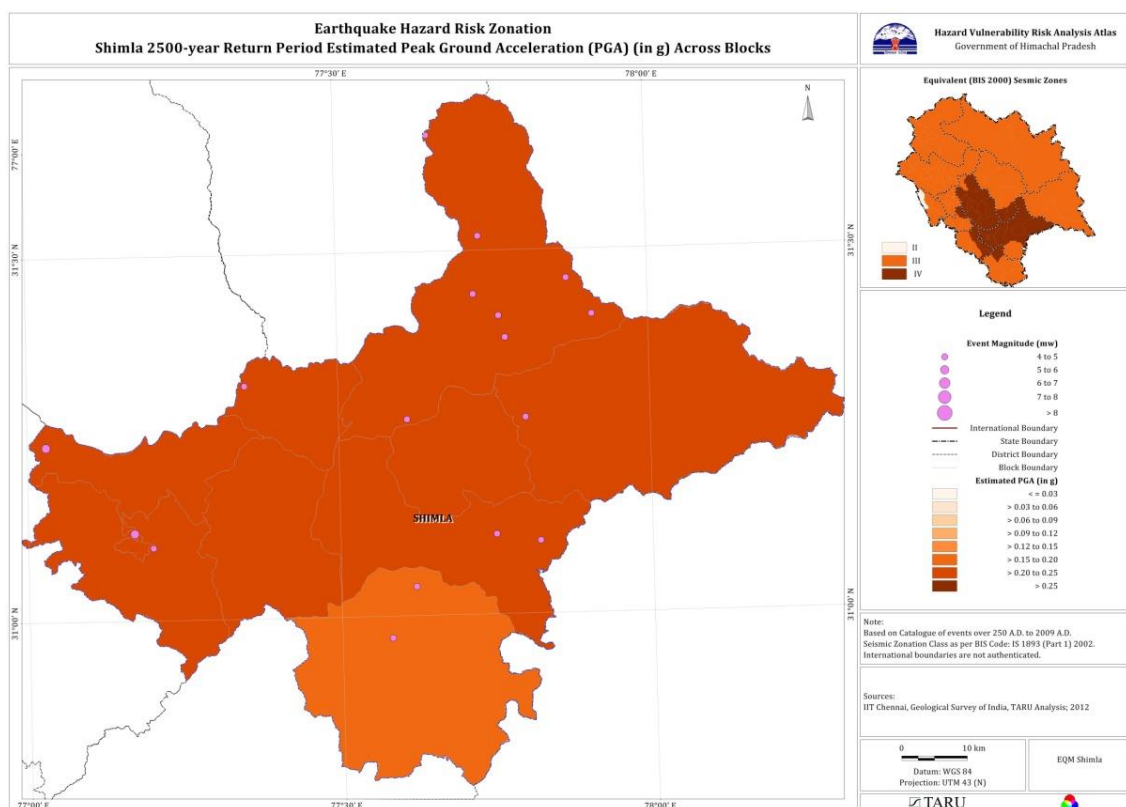
### 2.1.1.1. EARTHQUAKE

The District Shimla as a whole lies between mid Himalaya and greater Himalaya and due to the tectonic movements of the Indo Australian Plate and Eurasian plate the Himalaya is Still rising and giving rise to tremors in the Himalayan region. Further the Jutog thrust, Kaurik thrust etc. made this region more prone to the earthquakes which are also evident from the table given in Annexure XX. As per vulnerability atlas 99.62% of the district lies in Zone IV and 0.38% in Zone V, however the amount of urbanization and unplanned construction makes the district highly vulnerable to the earthquakes and its likely impact to the large extent.

Table: Major Earthquakes in Shimla District

Date	Magnitude / Intensity	Damages
05/03/1842	VI/VII	Houses were damaged
07/04/1856	VII/VIII	Loss to life and property but not exactly reported
09/07/1860	V	Loss not reported
05/10/1869	V	Loss not reported
28/02/1906	6.5	Approximately 26 People Died And 45 Injured And 73 Dwelling Houses Destroyed

Earthquake Hazard Risk Zonation Map of District Shimla



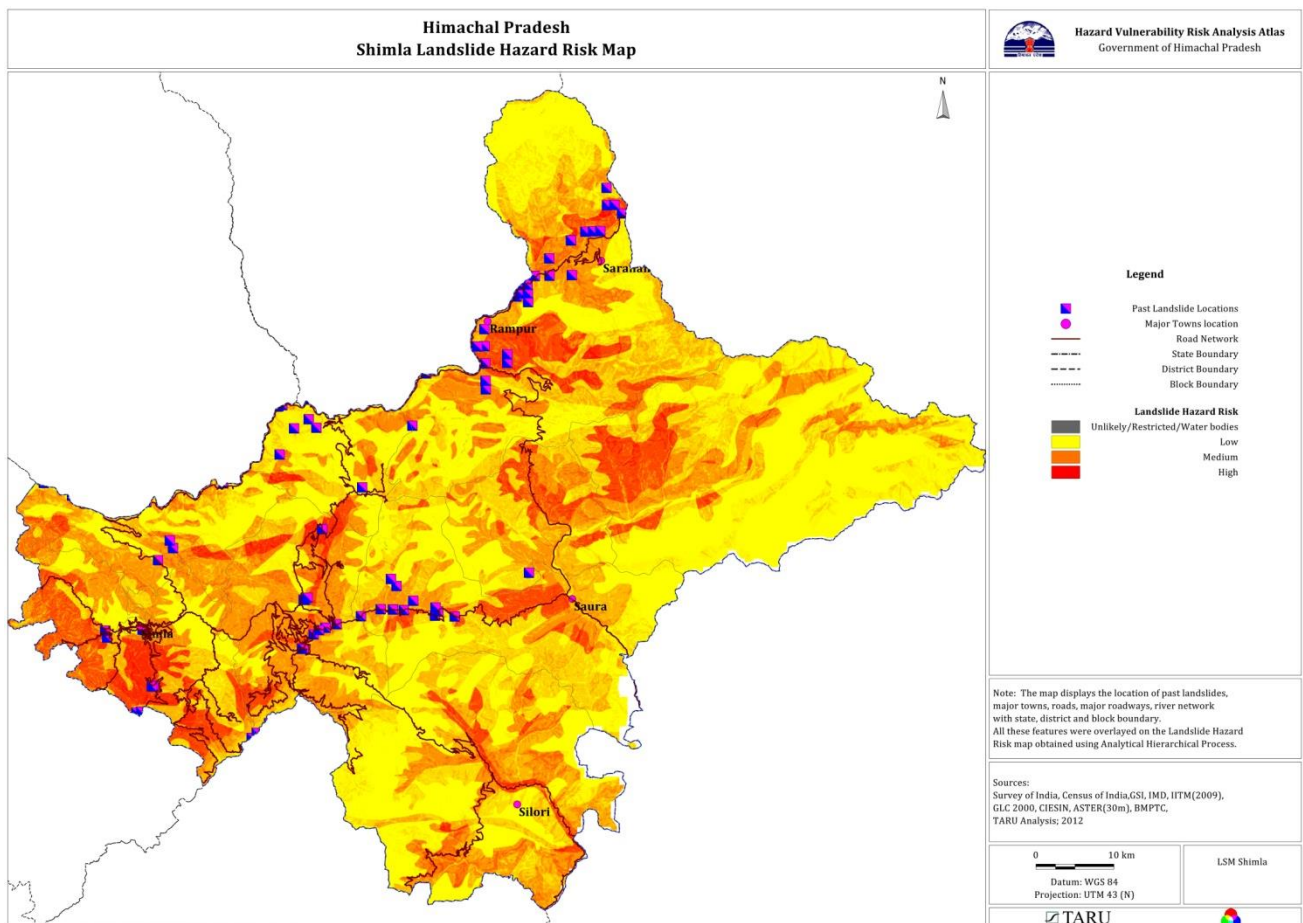
### 2.1.1.2. LANDSLIDES

Landslide is most risk oriented hazard found in district Shimla affecting the human life and property in many ways like damages to the houses, roads, communication network agriculture Etc.

Landslide Vulnerable Area in District Shimla (In sq. km)

District	Severe To Very High	High	Moderate To Low	Unlikely	Total Area
Shimla	893	3345	767	14	5019

Landslide Hazard Risk Zonation Map of District Shimla





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### 2.1.1.3. CLOUD BURSTS

It has been noticed that sudden heavy rains are occurring in some part of the district during the last two decades causing the situation of flashfloods .landslides resulting in devastating huge loss to the human life and property which is being attributed to the climate change caused due to the large human interference with the nature activities like deforestation, developmental activities like construction of roads, bridges, hydel projects, buildings etc.

Table: occurrence of cloud bursts in District Shimla

#	Date and place of Occurrence of the Event	Extent of Damages caused
1	11th August 1997 At Chirgaon and Rampur.	Due to cloud burst at the top of the hill near Rohal village in Chirgaon Tehsil the Andhra river which is originated from the same mountain was inundated in the ordinary way due to the heavy rains i.e. cloud burst, occurred in the night and the people and property situated along the Andhra River and thereafter Pavvar were washed away till Rohru. About 124 people died along with 456 cattles washed away. Roads and bridges houses, fishery tanks and school buildings situated at Chirgaon were completely washed away. The above cloud burst also caused damages towards Rampur side and killed 19 people, 464 cattles 105 houses damaged and agriculture; land measuring 40 hectare damaged.
2	On 10th August 2001 at Murali Danda, Devidhar Chirgaon.	The sudden heavy rains i.e. cloud burst occurred in Devidhar area of tehsil Chirgaon causing the complete washing away of the Harizan Basti, village paths, roads, about 8 village bridges, cattle sheds etc causes devastating damages to the human property.
3	August 2003 and 2007 at Ghanvi, Rampur.	The flash floods caused due to the cloud bursts in Ghanvi Area caused the death of 7 human beings and washed away houses, cattle sheds and other human property and damaged the public property.

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### 2.1.1.4. LIGHTENING

In this district there are intermittent incidents of the lightening and many lives have been lost in such incidents. Many times it has caused the damages to the live stocks as the people generally rear animals and for grazing them they have to go for higher reaches where the lightening is the common event. However the documentation of such events is not there.

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### 2.1.1.5. DROUGHT

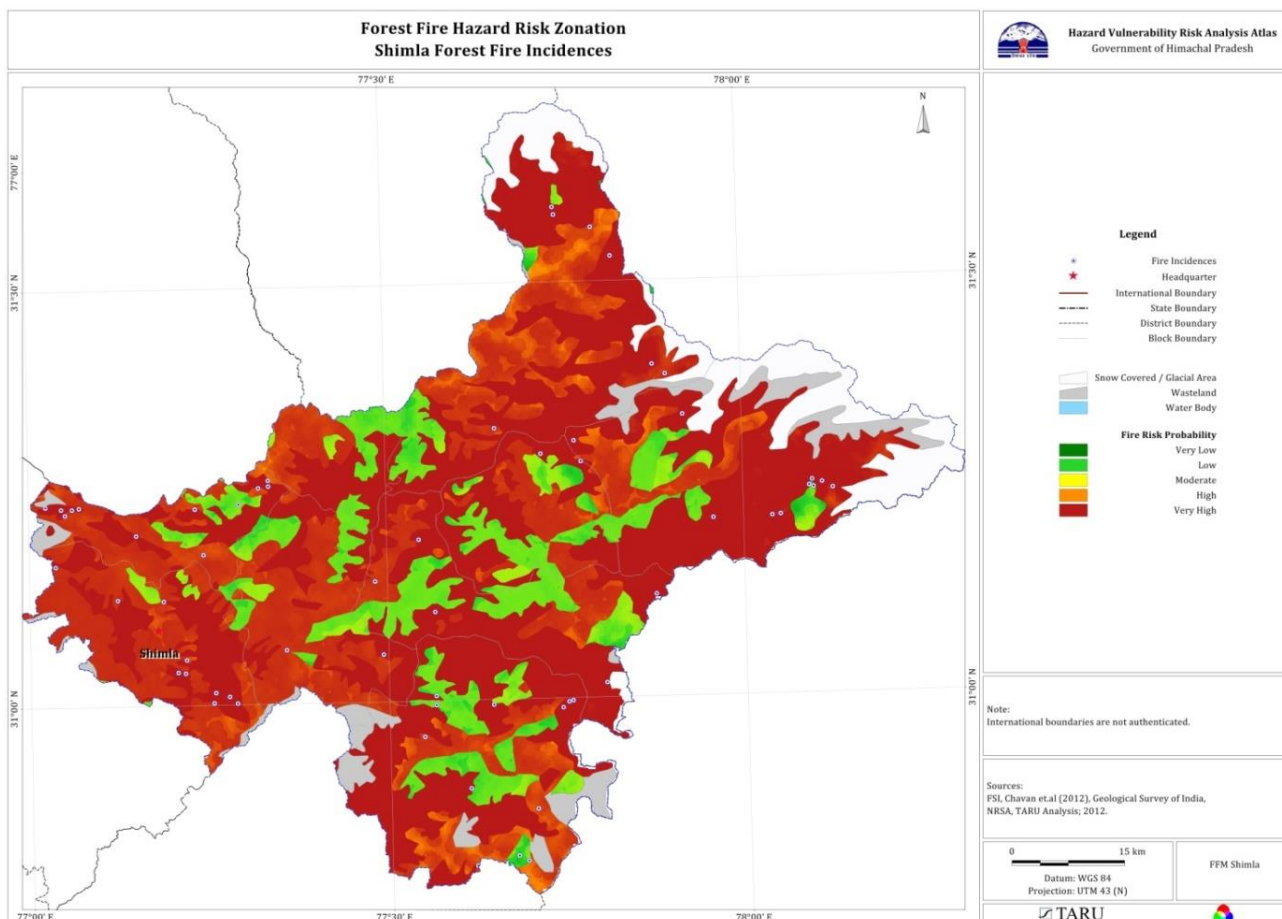
Due to the climatic change in the climate the drought is causing threat to the agro/ horticulture products of district Shimla.



### 2.1.1.6. FOREST FIRES

Shimla district is under thick forest cover and the flora varies from the pine tree to oaks to cedar. However during the hot dry spell sometimes the human negligence the unattended small spark in the forest triggers forest fire which spreads to the whole forest and becomes difficult to control resulting in huge loss to the natural resources of the district i.e. flora and fauna and to the extent that some time the fire enters the nearby villages causing huge loss to human life and property.

Forest Fire Hazard Risk Zonation Map of District Shimla



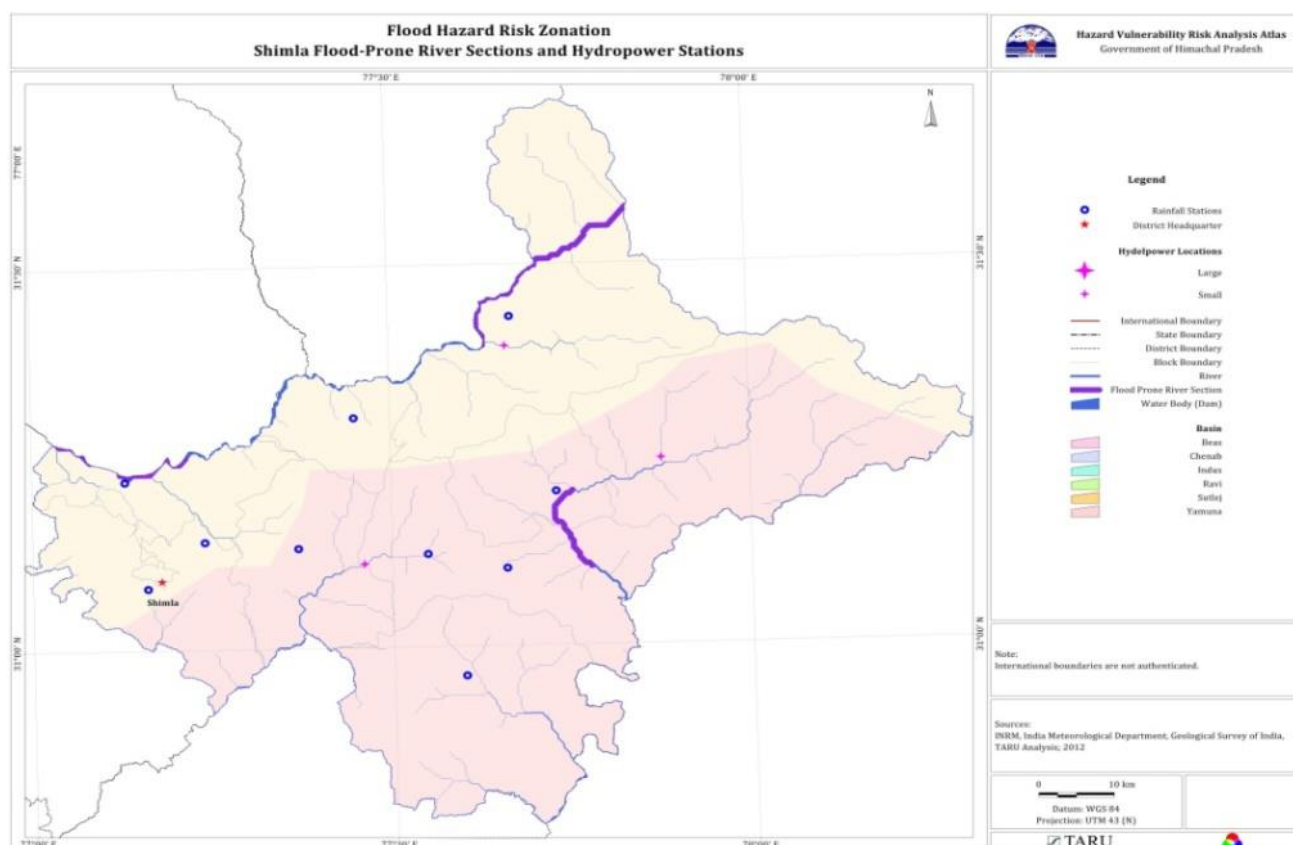
### 2.1.1.7. EPIDEMICS

A disease outbreak happens when a disease occurs in greater numbers than expected in a community or a region or during a season. An outbreak may occur in one community or even extended to several countries. It can also last from days to years. Sometimes a single case of a contagious disease is considered an outbreak. In the year 2002 plague broke out in the Rohroo subdivision viz. Sarswati Nagar Kuddu area claiming 11 lives which was triggered due to eating of the infected wild meat. In a recent incident there was a major outbreak of jaundice epidemic in the parts of Shimla town and some rural areas of district Shimla adjoining Ashwani Khud due to contamination in the drinking water source in the area. There were over 1000 reported jaundice cases reported since December 2015.

### 2.1.1.8. FLASH FLOODS

Shimla district's geographical location is such that it spreads from mid Himalaya to greater Himalaya and the river Satluj, Andhra, Pavvar, Nogali, Ganaviand other many smaller khuds/rivulets flowing through it makes the area and the people living around these more vulnerable to the floods /flash floods as is evident from the history as narrated in the Annexure XX.

Flood Hazard Risk Zonation Map of District Shimla



### 2.1.1.9. SINKING ZONE IN SHIMLA CITY

Recent geological studies indicate that roughly 25% of the old town is in the sinking zone, and unless improvements are made in the drainage and sewerage systems of the upper reaches, more could go under. Geologists say that when the famous Ridge of Shimla was constructed, the hilltop was sliced and all the debris was dumped on its northern slopes. Though it has compacted over the years, many parts of Lakkar Bazar and Rivoli bus stand do show a downward creeping movement. Slopes have become overloaded, and buildings in several heavily crowded localities in the central part of the town have become unsafe as they fall in the sinking zone. The Ridge is not only a portion of land in Shimla; it contains its life line. The water reservoir beneath it has storage of ten lac gallons of water. The reservoir was constructed without using an ounce of cement in the eighteen eighties and only lime mortar has been used. A major port on of the flat land consist debris and has resulted into so called sinking zone. Geologically weak areas, identified as highly sinking prone areas, which include the northern slope of the Ridge extending upto Grand Hotel in the west, covering Lakkar Bazaar, Central School, upto Auckland Nursery School, Dhobi Chat below Idgah electric sub-station and sliding areas, including Ladakhi Mohalla, the spur below the office of the Director of education and surrounding areas of Clark's Hotel are also integral parts of green vertical buildings have

led to manifold increase in pressure on land resources and urban infrastructure development are the common problems of Shimla. Any further addition of load is likely to be hazardous in these areas.

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## 2.1.2. HUMAN INDUCED HAZARDS

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### 2.1.2.1. ACCIDENTS

The mountainous relief, rugged topography and adverse climatic conditions make the district quite prone towards road accidents. Besides the natural factors some human-induced factors viz. distracted driving like over speeding, drink and drive, reckless driving, teenage driving and answering mobile phones etc. are some of the common causes of road accidents. The state of Himachal Pradesh has faced 30,000 road accidents since 2010 and District Shimla has also experienced some of the major road accidents including falling of buses in gorges, car collision etc. The district wise data as below shows that in the recent year total no of people killed were 430 and injured were 801 in total accidental cases numbering 211. Some of the road accidents occurred in the year 2016 is mentioned below:-

- Eleven people killed in the year 2016 when a HRTC bus fell into a deep gorge near Bajroli in Theog sub division of Shimla district.
- In another accident in Shimla district, again eleven people, including the driver and conductor, were killed while 25 others sustained injuries. Four others died on the spot and seven succumbed to their injuries at a hospital.

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### 2.1.2.2. INDUSTRIAL HAZARDS

This district has come up as hydro project district with the one mega project Nathpa Jhakari hydro project 1500mw along with Rampur hydro power project 431mw, Luri Power Project mw, Kuddu Sawra Power Project---mw and around 30 mini and micro projects thus making the district prone to bursting of the water reservoir, other accidents. These projects not only display people living in close vicinity but also pose threat to vegetation and environment. One of the major projects on the Sutlej river is the Nathpa Jhakri Dam which generates nearly 1500MW of electricity. The Nathpa Jhakri Hydroelectric Station is the country's largest hydropower Plant. The project is funded by the World Bank. The project is located on River Sutlej, a major tributary on the Indus basin, in Shimla district of Himachal Pradesh in North India.

This plant is designed to generate 6950.88 (6612) million units of electricity each year but quality management at the plant has enabled generation to exceed yearly targets. The impact of this of hydroelectricity project is slowly but clearly becoming visible in the shape of vanishing aquatic life, depleting vegetation, water pollution, reducing irrigation water and livelihoods of locals. The problem would deepen in near future. Besides various advantages such plants has many disadvantages viz. emission of Methane and Carbon Dioxide, disturbance of habitat, expensive installation costs, limited use, diverted natural waterway, adverse effects on agriculture, breaking of dams, deposition of silt etc.

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### 2.1.2.3. STAMPEDE

Due to congestion especially in central Shimla the chances of stampede is very high. There are single paths in Lower Bazaar, Ram Bazaar and Sabzi Mandi area. If there is any miss happening occur it will result into stampede which due to congestion and slope terrain will cause huge loss. Also at temples in peak festival days huge crowd assembled and there is always a chance of facing stampede in crowded places. Incident of fire, earthquake or terrorist attack can also lead to such incidents.

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#### 2.1.2.4. RAPID UNPLANNED GROWTH IN SHIMLA

Planned for a maximum population of 16,000, the town now supports 2,36,000, as per provisional census figures for 2011. Shimla has seen a very rapid population growth during the last three decades due to huge housing and tourism demands. This combined with a lack of planning and haphazard growth has resulted in the construction of buildings on steep and unstable slopes with improper construction practices. High priority lifeline structures like hospitals, power stations, telecommunication installations and water supply stations are located in high vulnerability area with poor connectivity. Weak enforcement of byelaws and poor emergency management capacity has added to the risk.

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#### 2.1.2.5. DISTORTED LAND USE AND BUILDING UTILISATION

The major land use is residential in the Capital town of Shimla, which is estimated at 75% of the total builtup area. Seven percent of the residential buildings accommodate street level commercial activities. Areas such as Mall Road, Lower Bazar, Krishna Nagar, Summer Hill and Totu are highly commercialised where upto 50% of the total buildings are used for commercial purposes. There is only 4% of total building stock that is used by institutions and facilities such as schools, offices, hospitals, post offices, power stations, water works, and places for worship which could be utilised as community shelters. The built up areas have very few and small open spaces in most of the municipal wards. The city development plan of Shimla City reflects that in the city only 0.41 % area is meant as parks and open spaces. It would be really a wrong caution for the Shimla City to come out in the open ground when there is an earthquake because Shimla hardly have any. It is again increasing the vulnerability of Shimla.

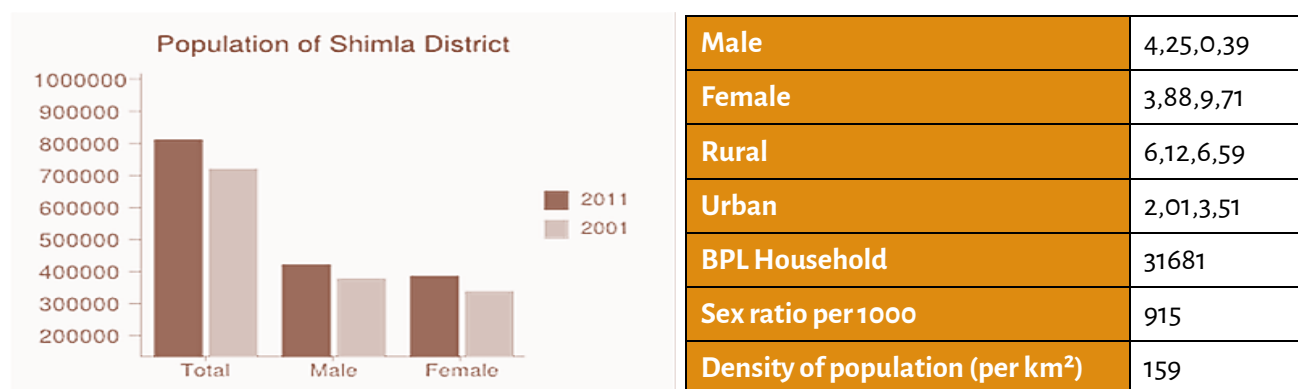
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#### 2.1.2.6. POOR ACCESSIBILITY

Accessibility within the Shimla city is extremely poor. 72% of all buildings are not accessible by trafficable roads. Out of that, 38% are accessible through pedestrian paths and stair ways with less than one meter in width. Certain areas are built on such steep slopes and with such poor accessibility that in case of a building collapse there will be no escape routes. Many of the trafficable roads too are in such locations that in case of earthquake induced landslides or building collapse on the slopes above the roads, they will get blocked. This can lead to the cutting off of critical rescue and relief routes.

## 2.2 SOCIO ECONOMIC PROFILE OF THE DISTRICT

### Population (As per 2011 Census)



### Literacy Rate Aggregate (As per 2011 Census)

<b>Male Literacy</b>	89.59 %
<b>Female Literacy</b>	77.13%

#### 2.2.1. SOCIAL VULNERABILITY

The awareness level of the society regarding earthquake is very low. Being highly exposed to the earthquake disaster and living in a vulnerable location with poor awareness level magnify the vulnerability of the community. Neither the government nor the citizens are ready to face the earthquake. This will increase the loss after an earthquake.

Although the whole Shimla is equally vulnerable but the poor population is living in the most vulnerable locations i.e. on slopes and sinking zones. Their exposure makes them more vulnerable to face the effects of an earthquake. Below the table reflects the age composition of the population. It reflects that around 60% population belongs to the productive age and if they face some accident or life loss it will cause adverse impact on the community.

The Shimla economy is mainly dependent upon the revenue from travel and tourism industry and the agriculture and horticulture in the region. The majority portion of the Shimla people is either placed into the tourism industry or into the administrative department of Shimla. A vast number of people of Shimla have taken the occupation of either travel agent, guide or photographer or something related to the tourism industry like hotels and the restaurants. Shimla's economy is being run to a large extent by the tourism industry that has developed gradually over the years. Shimla is the administrative capital of the state of Himachal Pradesh. As such there are many important departments and offices of the governing body in Shimla. The people working in these offices are the cogs and screws of the economy of Shimla. Besides the above, Shimla has a number of health care centres like the Indira Gandhi Hospital, Snowden Hospital and so on that also helps in the economy of Shimla.

Geographical Area (in km<sup>2</sup>) - 5131 sq. km

Forest Area (by Village Paper 1999-2000)	119331 Hect.
Cultivated Area (by Village Paper 1999-2000)	101160 Hect.
Unusable Area (by Village Paper 1999-2000)	49051 Hect.
Longitude	East(76°59'22"-78°18'40")
Latitude	North (30°45'48"-30°43'0")
Major Rivers	Sutlej , Pabbar , Giri

Cattle Population (As per cattle census):

Cows	307187
Buffaloes	16292
Yak	9
Mithun	3
Sheep	98376
Goats	98223
Horses & ponies	2050
Mules	3963
Camels	0
Donkeys	904
Pigs	544
Total Livestock	527551

Climate:

Humidity (at Hqr.)	89%(Max.) 51%(Min.)
Annual Rainfall	1211.4 mm ( Average)
Temperature	33.3°C(Max.) -3.1°C (Min.)

Distances:-

Nearest Railway Station	Shimla (Narrow gauge line just 1 Km from Mall Road Shimla Town), Kalka Railway Station (Broad Gauge line 90Km from the main Shimla Town)
Nearest Airport	Jubbalthatti Airport (14 Kms from Shimla town, but not operational these days – Under renovation) Chandigarh International Airport (125 Km from Shimla Town)

### Animal Husbandry:

State Level veterinary Hospital	01
Sub-Division veterinary Hospitals	05
Veterinary Hospital	40
Veterinary Dispensaries	253
Veterinary Disp.(Mukhiya Mantri Arogya Pashudhan Yozna)	99
Poultry Farm	0

### Schedule Caste and Schedule Tribe Population in Shimla district:

#	District / Block	Population	Scheduled Castes	Scheduled Tribes
1.	Rampur	67,232	23,389	2,238
2.	Narkanda	42,161	12,846	187
3.	Theog	80,331	22,013	53
4.	Mashobra	86,782	25,305	359
5.	Basantpur	41,724	12,224	37
6.	Chopal	85,244	25,230	1,789
7.	Jubbal Kotkhai	74,012	18,110	218
8.	Rohru	56,421	18,060	262
9.	Chauharra	52,514	14,948	192
10.	Nankhari	26,238	7,110	64

### Health facilities

Zonal Hospital	1
Civil Hospital	8
Community Health Center	8
Primary Health Center	88
Health Centers	250
Ayurvedic Hospital	3
Homeopathic	1
Available Beds	2026



### Employees according to type of institutions, 2014-15

Name of District / Town / Urban Local Bodies	Employees in Govt. Sectors				Govt. Undertakings			Local bodies		
	Regular	Part Time / Contract / Other	Daily Paid	Total	Regular	Temporary / Non regular	Total	Regular	Temporary / Non regular	Total
Shimla	8042	538	277	8857	2378	528	2906	1073	55	1128
Theog	1137	116	76	1329	43	0	43	12	2	14
Rampur	1425	40	155	1620	750	160	910	30	1	31
Rohru	1530	247	279	2056	240	130	370	11	14	25
Narkanda	80	20	0	100	12	1	13	8	0	8
Jubbal	105	15	35	155	15	10	25	8	0	8
Chopal	210	90	90	390	40	2	42	3	3	6
Kotkhai	276	0	31	307	7	0	7	4	1	5
Sunni	234	20	5	259	60	0	60	7	1	8
Jutogh (CB)	0	0	0		0	0	0	38	1	39
Jhakhri(CT)	..	..	..	..	..	..	..	..	..	..
<b>Total</b>	<b>13039</b>	<b>1086</b>	<b>948</b>	<b>15073</b>	<b>3545</b>	<b>831</b>	<b>4376</b>	<b>1194</b>	<b>78</b>	<b>1272</b>

### 2.3 IMPORTANT GAPS IN EXISTING CAPACITY TO DEAL WITH DISASTERS

- Connectivity and terrain of the district.
- Lack of specialized SAR equipment and capabilities with the state authorities.
- Communication - land and mobile based communication only.
- Lack of trained workforce.
- Lack of awareness at all levels - government functionaries, elected representatives and the general public.
- Lack of clarity of roles of various departments and stakeholders.
- DRR not integrated into development planning and programmes.
- Hospital and schools not prepared to deal with disasters.
- Only fire Post for the entire district.
- The existing construction of the district is not hazard resistant.
- Huge infrastructure has come along the major river courses of the district making them vulnerable to flash floods.
- No efforts have been taken to transfer the risk by way of insurance etc.
- The EWS in the district is not adequate and there is hardly any mechanism to communicate the EW to the vulnerable community.
- The district control room is not equipped and no trained manpower to handle it.
- The institutional set-up - SAR, MFA, etc. to deal with disasters is not adequate.



## 2.4 RISK ASSESSMENT

Risk has been defined as the total loss as expected from the hazard on the elements at risk as per the prevailing vulnerability at that point of time. It is therefore the function of the probability of occurrence of the hazard of the particular magnitude and the vulnerability prevailing at that point of time regarding the elements at risk.

Therefore risk = (probability of hazard magnitude) \* (vulnerability)

Hence as per the analysis of hazard done above and the vulnerability assessment the risk assessment as calculated for district Shimla is as follow:-

ASSESSMENT OF RISK FOR MULTI HAZARDS IN DISTRICT SHIMLA													
RISK ASSESSMENT BASED UPON PROBABILITY MODEL													
NATURAL AND HUMAN INDUCED HAZARDS													
EVENT	PROBABILITY				RISK					PREPAREDNESS			TOTAL RISK
	HIGH	MED	LOW	NONE	LIFE THREAT	HEALTH/ SAFETY	HIGH DISRUPTION	MOD DISRUPTION	LOW DISRUPTION	POOR	FAIR	GOOD	
SCORE	3	2	1	0	5	4	3	2	1	3	2	1	
<b>NATURAL AND HUMAN INDUCED HAZARDS</b>													
Flash Floods	3	0	0	0	5	0	0	0	0	3	0	0	45
Cloud bursts	3	0	0	0	5	0	0	0	0	3	0	0	45
Drought	0	2	0	0	0	0	0	0	1	0	2	0	4
Hailstorm	0	2	0	0	0	0	0	0	1	0	2	0	4
Lightening	3	0	0	0	0	4	0	0	0	3	0	0	36
Forest Fires	3	0	0	0	5	0	0	0	1	3	0	0	45
Earthquake	3	0	0	0	5	0	0	0	0	3	0	0	45
Landslide	0	2	0	0	0	0	3	0	0	3	0	0	18
epidemic	0	2	0	0	0	4	0	0	0	0	2	0	16
Accidents	3	0	0	0	5	0	0	0	0	3	0	0	45
village fires	3	0	0	0	5	0	0	0	0	3	0	0	45

### 2.4.1. RISK ASSESSMENT OF SHIMLA IN CONTEXT OF VARIOUS HAZARDS AND ASSOCIATED VULNERABILITIES

Risk is a measure of expected losses due to a hazardous event of particular magnitude occurring in given area over a specific time period. It is a function of probability of particular occurrences of activation of any hazard and losses each would cause. Risk is the potential that a chosen action or activity (including the choice of inaction) will lead to a loss (an undesirable outcome). The notion implies that a choice having an influence on the outcome exists (or existed). Potential losses themselves may also be called "risks". Almost any human endeavour carries some risk, but some are much more risky than others. Risk in itself exists only theoretically unless the hazard got activated and it gets an exposure with the vulnerability. Considering the situations of Shimla as there are different hazards present here with multi facet vulnerabilities the risks are also multi-dimensional. Risk associated with each of the hazard taken into account the various vulnerabilities the risks are as follows:

### 2.4.2. RISK RELATED TO EARTHQUAKE

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#### 2.4.2.1. PROBABILITY OF EARTHQUAKE

Being situated in seismic active zone and having the multi fold vulnerabilities the Shimla is at risk to face an earthquake in near future. Shimla can expect maximum peak ground acceleration (PGA) of 4.0 meters per Second Square. This suggests that Shimla can expect an earthquake of seismic intensity of VIII on the modified Mercalli (MM) Intensity Scale.

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#### 2.4.2.2. CONSEQUENCES OF EARTHQUAKE

- **Building Collapse:** MM VIII indicates that there will be slight damage in specially designed structures; considerable in ordinary substantial buildings; and great damage in poorly built structures. Panel walls can be thrown out of frame structures. Chimneys, factory stacks, columns, walls and monuments can collapse. Heavy furniture can get overturned. Sand and mud can get ejected in small amount. Changes can be caused in water levels. The worst part is that 90% of the buildings in Shimla categorised under poorly built.
- **Landslides:** Apart from building collapse the most prominent after effect of earthquake is triggering of landslides and which will cause blockage of roads, damage of built property & assets. The roads – the lifelines for search and rescue are also likely to block with the collapse of structures along the road.
- **Failure of Water Supply System:** The water supply and sewerage system in Shimla is already more than 100 years old and is in very poor and weak condition. Even a mild tremor could hit the water and sewerage supply system of Shimla. The supply of water within the city mainly depends upon the big water storage tanks- 02 number main of which are located at Ridge and Sanjauli. There is no scientific study available to say that these tanks could face the tremor up to what extent. Otherwise it could cause floods as an after affect and may wash out the Lower Bazar and Lakkar Bazar area of central Shimla. The water is lifted to Shimla from great distances and the supply line is likely to damage at many locations. Same is the situation of the sewerage system as well. At present only 40% of the area in Shimla is served with proper sewerage system which too is weak. The old sewer lines are likely to damage. The same may cause sanitation and related problems. Also restoration of these services is again a big challenge for the M.C. Shimla. At present no studies have been done which could state as how much time it will take to restoration of W&S system in Shimla and how it will be done.
- **Failure of Electricity Supply:** Failure to electricity supply and damage to supply wires is another consequence. Dependency on 24 hrs supply of electricity makes people more vulnerable and they find it hard to manage without electricity as they don't have alternate options. Disrupted electricity supply will affect the search and rescue operations, health care facilities prominently and also the water supply.
- **Shelter Management:** Another major risk is to rehabilitate communities after an earthquake as at present no exercise has been done to identify shelters at ward or at micro level. Having mountain terrain and cold weather with shortage of open spaces it will not be possible to put tents in open and make temporary shelters.
- **Dead Body Disposal:** In case of mass causality it is important to identify the places where dead bodies could be buried. Open spaces are very few in the town and nearby areas and lack of additional space may make the cremation process very difficult.
- **Communication:** At present there is no centralized communication system available which will address different aspect of emergency management. It could create chaos after an earthquake. There is a big risk of conflict generation with multiple commands and actions. Also in absence of clarity of roles few agencies will not respond or others will get over burdened with low capacities.

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### 2.4.3. RISK RELATED TO LANDSLIDES / LANDSLIPS

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#### 2.4.3.1. PROBABILITY OF LANDSLIDES / LANDSLIPS

The probability of Landslides could be high in Shimla. Either the heavy rainfall can trigger the landslides during monsoon or it could be the after effect of an earthquake which will be more threatening than the normal landslide.

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#### 2.4.3.2. CONSEQUENCES OF LANDSLIDE

- **Collapse of Built Structure:** Structures constructed on extreme slopes are liable to damage from landslide. Weak and unstable strata also contribute to the slipping of structures which could cause damage to or collapse of building, infrastructure and utilities.
- **Debris:** The buildings, infrastructure or the utilities may also be threatened by mudslide or debris.
- **Blockage of Roads and Paths:** After landslide it is possible that important highways or internal roads / paths get blocked. It is important to develop a mechanism to open these important paths at the earliest to ensure the smooth transportation for search and rescue, medical response and relief operations.
- **Evacuation and Early Warnings:** Due to unavailability of proper information of city regarding landslides or micro-zonation maps containing information regarding landslides it is impossible to provide early warnings to communities for evacuation.

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### 2.4.4. RISK RELATED TO SINKING ZONE

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#### 2.4.4.1. PROBABILITY OF SINKING OF SHIMLA

The core area of central Shimla Ridge is gradually sinking over the period and this sinking is on. Administration interventions have proved futile.

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#### 2.4.4.2. CONSEQUENCES OF SINKING

- **Threat to Ridge and Heritage Buildings:** Continuous sinking in core area is causing threat to the historical Ridge. It is also possible that one day this area will get collapsed and Shimla people will lose the historical buildings situated at Ridge including the Ridge itself.
- **Pressure over Water Supply System:** The underground water supply system is also getting pressure due to the sinking. Getting cracks in water supply pipes is now a common feature in this area as sinking area causing pressure over old supply lines which are situated towards sinking side.
- **Threat to Water Tank:** A water supply tank is also located at Ridge due to seepage the tank could be a reason for sinking of this area. Also if this tank got collapsed anyway it will cause big threat in its vicinity.

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### 2.4.5. MOUNTING PRESSURE ON LAND RESOURCES

The original structure of city was designed for 25000 persons at pedestrian scale. Population of the city and migration to it has increased manifolds. The housing stock, water supply, transportation, sewerage, electricity supply and tourist infrastructure are under stress and strain. Every conceivable space has been utilized for constructions and to cater for infrastructural requirements. Thus Shimla has exhausted all

physical thresholds and any more development shall be at the cost of health of the city at exorbitant costs. The immense pressure on land resources has led to environmental degradation.

Shimla has reduced to a hazardous city. It has congested built-up areas. Common problems of the city are the disturbance to natural profile of land by cutting of terrain for constructions, haphazard development, traffic hazards, overconcentration in the Central area, unauthorized constructions, encroachments on roads and public land, mixed land use, lack of integration between place of work and place of living discrimination between population growth and urban infrastructure development, garbage nuisance and scanty care of natural and built heritage. Land, Water, Air and noise pollution and vegetation loss have grossly affected its eco-system. High rate of construction activity is damaging the natural setting as well as its scenic beauty. Increasing depth of water table has also become a prime concern. The greed and selfishness and thereby materialistic and consumerism attitude have taken over almost all spheres of life.

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#### 2.4.6. GEO-HAZARDS

There is a constant environmental and aesthetic degradation. Once quaint and tranquil, now melancholy shadows of its glorious past. Increased commercial activity, unplanned physical growth and influx of rural population, along tourists have ruptured the fragile relationship between the built form and nature. All this has resulted in denuding the mountain slopes of majestic tree-cover-making way for more asphalt roads and concrete buildings. Metamorphosed Himalayan system has Shali series, permo- carboniferous, Pre-Cambrian arch can group of rocks and hard sedimentary rocks. It has mountainous and sandy soil. Shimla city and its surrounding areas have a complicated physiography due to tectonic events, folding, faulting and thrusting processes, and resulting inversion of topography and formation of irregular landforms. On account of predominance of dolomite and lime stone rocks, landslides are common. As rocks are unstable, dislocation of buildings can occur. Being located in seismic zone, it is susceptible to earthquakes.

The recent two decades of organic growth, on account of overwhelming urbanization forces, resulted into eyesores on the townscape of Shimla, which may emerge death traps in the event of natural calamities like earthquakes, cloudbursts and landslides, for which the area is highly susceptible. As the city is now growing beyond its leaps and bounds, it has posed colossal environmental threats. Constructions carried on slopes are more dangerous. Even 45° slope is more than tolerable limits in order to cope up with the gravity of geo-hazards like earthquakes, landslides and dislocation of buildings.

## 3. INSTITUTIONAL ARRANGEMENT FOR DISASTER MANAGEMENT

India has integrated administrative machinery for management of disasters at the National, State, District and Sub-District levels. The basic responsibility of undertaking rescue, relief and rehabilitation measures in the event of natural disasters, as at present, is that of the State Governments concerned. The Central Government supplements the efforts of the States by providing financial and logistic support. The district administration is the focal point for implementation of all governmental plans and activities. The actual day-to-day function of administering relief is the responsibility of the District Magistrate who exercises coordinating and supervising powers over all departments at the district level.

The 73<sup>rd</sup> and 74<sup>th</sup> constitutional amendments recognize Panchayati Raj Institutions as 'Institutions of self-government'. The amendment has also laid down necessary guidelines for the structure of their composition, powers, functions, devolution of finances, regular holding of elections and reservation of seats for weaker sections including women. These local bodies can be effective instruments in tackling disasters through early warning system, relief distribution, providing shelter to the victims, medical assistance etc. Other than the national, state, district and local levels, there are various institutional stakeholders who are involved in disaster management at various levels in the country. These include the police and para-military forces, civil defence and home-guards, fire services, ex-servicemen, non-government organizations (NGOs), public and private sector enterprises, media and HAM operators, all of whom have important roles to play.

The institutional and policy mechanisms for carrying out response, relief and rehabilitation are well-established in the district. These mechanisms have proved to be robust and effective so far as response, relief and rehabilitation are concerned. This section gives a brief overview of the institutional mechanism for disaster management in the National, State level and in details at the district and sub-district Level.

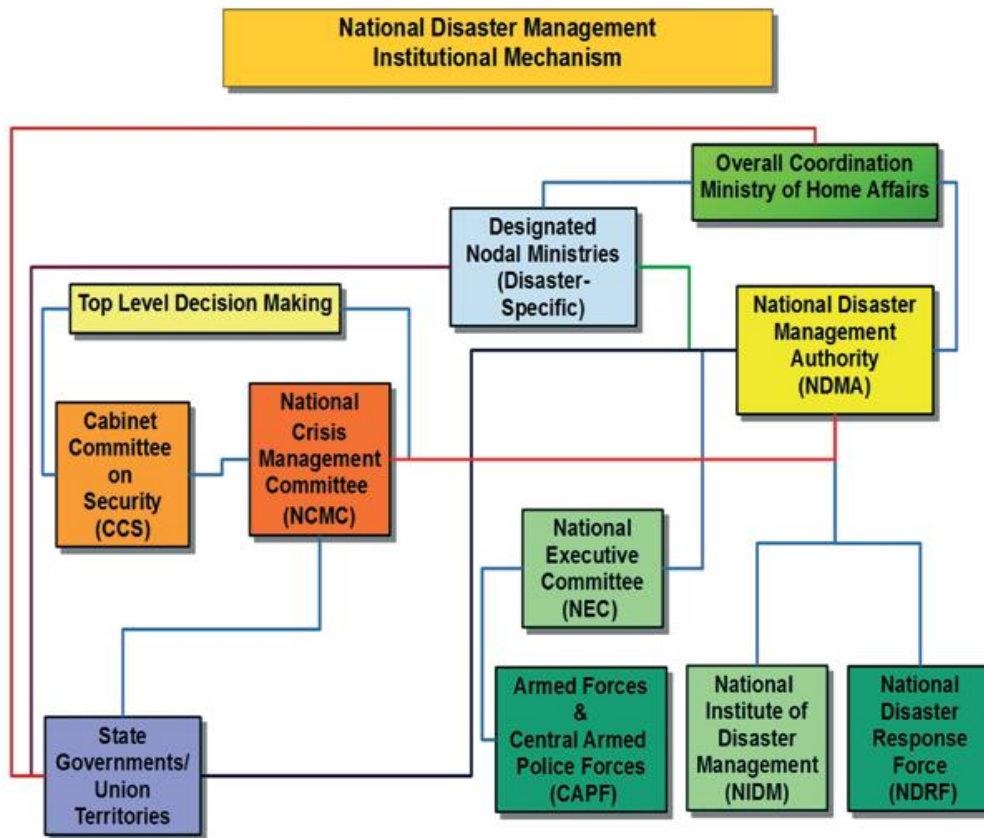
### 3.1 INSTITUTIONAL FRAMEWORK

#### 3.1.1. DM ORGANISATIONAL STRUCTURE AT NATIONAL LEVEL

The overall coordination of disaster management vests with the Ministry of Home Affairs (MHA). The Cabinet Committee on Security (CCS) and the National Crisis Management Committee (NCMC) are the key committees involved in the top-level decision-making with regard to disaster management. The NDMA is the lead agency responsible for the preparation DM plans and the execution of DM functions at the national level. In most cases, state governments will be carrying out disaster management with the central government playing a supporting role. The central agencies will participate only on the request from the state government. Within each state, there is a separate institutional framework for disaster management at the state-level.

The DM Act of 2005 provides for the setting up of NDMA at national level, and, the SDMA at the state level. The extent of involvement of central agencies will depend on the type, scale, and administrative spread of the disaster. If the situation requires the direct assistance from central government or the deployment of central agencies, the central government will provide all necessary support irrespective of the classification of the disaster.

The central Institutional Mechanism is as following (Source: NDMP 2016):



### 3.1.2. DM ORGANISATIONAL STRUCTURE AT STATE LEVEL

As per the DM Act of 2005, each state in India shall have its own institutional framework for disaster management. Among other things, the DM Act, mandates that each State Government shall take necessary steps for the preparation of state DM plans, integration of measures for prevention of disasters or mitigation into state development plans, allocation of funds, and establish EWS. Depending on specific situations and needs, the State Government shall also assist the Central Government and central agencies in various aspects of DM. Each state shall prepare its own State Disaster Management Plan. The DM Act mandates the setting of a State Disaster Management Authority (SDMA) with the Chief Minister as the ex-officio Chairperson. 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 DM organizational structure at the district level 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 Government shall constitute a State Executive Committee (SEC) to assist the SDMA in the performance of its functions. The SEC is headed by the Chief Secretary to the State Government and it coordinate and monitors the implementation of the National Policy, the National Plan and the State Plan. The SEC also provides information to the NDMA relating to different aspects of DM.

### 3.1.2.1. STATE DISASTER MANAGEMENT AUTHORITY

As per clause b of sub-section (2) of Section 14 of the Disaster Management Act 2005, the Himachal Pradesh Disaster Management Authority under the chairperson of the Honorable Chief minister was constituted on 1st June 2007 with the following persons as member of the HPDMA:

- i. Honorable Chief Minister - Chairperson
- ii. Hon'ble Revenue Minister - Member
- iii. Chief Secretary - Chief Executive Officer
- iv. Principal Secy.(Revenue) - Member
- v. Principal Secy. (Home) - Member
- vi. Principal Secy. (PWD) - Member
- vii. Principal Secy. (Health) - Member
- viii. Director General Police - Member
- ix. Secretary / Add. Secy. (Rev.) - Member Secy.

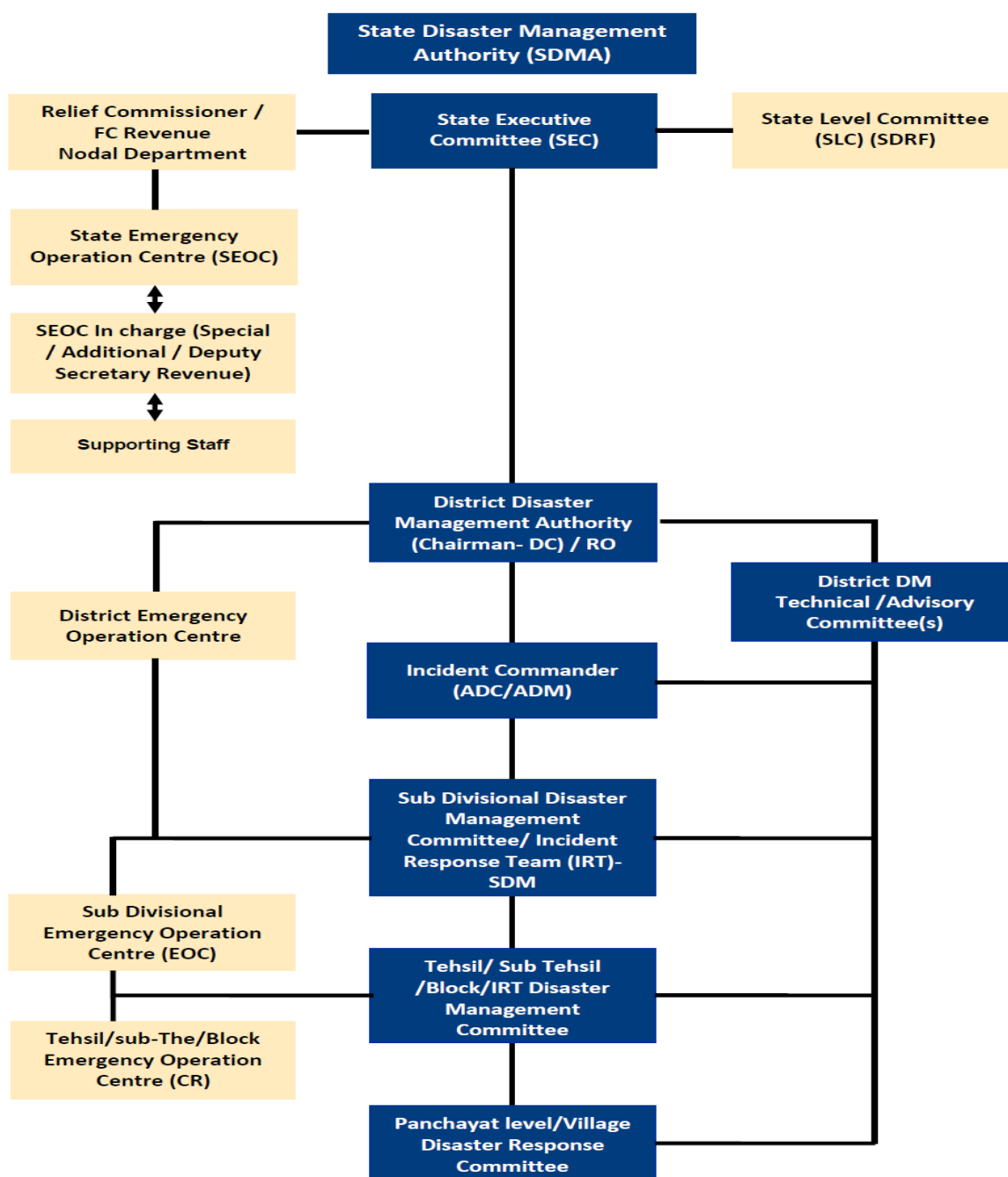
**The State Disaster Management Authority (SDMA)** has the mandate to lay down the state policies and approval of State Disaster Management Plan, with the assistance of SEC.

### 3.1.2.2. THE STATE EXECUTIVE COMMITTEE (SEC)

As per sub-section (1) of section 20 of the Disaster Management Act 2005, the State Executive Committee under the chairperson of Chief Secretary was constituted by the Government of Himachal Pradesh on 1st June 2007 comprising the following members:

S.No.	Officials	Designation
1	Chief Secretary	Chairman
2	Additional Chief Secretary/ PS (Forest)	Member
3	Principal Secretary Revenue)	Member
4	Principal Secretary (Home)	Member
5	Principal Secretary (Health)	Member
6	Principal Secretary (PWD)	Member
7	Principal Secretary (Finance)	Member
8	Principal Secretary (I&PH)	Member
9	Secretary(GAD)	Member
10	Director, HIPA, Fairlawns, Shimla-12	Member
11	Secretary/ Add. Secy.(Revenue)	Member Secretary

## State and District Level Institutional Mechanism



### 3.1.3. DM ORGANISATIONAL STRUCTURE AT DISTRICT LEVEL

The district administration is the focal point for implementation of all governmental plans and activities. The actual day-to-day function of administering relief is the responsibility of the District Magistrate who exercises coordinating and supervising powers over all departments at the district level. As per provisions in Chapter-IV of the DM Act, each State Government shall establish a District Disaster Management Authority for every district in the State with such name as may be specified in that notification.



**The District Disaster Management Authority (DDMA)** will act as the district planning; coordinating and monitoring body in accordance with the guidelines laid down by the State Authority. As per Section 25 of the DM Act 05, DDMA for every district in the State of Himachal Pradesh has also been constituted, consisting of the following members:

S.No.	Officials	Designation
1.	Deputy Commissioner	Chairperson
2.	Superintendent of Police	Member
3.	Chief Medical Officer	Member
4.	Superintending engineer (PWD)	Member
5.	Superintending Engineer (I & PH)	Member
6.	Superintending Engineer (MPP & P)	Member
7.	Chairperson of the Zila Parishad	Member

#### 3.1.3.1. DISTRICT CRISIS MANAGEMENT GROUP

The District Disaster Management Committee will work as District Crisis Management Group established at the district level comprising of such officers from all the nodal departments who are head of the offices / departments and are capable of taking decision on behalf of the departments at the district level. District Shimla Crisis Management Plan will address situations of large-scale human induced problems such as major extremist attacks, suicide attacks, sabotages, bomb explosions, taking of hostages, major breakdown of law & order, mutiny, large scale desertion in Central Para Military Forces and State Police Forces, terrorist attacks using chemical weapons, radioactive material, biological agents and major natural calamities like floods, landslides and earthquakes.

#### 3.1.3.2. DISTRICT DISASTER MANAGEMENT COMMITTEE AND TASK FORCES

District level Disaster Management Advisory Committee(s) will be appointed by the District Disaster Management Authority to take advice on various subject specific fields within the overall context of disaster management. The committee will comprise disaster management experts, which may be from government departments, research institutes and NGO's.

In order to implement the District Disaster management Plan in the district the following committee has been constituted under the chairmanship of Deputy Commissioner Shimla as below:-

- i. Superintendent Of Police Shimla
- ii. Additional Deputy commissioner Shimla
- iii. Additional District magistrate ( L&O ) Shimla
- iv. Conservator Of Forest Shimla
- v. General Manager ( Telecommunication ) Shimla
- vi. Chief Medical Officer Shimla
- vii. Superintending Engineer (PWD) Shimla
- viii. Superintending Engineer (IPH) Shimla
- ix. Superintending Engineer (MPP &Power) Shimla
- x. Chairperson Of Zila Parishad Shimla

- xi. District Food and supplies controller Shimla
- xii. Commandant Home Guards Shimla
- xiii. Commandant ITB P( Hqrs) Shimla
- xiv. District/Divisional Fire Officer Shimla
- xv. Divisional manager HRTC Shimla
- xvi. District public Relation Officer Shimla
- xvii. District Town Planner Shimla
- xviii. District Revenue Officer Shimla
- xix. Commissioner Municipal Corporation Shimla.
- xx. Deputy Director (Higher Education)
- xxi. Deputy Director ( Elementary Education)
- xxii. Medical Superintendent IGMCS Shimla
- xxiii. Medical Superintendent KNH
- xxiv. District Coordinator NYK
- xxv. Additional District Magistrate (Protocol) Shimla ----- Member Secretary

### Non Official Members

- Mayor / Dy mayor MC Shimla
- All Zila Parishad Members
- All Councilors MC Shimla
- All NGOs / CBO Shimla

Any other member can be included as desired by the chairman. This committee will ensure that the functions assigned to the different departments are being implemented properly while dealing with the disastrous situation.

### Nodal Ministry for Management / Mitigation of Different Disasters

	Disaster	Nodal Ministry/ Department
1	Biological	Min. of Health and Family Welfare (MoHFW)
2	Chemical and Industrial	Min. of Environment, Forest sand Climate Change (MoEFCC)
3	Civil Aviation Accidents	Min. of Civil Aviation (MoCA)
4	Cyclone / Tornado	Min. of Earth Sciences (MoES)
5	Tsunami	Min. of Earth Sciences (MoES)
6	Drought / Hailstorm / Cold Wave and Frost / Pest Attack	Min. of Agriculture and Farmers Welfare (MoAFW)
7	Earthquake	Min. of Earth Sciences (MoES)
8	Flood	Min. of Water Resources (MoWR)
9	Forest Fire	Min. of Environment, Forests, and Climate Change (MoEFCC)
10	Landslides	Min. of Mines (MoM)
11	Avalanche	Min. of Defence (MoD)
12	Nuclear and Radiological Emergencies	Dept. of Atomic Energy (DAE)

13	Rail Accidents	Min. of Railways (MoR)
14	Road Accidents	Min. of Road Transport and Highways (MoRTH)
15	Urban Floods	Min. of Urban Development (MoUD)

Ref: NDMP 2016

### Roles and Responsibilities of Nodal Departments / Agencies (State Level)

<b>H.P. State Disaster Management Authority (HPSDMA)</b>	Lay down policies and plans for disaster management in the State. Declare emergency situation in case of State level disaster and the end of it. Provide policy directions and integration of Disaster Management programmes in the state development framework.
<b>State Executive Committee for Disaster Management (SEC)</b>	Implementation of the State Plan and monitoring body for management of disasters in the State.
<b>Himachal Institute of Public Administration (HIPA)</b>	Primary agency responsible for conducting and coordinating training to all government officials involved in the planning and implementation of preparedness, mitigation response and relief work.
<b>State Technical Committee(s)</b>	Responsible for ensuring community participation in the disaster management activities. They will also advise the SEC on implementation of activities at State level.
<b>Department of Revenue and Relief</b>	Member Secretary of SDMA. Member of SEC, Overall coordination, implementation of the EOC activities and documentation and reporting to the SEC,
<b>Department of Public Works (PWD)</b>	Primary agency for maintenance of public infrastructure identifies safer places, assess physical damage, identify safer routes, and provide necessary reconstruction and rehabilitation support. Ensure hazard resistant features as per all building by laws and maintain all National & State roads.
<b>Department of Town and country planning</b>	Primary agency responsible for evolving policy and ensuring land use, hazard wise zonation and implementation building by laws.
<b>Department of Urban development</b>	Main agency to ensure repair and maintenance in the urban areas.
<b>Himachal Pradesh Housing and Urban Development Authority</b>	One of the executing agency for constructions under implementation of recovery and rehabilitation plans. Responsible for ensuring the mitigation measures while construction or reconstruction of its projects in the state.
<b>Department of Education</b>	The department will prepare curriculum related to disaster management and conduct training programme for teachers and children. The department will coordinate with the local authority and arrange for mock drills, search and rescue drills. Awareness campaigns, Volunteer Teams. Ensuring maintenance and retrofitting of school buildings/school safety.
<b>Department of Home</b>	Be the primary agency responsible for “Urban Fire”, “Village fire”, Nuclear disasters, Serial Bomb blasts and Festival related disasters. And also for Security, evacuation, emergency assistance, search and rescue, first aid, law and order, communication, shifting of people to relief camps, traffic management. Burial work of dead bodies, Fire management.

<b>Department of Forest</b>	Be the primary agency responsible for “Forest Fire”. During response and recovery support SEOC with resources. Identification of prone areas, mitigation activities, research and assessment.
<b>Department of Environment, Science and Technology</b>	The primary agency responsible for Avalanches Snow Storms & Environmental & Climate Change Hazards. GIS mapping for effective disaster management. Primary agency of research and development on Climate Change impact and adaptation activities for the State. Provide inputs to the State Disaster Mitigation Committee for new technologies and also for awareness programs.
<b>Department of MPP and Power</b>	Primary agency responsible for Dam failures / bursts and electrical disasters and fires. It will ensure power supply for public facilities such as Hospital, police stations, telecommunication building and meteorological stations. Coordination with Hydro Power Projects.
<b>Department of Information Technology</b>	Overall responsible for the fail proof communication. Maintenance of IT infrastructures and HIMSWAN, maintain communication and satellite links.
<b>Department of Irrigation and Public health</b>	Primary agency responsible for Floods, Water supply and Drought, Issue flood warnings, identification of safer places, construct embankments, arrangement of boats and pump sets, swimmers and divers and communication.
<b>Department of Health</b>	Be the primary agency responsible for “Biological Disasters and Epidemics”. First aid, health and medical care, ambulance arrangements, preventive steps for other diseases, establishment of health camps. Providing Trauma Centres and all other health related support.
<b>Department of Information and Public Relations</b>	Communicate warnings to the public, relay announcements issued by SEC, telecast special programmes for information and actions, education and awareness messages for preparedness actions and coordinated response. Promote disaster related polices, provide emergency communication systems, enable critical communication links with disaster sites and coordinate with media.
<b>Department of Rural Development</b>	Primary agency to implement vulnerability reduction projects to alleviate poverty and improve people’s livelihoods. Ensure Rural development schemes implemented in the State incorporating disaster management measures. Assists in rehabilitation of the victims.
<b>Department of Agriculture</b>	Primary agency for hailstorms, Droughts and pest attacks. To provide seeds and necessary planting material and other inputs to assist in early recovery. Early warning and avert ion of disasters such as Hail Storms and droughts.
<b>Department of Finance</b>	Arrange necessary funds and ensure equitable distribution, manage accounts.
<b>Department of Planning</b>	Allocation of funds on priority basis for disaster mitigation and rehabilitation projects
<b>Department of Transport</b>	Primary agency for Road accidents. Arrange for sending personnel and relief material to the disaster affected area, relocate the affected people, keep access routes operational and inform about alternate routes. Keep an inventory of resources available with Govt. & private operators.
<b>Department of Town and Country Planning</b>	Ensure hazard resistant features are in all building by laws. Zoning for safe construction sites and development of policies.

<b>Department of Technical Education and vocational training</b>	Be the primary agency responsible to conduct certificate training programmes for construction workers. To create a pool of qualified masons to ensure safe construction practices in construction work.
<b>Department of Food, Civil Supplies and Consumers Affairs</b>	Plan for food storage locations keeping in view the necessity. Primary agency responsible for identifying the basic needs of food in the aftermath of a disaster or emergency, to obtain appropriate supplies and transporting such supplies to the disaster area.
<b>Department of Social Justice and Empowerment</b>	Primary agency for building capacities and increasing awareness of disabled persons and women. Organizing special camps for the disabled, widows, children and other vulnerable groups. It will also provide necessary help and assistance for socio-economic rehabilitation.
<b>Department of Industries</b>	Primary agency for landslides and mudflows and mining collapses.
<b>Department of Horticulture</b>	The primary agency for hailstorm and Pest Attack for horticulture sector. Support in crop damage assessment due to disasters.
<b>Department of Animal Husbandry</b>	Primary agency for Animal epidemics. Responsible for fodder assessments, supply and management during disasters and disposal of dead animals.
<b>Department of Panchayati Raj</b>	Ensure training of Panchayati Raj Institutions on disaster management and also ensure that all the development schemes of the department have the component of disaster mitigation as an integral part.
<b>District Administration</b>	The District Disaster Management Authority (DDMA) will act as the district planning; coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in the district in accordance with the guidelines laid down by the State Authority.
<b>International Agencies /NGOs</b>	Provide relief, coordinate with Government, and conduct awareness and capacity building programmes, preparedness activities at community level, assist in reconstruction and rehabilitation.
<b>Department of Tourism</b>	Coordinate in providing temporary shelters, food packages for air dropping.

Ref: SDMP 2012

### 3.1.3.3. ESSENTIAL SERVICE FUNCTIONS (ESF)

The ESFs aim is to ensure continuity of services important for human life and dignity, enabling smooth governance and other socio-economic-political systems of the district during disaster and pre-disaster times. The broad guidelines are:

- Each ESF shall have a nodal agency, primarily a government agency responsible for providing that service.
- All other agencies, government and non-government that are directly/indirectly involved in provision of these services coordinate with nodal agency as support agencies.
- The nodal agency in consultation with the support agency shall develop its own terms of reference, rules and regulations.
- The nodal agency in consultation with the support agency shall develop a plan for the particular service to include contingency planning for worst case scenarios

## ESF Management Committee

ESF management committee comprises of the heads of nodal agencies for all ESF and is chaired by Zila-Parmukh and co-chaired by ADM disaster management or Chief Executive Officer of DDMA. After constitution of District Disaster Management Authority, this committee takes over the role of district disaster management committee.

### Key Functions of ESF management committee are

- Collate annual DRR action plans for each ESF and monitor its implementation
- Recommend projects and activities for DRR to be included in the development activities of nodal and support agencies for each ESF
- Collaborate assessments from each ESF during emergencies and suggest strategies for intervention to DDMA.
- Finalize strategies for Response and recovery interventions
- Coordinate overall response
- Document lessons learnt and good practice
- Ensure grievance redressal mechanisms

### 3.1.3.4. FORECASTING AND WARNING AGENCIES

Hazards	Warning Agency	Contact Details
Earthquake	Center: (IMD) Indian Meteorological Department / NEOC State: SDMA / SEOC District: DDMA / DEOC	011-24619943 / 24624588 <a href="http://www.imd.gov.in">www.imd.gov.in</a> 1071 (National Helpline) 1070 (State Helpline) 1077 (District Helpline)
Landslide	(GSI) Geological Survey of India SDMA / SEOC DDMA / DEOC	0172-2622529 Fax0172-2621945. Mob: 094173-71954. Joginder.singh@gsi.gov.in
Heavy Rain / Snowfall / avalanche	(IMD) Indian Meteorological Department / SEOC DEOC	0177-2626211 <a href="http://www.weathershimla.gov.in">www.weathershimla.gov.in</a> 1070 1077
Flood / Flash Flood	(CWC) Central Water Commission Irrigation and Public Health Dept. SEOC DEOC	0183-236105 1070 1077
Domestic / Forest Fire	Department of Fire Services/ Department of Forest	101
Epidemics	Health and Family Welfare Department	102/108
Human Induced Hazards	Himachal Pradesh Police	100



Forecasting refers to the prediction of future weather events and trends, tested against historic data. Along with Early Warning Systems, forecasting has the ability to deliver immense benefits in the form of improved planning and preparedness, especially when combined with indigenous knowledge of past trends. Unfortunately very few people in the developing world are receiving these benefits and their wellbeing is therefore compromised. Whereas an early warning system (EWS) is technology and associated policies and procedures designed to predict and mitigate the harm of natural and human-initiated disasters and other undesirable events. Both are major element of disaster risk reduction. It prevents loss of life and reduces the economic and material impact of disasters. To be effective, early warning systems need to actively involve the communities at risk, facilitate public education and awareness of risks, effectively disseminate alerts and warnings and ensure there is constant state of preparedness. A complete and effective early warning system supports four main functions: risk analysis, monitoring and warning; dissemination and communication; and a response capability.

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### 3.1.3.5. EOC SETUP AND FACILITIES AVAILABLE IN THE DISTRICT

It has been observed that at the time of a calamity/disaster, communication services are the first to go out of order. Emergency Operation Centre plays a vital role in Emergency Operation activation and place multi-mode and multi-channel communication system for pre, during and pro emergency situation. It coordinates the flow of information with respect to activities associated with relief operations. District Emergency Operation Centre (DEOC), Shimla established according to essence mentioned above. The design, layout, equipment and operation of the DEOC, Shimla is as per the EOC Manual prepared at the State level by Himachal Pradesh State Disaster Management Authority (HPSDMA), Shimla or National Disaster Management Authority (NDMA), Delhi (India). It also fortify with all the basic and advance communication and IT infrastructure in constraint of limited space and resources. The main office of DEOC, Shimla is sited adjoining to the main building of DC Office, Shimla.

#### **Role and Objectives of DEOC, Shimla**

District Emergency Operation Centre plays a vital role in Emergency Operation activation in the district and have following roles and objectives during occurrence of any disaster and normal time,

- It acts as a control room that would be the nerve centre for the fatal incident and disaster management in the district.
- To monitor, coordinate and implement the actions for disaster risk management within the district.
- Activate the Emergency Support Function (ESF) in the event of a disaster and coordinate the actions of various line departments/ agencies.
- Encourage each line and stakeholder department within the districts to prepare their area-specific plans in terms of their vulnerability and proneness to specific disasters and receive reports on preparedness from their side. Based on these, the DEOC will submit a summary report to the SDMA and higher authority
- Serve as a data bank to all line departments and planning department, with respect to risks and vulnerabilities, ensure that due consideration is given to mitigation strategies in the planning process.
- Maintain a web-based inventory of all resources available with all concerned departments in the district and update it through the India Disaster Resource Network (IDRN).

- Receive appropriate proposals on preparedness, risk reduction and mitigation measures from various departments/agencies and place the same for consideration of the Chief Secretary through Deputy Commissioner's approval.
- Monitor preparedness measures undertaken at the district levels including simulation exercises undertaken by various departments.
- Ensure from each line departments that all warning, communication systems and instruments are in working conditions. Upgrade the Disaster Management Action according to changing scenario.
- Monitor preparedness measures and build the capacity on the disaster risk management training, workshops and awareness generation programme.
- Providing information at district level, local level and to disaster prone areas through appropriate media. Brief the media of the situations and prepare day to day reports during the disasters and report the actual scenario and the action taken by the District Administration.
- Maintain a data base of trained personnel and volunteers who could be contacted at any time.

**Alternate EOC - State Emergency Operations Centre (SEOC) is also located in Shimla.**

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#### **3.1.4. PUBLIC - PRIVATE PARTNERSHIP:**

Himachal Pradesh may not have many large corporate entities in private sector, but it does have significant presence of public sector giants like NHPC, Power Grid, BSNL etc. that have always provided support to district administration during disasters. Moreover, CSR does not have any geographical limitation and large corporate houses of the country have always extended their support whenever major disasters have struck the country.

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#### **3.1.5. INCIDENT RESPONSE SYSTEM (IRS)**

Incident Response System is a combination of facilities, logistic, personnel, finance, operation and communication operating within a common organisational structure, with responsibility for the management of assigned resources to accomplish the objectives effectively pertaining to an incident. The IRS organization functions through Incident Response Team (IRTs) in the field. The District Magistrate (DM) as the chairman of the DDMA is a Responsible Person (RO) as overall in charge of the incident response management. If needed, he can delegate his functions to any other responsible officer or appoint another senior officer as an incident commander. If the disaster is in more than one district, the DM of the district that has maximum loss will act as Incident commander. On activation of IRS, all line departments / Organizations / individuals shall follow the directions of the Incident Commander as condition demands. He can divert all mechanisms and resources in the district to fight against a scenario leading to disaster / calamity in the district. An operation section with a chief and associates, planning section with a leader and associates, logistic section with a leader and section chief and finance section with a leader and associates shall be assume their roles. This is the sole discretion of the Incident Commander to appoint the Section chief. These section chiefs are vested with commanding authority and logistic assistance to deliver the concerned responsibility. The chief and associates for the different sections are as nominated below:

- All team leaders will be in the rank of ADM/Line Department Heads in the district who are senior level officer.
- The SDMs shall not be given any responsibility in the incident command chain since
- they are to look after the onsite EOC in their territory or as assigned to the
- affected areas as well as they are the Team Leaders of Incident Management
- Teams (IMTs) in each Onsite Emergency Operation Centre



**The IRS team has not been yet notified officially by the District Administration, it is planned to be notified shortly.**

## 4. PREVENTION AND MITIGATION MEASURES

As it has been discussed in the previous chapters that district Shimla lies in Zone IV & Zone V. Risk gets compounded when hazard meets with Vulnerabilities as high dense population, weak physical structures and conventional construction technologies. Similarly, district is also vulnerable to high degree of fire (Forest / Domestic). Although, district has not faced any high intensity earthquake in recent past but the recent repeated tremors felt in Rampur makes it more important to take necessary prevention and mitigation measures, also studies envisages that the district can receive an earthquake of 6 to 7.5 Richter scale band. Earthquakes can destroy buildings and infrastructure with secondary effects i.e. fires, embankments failures, Landslides, liquefaction etc. Therefore it is important to consider both primary and secondary effects into earthquake disaster mitigation planning. So, an effective mitigation planning is necessary to reduce the risk involved in the district. For efficient disaster mitigation, the pre-disaster phase needs to be utilized for planning and implementing preventive measures on the one hand and working on preparedness activities on the other. Disaster is caused due to failure of manmade structures, lack of preparedness and awareness.

### 4.1 PREVENTION MEASURES

Prevention can be defined as an action taken to avoid an incident or stopping an incident from occurring. It basically includes deterrence operations and surveillance. Whereas, Mitigation refers to measures that prevent an emergency, reduce the chance of an emergency happening, or reduce the damaging effects of unavoidable emergencies. Moreover, Disaster Mitigation contributes to lasting improvement in safety and is essential to integrate disaster management in mainstream planning.

Risk mitigation measures are typically designed to reduce or limit the adverse impacts of already existing risks of disasters through various structural or non-structural measures or a combination of both. For example, risks of drought can be reduced through measures of water conservation and drought proofing. Risks of earthquake can be reduced by retrofitting life line structures in seismic zones. Risks of every type of disasters can be reduced with proper strategic action plans for risk reduction as well as development of capacities at all levels.

Broadly mitigation ways can be divided into two parts i.e. structural measures and non-structural measures. Structural measures undertake to strengthen buildings, lifelines and infrastructure to withstand any hazard. Non-structural measures emphasis on land-use planning programmes for sustaining awareness, dissemination of information materials on do's and don'ts at the time of disaster. Once the area has been identified as hazard prone, it becomes important that the government and the community should practice these above-said measures. Based on this ideology, mitigation plan may vary according to major hazards identified. Shimla district is being considered prone to Flood, Drought and fire related hazards apart from above mentioned hazards (Earthquakes & landslides). In order to know the mitigation measures already existing in the district, there are various development projects and schemes which will be seen in the following sections.

Hazard	Structural Mitigation Measures	Non- Structural Mitigation Measures	Implementing Agency / Department
Earth quake	<ul style="list-style-type: none"> <li>• Safety Audit of Lifeline buildings</li> <li>• Seismic Retrofitting life line buildings</li> <li>• Seismic Micro-Zonation</li> <li>• Implementation of the solutions to the identified Non-Structural hazards in a building</li> <li>• Making all public utilities like water supply systems, communication networks, electricity lines etc. earthquake-proof.</li> <li>• Ensuring that all new structures conform to earthquake resistant standards and specifications;</li> <li>• Ensuring that all existing structures are retrofitted to withstand the shocks of disasters.</li> </ul>	<ul style="list-style-type: none"> <li>• The building codes etc. have to be suitably formulated / amended and appropriately detailed and legal implications properly stated.</li> <li>• Wide dissemination of earthquake-resistant building codes, the National Building Code 2005, and other safety codes.</li> <li>• Provisions of insurance according to building bye laws, codes and hazard proneness</li> <li>• Training and Capacity Building Activities</li> <li>• Policy Measures</li> <li>• Capacity Building of engineers, masons and general public</li> <li>• Identification of critical lifeline buildings</li> <li>• Mock drills</li> <li>• Land Use Planning</li> <li>• IEC material for Earthquake resilient building</li> <li>• Awareness generation</li> <li>• Non Structural hazard identification in the building</li> <li>• Determine Local Soil and Groundwater Conditions</li> </ul>	<p>Dept. of Environmental Science and Technology (HP), Ministry of Earth sciences / Geological Survey of India, Wadia Institute of Himalayan Geology (Dehradun), Town &amp; Country Planning Department, Urban Development Department, Municipal Corporation, Public Works Department, IPH, HPSEBL</p>
Landslide	<ul style="list-style-type: none"> <li>• Landslide Hazard Zonation Mapping</li> <li>• Land use regulation</li> <li>• Slope stabilisation</li> <li>• Drainage development &amp; improvement</li> <li>• Tunnels and elevated structures that allow passage of debris</li> <li>• Synthetic materials are used for slope stabilization</li> </ul>	<ul style="list-style-type: none"> <li>• Legislation</li> <li>• Land use planning</li> <li>• Monitoring &amp; Early warning system</li> <li>• Awareness generation of the Hotspots of Landslides</li> <li>• Routine observation and assessment of slope conditions</li> <li>• Implement vegetation management plans in specific areas based on recommendations from geotechnical and vegetation specialists</li> <li>• Training of trainers in professional and technical institutions.</li> <li>• Training of professionals like engineers and geologists for landslide mapping, investigation techniques, analysis, and observational practices.</li> <li>• Launching public awareness campaigns on landslide hazard and risk reduction, and sensitizing</li> </ul>	<p>PWD, IMD, Ministry of Earth sciences, Wadia institute of Geology, RS Environment Science &amp; Technology, PWD, BRO, Urban Development, ARI Shimla (for Plantation)</p>

		all stakeholders on landslide hazard mitigation.	
Flash flood, Flood, Cloud Burst	<ul style="list-style-type: none"> <li>• Flood plain zoning regulations</li> <li>• Construction and maintenance of river embankments and levees</li> <li>• Pre and post monsoon inspections of dams and reservoirs</li> <li>• Desilting or dredging of rivers to improve flows</li> <li>• Improvement of drainage systems in towns</li> <li>• Floodwater diversion through existing or new channels</li> <li>• Removal of encroachment into the waterways and natural drainage systems</li> </ul>	<ul style="list-style-type: none"> <li>• Flood Hazard zoning</li> <li>• Monitoring &amp; Forecasting</li> <li>• Early Warning</li> <li>• Insurance</li> <li>• Capacity Development (Training, education, research and awareness)</li> <li>• Updating and implementation of flood management plans of vulnerable areas of the District</li> <li>• Catchment area treatment and afforestation programmes</li> </ul>	IPH, IMD,CWC, Department of ES&T, Revenue Department
Fires	<ul style="list-style-type: none"> <li>• Fire hazard zoning and risk assessment</li> <li>• Use of fire extinguishers</li> <li>• Procurement of latest Fire equipment required according</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring</li> <li>• Awareness Generation</li> </ul>	Fire Department, IPH, Health, Home
Forest Fire	<ul style="list-style-type: none"> <li>• Adequate firefighting equipment and vehicles</li> <li>• Deployment of helicopters and air-tankers for fighting fire in remote strategic locations.</li> </ul>	<ul style="list-style-type: none"> <li>• Forest areas prone to fires can be mapped</li> <li>• Communities living close to fire prone areas can be targeted for special awareness</li> <li>• Programmes regarding <i>Do's and Don'ts</i> for fire prevention.</li> </ul>	Forest Department, Fire Department
Road Accidents	<ul style="list-style-type: none"> <li>• Median barriers to prevent overtaking and to eliminate head-on crashes</li> <li>• Advisory speed limits at sharp bends</li> <li>• Better highlighting of hazards through road lighting at junctions</li> <li>• The systematic removal of roadside hazards – such as trees, utility poles and other solid objects.</li> </ul>	<ul style="list-style-type: none"> <li>• Constant performance monitoring of existing roads ('Blackspot' or Hazardous location treatment programme) for all categories of roads</li> <li>• Introduction of Road Safety Audit (RSA)</li> <li>• Risk assessment of all categories of existing roads</li> <li>• Enhanced improvement by deployment of Intelligent transport System (ITS)</li> <li>• reducing exposure to risk through transport and land-use policies</li> <li>• shaping the road network for road injury prevention</li> <li>• improving visibility of road users</li> <li>• setting and securing compliance with road safety rules</li> </ul>	Transport Department, Urban Development, NHAI, PWD & HRTC

## 4.2 MAINSTREAMING DRR IN DEVELOPMENT PLANS AND PROGRAMMES

The DM Act mandated the DDMA to “lay down guidelines to be followed by the departments of the Government of the State for the purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance therefore” and to “review the development plans of the different departments of the State and ensure that prevention and mitigation measures are integrated therein”. Under Section 38 (2) (e) of the Act the State Government is to ensure that the integration of measures for prevention of disaster or mitigation have been incorporated by the departments of the Government of the State in their development plans and projects. The State Government is further to ensure integration of measures to reduce or mitigate the vulnerability of different parts of the State to different disasters in the state development plan {38 (2) (f)}. The Act also prescribes for preparation of District Plan and for incorporation of measures suggesting as to how mitigation shall be integrated into development plans and projects. The Act states that the DMPs shall prescribe “the manner in which the mitigation measures shall be integrated with the development plans and projects”. The DMPs of departments at State and district level shall also have provisions for prevention of disaster and mitigation of its effects or both in the development plans and programmes as provided for in the State DMP and as is assigned to the department or agency concerned.

Mainstreaming disaster management into the development planning process essentially means looking critically at each activity that is being planned, not only from the perspective of reducing the disaster vulnerability of that activity, but also from the perspective of minimizing that activity’s potential contribution to the hazard. Every development plan in the state would require incorporating elements of impact assessment, risk reduction, and adoption the ‘do no harm’ approach. The measures such as urban planning and zoning, upgradation of building codes their enforcement, adoption of disaster resilient housing designs and flood proofing, response preparedness planning, insurance, establishment of early warning systems generating community awareness, creating technical competence and promoting research among engineers, architects, health experts will be taken on priority. The current level of urbanization is likely to increase. Urbanization is inevitable and growing at a fast pace, urban settlements are bound to be confronted with problems of greater magnitude in terms of shelter options, cramped living spaces, problems of transportation, access to facilities, services etc. and above all the climate change, mainstreaming Disaster Risk Reduction (DRR) issues in Development Plans etc. are to be interlinked vertically and horizontally for fail safe infrastructures in Himachal Pradesh. The Major challenges which will be addressed are as follows:

Table 1: DRR and Major Challenges

#	Major Challenges			
	Technical	Regulatory	Organisational	DRR Initiatives
1	Micro-zonation	Development of Law	Sensitization	Mapping
2	Risk Identification & Assessment	Up-gradation of Building Bylaws	Capacity Building	Proper land use practices
	Vulnerability Assessment	Building Inspection and compliance of BIS	Implementing regulatory measures	Zoning regulations
3	Identification and optimum utilisation of local resources.	Retrofitting methodologies	Setting up of Disaster Management cells	Building bye laws

4	Monitoring the DMP plans of all Projects	Soil Improvement measures	Knowledge sharing	Vulnerability Assessment
5	Community disaster risk reduction of all NREGA & MNREGA based programmes	Compulsory Disaster Risk assessment as part of project planning	To improve emergency response planning	Categorization of building having high/very high risk
6	Integration of development plans with Disaster Management Plan	Geotechnical investigations of all road projects	Enhance capacity of ULBs	Retrofitting
7	-	Mandatory geological & geotechnical examination of all engineering programme	Facilitate Structural and Non-Structural interventions	Framework for redevelopment

Table 2 : Aim/Purpose of Disaster Risk Reduction

#	Aim / Purpose
1.	To make certain 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
2.	To make certain 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.
3.	To make certain 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.

#### 4.2.1. MAINSTREAMING DRR INTO DEVELOPMENT SECTORS

DRR refers to the measures used to reduce direct, indirect and intangible disaster losses. The measures may be technical, economic or social. DRR encompasses the two aspects of a disaster reduction strategy: 'mitigation' and 'preparedness'. Mitigation refers to measures aimed at reducing the risk, impact or effects of a disaster or threatening disaster situation, whereas, preparedness refers to the measures undertaken to ensure the readiness and ability of a society to forecast and take precautionary measures in advance of imminent threat, and respond and cope with the effects of a disaster by organising and delivering timely and effective rescue, relief and other post-disaster assistance. 'Mainstreaming DRR' describes a process to fully incorporate the concerns of disaster preparedness, prevention and mitigation into development and post disaster recovery policy and practice. It means completely institutionalizing DRR within the development and recovery agenda. Accordingly, the following broad objectives of mainstreaming DRR into Development will be encouraged:

- Ongoing schemes and projects of the Ministries and Departments of GoI and State Governments, as well as of all Government agencies and Institutions, including Public Sector Undertakings, will be selectively audited by designated government agencies for ensuring that they have addressed

the disaster risk and vulnerability profiles of the local areas where such schemes and activities are being undertaken.

- At conceptualization or funding stage itself, the development schemes will be designed with consideration of any potential hazardous impact associated with it and incorporate measures for mitigation of the same.
- All the development schemes will be pragmatic, incorporating the awareness of local disaster risk and vulnerability, and ensuring that the schemes have addressed these concerns and included specific provisions for mitigating such disaster concerns; and
- DDMA will ensure that all the disaster relief and recovery programmes and projects that originate from or are funded by any agency satisfy developmental aims and reduce future disaster risks.

### Illustrations of Mainstreaming DRR into ongoing Flagship Programmes

Some of the following flagship programmes for Government of India could be used as an entry point for mainstreaming the DRR in development plans and the following steps may be undertaken:

Table: Mainstreaming DRR into ongoing Flagship Programmes

Name of the Programme	Department / Sector	Proposed Strategies for DRR Integration into the Flagship Programmes
Indira Awas Yojna	Rural Development	<ul style="list-style-type: none"> <li>• Inclusion of such measures like application of Hazard resistant design in construction of IAY houses, appropriate sitting of IAY housing in guideline of IAY</li> <li>• Development of model design for IAY houses which could be easily referred to by DRDAs at district level and used for community awareness depending on the geographical location.</li> <li>• Capacity Building of Rural masons on safe construction.</li> <li>• Capacity Building of PRIs.</li> <li>• Community Awareness.</li> <li>• Capacity Building Programmes for DRDA officials on Disaster Risk Reduction issues</li> </ul>
Mahatma Gandhi National Employment Guarantee Scheme	Rural Development	<ul style="list-style-type: none"> <li>• Utilisation of MGNREGS funds to reduce the vulnerability of Panchayat vis a vis natural hazards such as landslide, drought, forest fire, cloud burst, flash floods, earthquake etc.</li> <li>• Giving priority to those works which reduce the vulnerability of area over the works which enhances the vulnerability of the area to natural hazards.</li> <li>• Identified works are available which take into account the hazard profile and offer continuous employment opportunities in the event of disasters to ensure livelihood security in the event of disasters.</li> <li>• Works which reduce disaster risk are given priority in plans-such as local mitigation works etc.</li> <li>• Any other implements able suggestion within the ambit of the scheme.</li> </ul>
Pradhan Mantri Gram	PWD	<ul style="list-style-type: none"> <li>• The Master Plan rural roads, the district rural road plan and identification of core network under the planning process of this</li> </ul>



Sadak Yojana		<p>scheme should, which the overall guidelines of its preparation, explicitly address the disaster risk reduction concerns and accord priority to connect the vulnerable habitations.</p> <ul style="list-style-type: none"> <li>• The technical guidelines should explicitly provide for suitable protection and inclusion of disaster risk concerns explicitly - while provision of cross drainage, slope stabilization, protection works are already included, in multi-hazard and especially flood and landslide prone areas fair weather roads need to be upgraded on a priority basis.</li> <li>• The maintenance guidelines are modified to ensure that in case of disasters these roads get provision for restoration to ensure all weather connectivity.</li> </ul>
SarvaSiksha Abhiyaa	Education	<ul style="list-style-type: none"> <li>• Development of a Policy paper of school safety. Introducing school safety as a part of the guidelines of SSA which is currently focusing on inclusive development.</li> <li>• Developing model structurally safe designs for schools.</li> <li>• Introducing School Safety in the Teacher's Training Curriculum.</li> <li>• Training of Rural Engineers appointed under SSA Scheme as well as the SSA State Coordinators.</li> <li>• Training of masons in rural areas.</li> <li>• Construction of Technology Demonstration Units.</li> <li>• Community Awareness</li> </ul>
Jawahar Lal Nehru Urban Renewal Mission	Urban Development	<ul style="list-style-type: none"> <li>• Strengthening of the compliance mechanism at the detail project report submission and appraisal stage in case of infrastructure projects as well as housing scheme to ensure structural safety.</li> <li>• Emphasis on disaster risk audit at the stage of preparation of detail project reports.</li> <li>• Inclusion of amending of building byelaws to ensure structural safety as a mandatory reform in the Mission cities to ensure safe habitat development (Both structural safety and fire safety norms).</li> <li>• Inclusion of disaster management as a function of the Urban Local Bodies and allocate resources.</li> <li>• Inclusion of Disaster Resistant features in the houses being constructed under the BSUP component as well as promote development of safe habitat.</li> <li>• Inclusion of strategies for disaster management in the City Development Plans.</li> <li>• Training and Capacity Building Programmes for municipal officers on disaster risk reduction</li> </ul>
Rajiv Awas Yojana	Urban Development	<ul style="list-style-type: none"> <li>• Since Rajiv Awas Yojana is focusing on developing slum free cities and Capacity Building and Community Mobilization is also an important component of RAY, through this programme attempts can be made towards community level disaster preparedness as slum dwellers often become the most vulnerable community during such disasters as floods, fire and high wind speed. The 30 cities selected on a plot basis can be targeted to initiate community based disaster preparedness activities.</li> </ul>



		<ul style="list-style-type: none"> <li>• Also the Housing Programmes to be implemented in these selected cities can ensure incorporation of hazard resistant features and safe sitting.</li> </ul>
<p><b>National Rural Health Mission</b></p>	<p>Health and family welfare</p>	<ul style="list-style-type: none"> <li>• Ensure that the village Health Plan and the District health plan explicitly address the disaster risk reduction concerns in the vulnerable habitations and the vulnerable districts and the disaster management plan as per DM Act 2005 takes links itself to the District and village Health plans</li> <li>• Provide training to the ASHA workers on disaster health preparedness and response.</li> <li>• Strengthening of Disease Health Surveillance System in rural areas.</li> <li>• Ensuring structural safety of the CHC / PHC and other health care service delivery centers in rural areas.</li> <li>• Training of doctors and hospital staffs on mass casualty management and emergency medicine.</li> <li>• Community awareness on disaster management</li> </ul>

The list given in the above table is an indicative one and many more line departments can be added to it. DRR planning needs to be done at Municipal and Panchayat levels with the involvement of local community representatives; and simultaneously the resource and responsibility to manage would be in the domain of the local authorities. Decentralized planning can enhance local participation along with improved efficiency and equitable benefits.

### 4.3 CONCLUSION

- District consists of weak and illegal constructions which compounds its vulnerability to earthquake and fires.
- Buildings constructed through good design are not necessarily built with earthquake safe design
- There is a need of an urgent mitigation planning under which new constructions should come up as per building-by-laws and standard codes.
- Retrofitting techniques are very much important to re-strengthen old and weak constructions which needs to be taken up by SDMC and district administration
- Fire safety assessments and fire-fighting arrangements shall be promoted in multi-storeyed buildings and residential communities
- Insurance of buildings according to their hazard proneness is important to promote in the district under the supervision of local administration
- Life-line buildings like Major hospitals, Deputy Commissioner's office, residences of key officials, schools, community spaces, police and fire stations etc. shall be organized on priority basis.

## 5. PREPAREDNESS MEASURES

### 5.1 INTRODUCTION

Disaster preparedness, is a broad concept that describes a set of measures that minimises the adverse effects of a hazard including loss of life and property and disruption of livelihoods. Disaster preparedness is achieved partially through readiness measures that expedite emergency response, rehabilitation and recovery and help in providing timely assistance and also community-based approaches and activities that build the capacities of people and communities to cope with and minimise the effects of a disaster on their lives.

Disaster causes sudden disruption to the normal life of society and causes damage to the properties and lives to such an extent that normal social and economic mechanism available to the society get disturbed. If community is not aware and unprepared then the people are affected more due to disaster or calamity. Hitherto, the approach towards coping the effects of disasters have been post-disaster management, involving many problems related to law and order, evacuation, communications, search and rescue, firefighting, medical and psychiatric assistance, provisions of relief and shelters etc.

After initial trauma next phase starts with long-term reconstruction planning which takes about 5 to 6 years to normalize the life-style in a particular area. In view of these problems the district administration Shimla (H.P) has prepared a comprehensive plan. The plan basically detailed out preparedness strategy under which communities and district authorities would be prepared so that level of destruction and unnecessarily delay in relief and response can be reduced. The preparedness measures that is mentioned in this chapter include setting up of disaster relief machinery, formulation of community preparedness plans, training to the specific groups and earmarking funds for relief operations.

### 5.2 PREPAREDNESS BY DIFFERENT DEPARTMENTS / AGENCIES OF THE DISTRICT

Disaster preparedness is a multidisciplinary function and hence different departments of the district have a role to play. The following table captures the details of the roles of different departments of the district.

Table 5.1: Department wise Preparedness Checklist and their task and responsibilities

#	Department	Preparedness Task and Responsibilities
1.	District Administration / DDMA	<ul style="list-style-type: none"><li>• Prepare, Coordinate and monitor overall district response.</li><li>• Review readiness to respond to any disaster or threatening disastrous situation</li><li>• Advise, assist and coordinate the activities of the other Departments</li><li>• Establish stockpiles of relief and rescue materials.</li><li>• Ensure communication systems are in order.</li><li>• Mock drills are carried out periodically.</li><li>• Ensure prepared and response plans are in place for all Departments of the Government.</li><li>• Ensure enforcement of the codes, by-laws and act such as National Building Code, Bureau of Indian Standards, etc. in the upcoming development projects, construction work, and commercial complexes.</li></ul>

2	DEOC	<ul style="list-style-type: none"> <li>• Ensure proper functioning of the DEOC including hunting line 1077.</li> <li>• Prepare and maintain inventory of maps, information and contact details.</li> <li>• Prepare and maintain contract agreements for procuring different goods and services.</li> <li>• Identify, list and maintain vendors of critical goods and services.</li> <li>• Ensure functioning of Satellite phones.</li> <li>• Track stock piling of multi –hazard emergency equipment and maintenance.</li> </ul>
3	HPSDMA	<ul style="list-style-type: none"> <li>• Facilitating resources on demands raised by administration.</li> <li>• Maintain state level inventory of critical resources.</li> <li>• Constitute and train disaster management teams which could be deployed in the event of a disaster.</li> <li>• To check the readiness, conduct mock drills.</li> <li>• Track and mobilize resources during disasters.</li> <li>• Update IDRN.</li> <li>• Ensure functioning of Satellite phones.</li> </ul>
4	Police Department	<ul style="list-style-type: none"> <li>• Ensure proper functioning of all equipment's.</li> <li>• Ensure proper mechanism in place for early warning of different hazards through police stations and police posts.</li> <li>• Arrange for public address system and siren.</li> <li>• Prepare for temporary installation of wireless systems between district and subdivisions in case of any damage to existing wireless system with the department.</li> <li>• Train the communication wing of police in setting up control room at short notice at a required site.</li> <li>• Prepare Contingency Plan for response to bomb blast, riots, terrorist attack and other law and order emergencies.</li> <li>• Prepare deployment plan of home guards and other volunteers for protection of property of affected community.</li> <li>• Prepare for proper arrangement for custody of recovered belongings and property from dead bodies and affected sites.</li> <li>• Police personal and staff of PCR vans should keep basic first aid box and ensure proper functioning of equipment.</li> <li>• Train police personnel and staff of PCR vans in first aid and basic life saving techniques.</li> <li>• Prepare for proper protection to women, girls and children to avoid cases of human trafficking.</li> <li>• Prepare for protection of dead bodies to avoid their theft and false claims.</li> <li>• Prepare for safety and security of food and other commodities.</li> <li>• Prepare for protection against hoarding, black marketing of relief material.</li> <li>• Prepare for safety and security arrangements for evacuated area, affected area, transit camps, relief camps, hospital, medical centre, cattle camps and feeding entrees.</li> <li>• Ensure traffic plan of Police at disposal.</li> <li>• Keep updated telephone Nos and databases of reserved battalions of police, BDS and Dog Squad in police control Room</li> </ul>

5	Home Guards	<ul style="list-style-type: none"> <li>• Ensure proper functioning of all equipment's.</li> <li>• Prepare teams trained in search and rescue, first aid, firefighting, etc.</li> <li>• Prepare a database of volunteers and equipment and update the same in DDMRI. Emergency arrangements in industries and direct for corrective measures, if necessary, with respect to statutory provisions for safety.</li> <li>• Direct the management of industries and units to prepare on-site emergency plan of their units.</li> </ul>
6	Fire Services	<ul style="list-style-type: none"> <li>• Ensure proper functioning of all firefighting equipment's, appliances and respiratory equipment's.</li> <li>• Ensure important buildings should have sketched maps and marked evacuation routes with growing sign.</li> <li>• Ensure regular evacuation drills as per evacuation plans in all important buildings, malls, hospitals, etc.</li> <li>• Make a database of existing firefighting services and facilities provided with private agencies.</li> <li>• Be aware of MAH units and other potential hazardous installations and level of possible emergency required.</li> <li>• Prepare to deal with leakage of flammable toxic substances.</li> <li>• Ensure, at disposal, the list of adverse effects of chemicals and antidotes/ methods to deal with emergency involving each chemical. This is prepared by Department of Industrial Safety and Health. (See annexure VII)</li> <li>• Review the adequacy of existing fire prevention arrangements in each MAH and other hazardous units before and after the installations. Share the report with Department of Industrial Safety and Health.</li> <li>• Identify roads and routes of access and escape to and from MAH and other potential hazardous units.</li> </ul>
7	Health Department	<ul style="list-style-type: none"> <li>• Prepare trained team of paramedics.</li> <li>• Develop dos and don'ts and IEC materials regarding health and hygiene.</li> <li>• Organise awareness camps with help of CHC/PHCs and Development and Panchayat Department for hygiene promotion and public health issues.</li> <li>• Ensure availability of trained mobile medical teams at disposal.</li> <li>• Prepare psychological and psychosocial care teams.</li> <li>• Ensure availability of generator sets and buffer stock of fuel at disposal.</li> <li>• Ensure availability of adequate supply of life saving equipment's and stock of medicines, portable supplies including portable oxygen cylinders, portable X-ray machine, portable ultrasound machines, triage tags, etc.</li> <li>• Ensure availability of adequate space with suitable facilities for storage of medicines.</li> <li>• Prepare a database of private hospitals and nursing homes with services and facilities available.</li> <li>• Prepare a database of doctors registered with Indian Medical Association (IMA). 11. Prepare a database of available ambulance services from government, private agencies and District Red Cross Society, if any.</li> <li>• Ensure, at disposal, list of MAH units and hazardous chemicals stored in them.</li> <li>• Ensure, at disposal, the list of antidotes for various hazardous chemicals. This list is prepared by Department of Industrial safety and Health.</li> </ul>

		<ul style="list-style-type: none"> <li>• Ensure availability of adequate supply of blood units.</li> <li>• Prepare database of blood donors in the district and update the same in DDMRI.</li> <li>• Prepare a database of providers of refrigerated vehicles for transportation of vaccines, blood, blood products, etc.</li> <li>• Train drivers and attendants of ambulance and mobile medical units in first aid and basic life saving techniques.</li> <li>• Prepare a decontamination ward in view of any possible chemical or industrial hazard.</li> <li>• Prepare for prompt establishment of temporary hospital, mobile surgical unit, etc. at short notice, near the affected area.</li> <li>• Ensure proper and safe mechanism for medical waste disposal.</li> <li>• Prepare for proper disease surveillance system.</li> <li>• Make proper arrangement and mechanism for mass casualty management.</li> </ul>
8	District Red Cross Society	<ul style="list-style-type: none"> <li>• Ensure availability of fund for relief materials/ work.</li> <li>• Train and prepare ward and village wise first aid teams.</li> <li>• Prepare database of blood donors in the district and update the same in DDMRI.</li> <li>• Prepare database of trainers &amp; volunteers and update the same in DDMRI.</li> <li>• Prepare a database of voluntary organizations and service they offer, ensure their authenticity, and update the same in DDMRI.</li> <li>• Ensure availability of adequate stock of food items, blankets, clothing including woollens, utensils, first aid kits, stretchers, medicines etc in view of any emergency situation.</li> <li>• Ensure availability of adequate stock of aids (hearing, visual, crutches, artificial limbs, etc.) for physically challenged persons.</li> <li>• Ensure availability of old blankets / gunny bags for animal during cold wave period.</li> </ul>
9	Agriculture Department	<ul style="list-style-type: none"> <li>• Prepare Agriculture Contingency Plan.</li> <li>• Constitute a Crop Weather Watch Group at district level (as per 'A Model Manual for Drought Management', GoI) with representatives from Meteorological Department and concerned officers dealing with agricultural inputs, credit extension, etc. to keep a close watch on the monsoon situation, extreme temperature, hail and wind storm.</li> <li>• Identify vulnerable areas prone to pest infestation, drought, flood and other hazards.</li> <li>• Ensure awareness generation in farmers regarding various plant diseases, alternate cropping practices in disaster-prone areas, crop insurance, provision of credit facilities, proper storage of seeds, etc.</li> <li>• Provide training to farmers in alternate cropping techniques, mixed cropping and other agricultural practices which minimise crop losses during future disasters.</li> <li>• Ensure surveillance for pest infestation and crop diseases.</li> <li>• Ensure availability of stock for immediate replacement of broken/non-functioning gadgets / equipment.</li> </ul>

		<ul style="list-style-type: none"> <li>• Ensure availability of adequate stock of seeds and other agro inputs particularly for areas vulnerable to hazards.</li> <li>• Prepare trained and equipped team for assessment of damage to soil, crop, plantation, drainage, embankment, other water bodies and storage facilities that might impact agricultural activities.</li> <li>• Prepare for establishment of public information booths, with appropriate and modern means of communication, to assist farmers in providing information regarding insurance, compensation, repair of agro equipment's and restoring of agricultural activities at the earliest.</li> <li>• Identify sources of feed and fodder.</li> </ul>
10	Animal Husbandry	<ul style="list-style-type: none"> <li>• Ensure isolation / separation of sick and healthy animals and prepare for arrangements for keeping, feeding and watering of animals suffering from contagious diseases.</li> <li>• Sensitize farmers / owners for above problems.</li> <li>• Ensure separate transportation of animals suffering from contagious diseases.</li> <li>• Ensure proper disinfection of space, vehicle and manpower involved in transportation of sick/infected and dead animal from contagious diseases.</li> <li>• Ensure fully functional mobile veterinary unit at disposal.</li> <li>• Prepare a database of veterinary hospitals/clinics and agencies working for animal care.</li> <li>• Ensure availability of stocks of mineral and feed supplements, lifesaving drugs, electrolytes, vaccines, etc.</li> <li>• Ensure sensitization of farmers about protection of their feed and fodder prior to the onset of monsoon.</li> <li>• Ensure filling feed banks before the scarcity period.</li> <li>• Prepare for the feed of the poultry birds for drought situation.</li> <li>• Locate feed and fodder banks in view of submergence situation during the monsoon.</li> <li>• Identify source for procurement of fodder.</li> <li>• Identify safe locations for fodder depot and cattle camps within the district.</li> <li>• Ensure assured source of water or canals for drinking and growing fodder along with the above locations.</li> <li>• Prepare for necessary arrangements of tatties, gunny bags and tarpaulin sheets to cover the sheds during heat and cold waves.</li> <li>• Ensure availability of sprinklers / foggers in shed / camp during heat waves period.</li> <li>• Prepare for special care for productive, lactating and pregnant animals; also supplement them with additional concentrates and fodder.</li> <li>• Ensure proper administration of deworming and vaccinations for cattle, sheep and goats, pigs and other relevant measures for disease management.</li> <li>• Prepare for arrangements for transportation of critically injured livestock.</li> <li>• Identify space for burial of animals and ensure proper disposal of dead animals.</li> </ul>
11	Bharat Sanchar Nigam Limited	<ul style="list-style-type: none"> <li>• Procure recovery plans from private communication service providers for their recovery time objectives.</li> </ul>

		<ul style="list-style-type: none"> <li>• Prepare for alternate communication System</li> </ul>
12.	Development and Panchayat	<ul style="list-style-type: none"> <li>• Prepare mechanism for proper solid waste management, disposal of waste and removal of debris in shelter and relief camps, feeding centres and affected rural areas.</li> <li>• Prepare for sanitation operations in view of post flood situations.</li> <li>• Ensure availability of tractor trolleys and other required equipment for the same.</li> <li>• Plan to provide building/guest house / dharamshalas at different locations to establish control room, first aid and medical post or shelters during emergency.</li> <li>• Prepare a database of catering services providers.</li> <li>• Prepare mechanism for proper solid waste management and disposal of waste in shelter and relief camps, feeding centres and affected villages.</li> <li>• Prepare for prompt provision of temporary toilets/ trench latrines in the affected area and relief camps in rural area.</li> </ul>
13.	Education Department	<ul style="list-style-type: none"> <li>• Organise awareness generation programs in schools and colleges for students, teachers, administrative staff and other helpers. These programs should focus on dos and don'ts for various hazards and safe evacuation in case of any emergency.</li> <li>• Conduct hygiene promotion activities as per direction issued by the Health Department on a regular basis.</li> <li>• Ensure preparation of first aid and disaster management kit in each school and college.</li> <li>• Ensure preparation of school and colleges disaster management plan.</li> <li>• Identify safe schools and colleges to serve as relief shelter in case of any emergency within that area, only for short period of time.</li> </ul>
14.	Electricity Department	<ul style="list-style-type: none"> <li>• Ensure transmission map at disposal.</li> <li>• Prepare a database of critical and lifesaving infrastructure in the district and prepare for providing uninterrupted power supply to them.</li> <li>• Prepare for providing continuous power supply to the affected area.</li> <li>• Prepare to provide electrical connections and system at short notice in affected areas for purpose of pumping flood water and illumination of the area.</li> <li>• Prepare for prompt replacement/ recommissioning of affected power supply system.</li> <li>• Ensure availability of adequate stock of important equipment like transformers, poles, conductors, cables, insulators, etc. for prompt action whenever required.</li> <li>• Ensure trained construction and maintenance staff at disposal.</li> </ul>
15.	Food & Supplies Department	<ul style="list-style-type: none"> <li>• Prepare a database of godowns and cold storage facilities in the district.</li> <li>• Prepare a database of catering services providers.</li> <li>• Prepare for safety of stored food grains in godowns against inundation and water logging, fire and other possible hazards.</li> <li>• Prepare for out-movement of food grains to a pre-decided safer location, if required.</li> </ul>



		<ul style="list-style-type: none"> <li>• Ensure availability of adequate food grains storage in godowns in view of the scarcity or emergency period.</li> <li>• Prepare a database of kerosene depots, petrol pumps, gas agencies, etc. and update the same in DDMRI.</li> <li>• Ensure availability of adequate stock of gas cylinders, kerosene, etc.</li> <li>• Prepare database of private retailers and wholesalers of edible food items.</li> <li>• Prepare a database of providers of refrigerated vehicles for transportation of perishable food items.</li> <li>• Prepare for large scale movement of food grains, their transportation, expeditious unloading, proper storage and prompt distribution through fair price shops, if required.</li> <li>• Prepare a database of private providers of tents, tarpaulin sheets, poles, kanats, cooking utensils, polythene bags, shrouds and other essential items that could be used for community kitchen and cremation and burial.</li> </ul>
16.	Forest Department	<ul style="list-style-type: none"> <li>• Ensure proper functioning of all equipment and vehicles.</li> <li>• Prepare a database of Ara machine holders, carpenters.</li> <li>• Prepare team for catching wild animals to prevent infiltration in habituated areas, relief camps, etc.</li> <li>• Prepare for supply of wood for cremation.</li> </ul>
17.	Transport/Himachal Roadways	<ul style="list-style-type: none"> <li>• Ensure proper functioning of filling station, vehicles and equipment including fire extinguishers, first aid kits, etc.</li> <li>• Prepare for prompt deployment of vehicles at short notice for various purposes like mass evacuation, transportation of response teams, relief items, victims, etc.</li> <li>• Prepare mechanical team for prompt repair of equipment and vehicles.</li> <li>• Train drivers and conductors in first aid and basic life saving techniques.</li> <li>• Identify the vehicle for rescue operations.</li> <li>• Be well familiar with routes of potential hazardous installations and follow incident traffic plan.</li> </ul>
18.	Irrigation Department	<ul style="list-style-type: none"> <li>• Ensure proper early warning mechanism in place for flood by monitoring water level of surface water bodies.</li> <li>• Ensure proper and timely inspection of conditions of bunds, siphons, regulators, embankments, inlet and outlets of lakes and reservoirs, etc.</li> <li>• Ensure timely de-silting and dredging of rivers and canals, if required.</li> <li>• Ensure prompt repair of channels, if required.</li> <li>• Ensure proper functioning of all equipment including dewatering pumps.</li> <li>• Prepare for the arrangements of clean drinking water for affected livestock and poultry.</li> <li>• Ensure availability and well-functioning of all equipment and vehicles.</li> <li>• Prepare for distribution of water purifying tablets, bleaching powder and chlorination of public water resources, if required.</li> <li>• Prepare for arrangement of safe drinking water supply for surviving community in the affected areas and also in relief camps and shelters. Also prepare for provisioning of water for other purposes.</li> <li>• Prepare a database of suppliers and distributors of packaged drinking water.</li> </ul>

		<ul style="list-style-type: none"> <li>• Prepare for prompt repair of pipelines supplying potable water.</li> <li>• Prepare for prompt repair of sewerage systems and water works.</li> <li>• Make standby arrangements of generators for running the water pumps.</li> <li>• Ensure availability of adequate number of water tankers, drums, jerry cans or identify their private suppliers to prepare for supply of water, in scarcity period and in emergency.</li> <li>• Ensure availability of water supply/ filling points for fire tenders, water cannons, hospitals and other necessary lifesaving infrastructure.</li> <li>• Ensuring filling of water ponds/ lakes in the district with canal water/tube wells prior to summer or whenever required in coordination of Irrigation Department.</li> </ul>
19.	Municipal Council / Committee	<ul style="list-style-type: none"> <li>• Prepare for sanitation operations in view of post flood situations within jurisdiction of the area.</li> <li>• Ensure cleaning of drains before the monsoon season.</li> <li>• Prepare mechanism for proper solid waste management and disposal of waste in shelter and relief camps, feeding centres and affected area.</li> <li>• Ensure availability of tractor trolleys and other required equipment for the same.</li> <li>• Prepare mechanism for proper solid waste management, disposal of waste and removal of debris in shelter and relief camps, feeding centres and affected areas in their jurisdiction.</li> <li>• Plan to provide building/ guest house at different locations to establish control room, first aid and medical post or shelters during emergency in coordination with HUDA.</li> </ul>
20.	Pollution Control Board	<ul style="list-style-type: none"> <li>• Prepare a database of hazardous chemicals and pollutants in the districts and their probable adverse effects on environment.</li> <li>• Prepare for methods and techniques of decontamination of the same.</li> </ul>
21.	Public Relations Department	<ul style="list-style-type: none"> <li>• Prepare for proper public address system ensuring rumour control.</li> <li>• Prepare for media management.</li> <li>• Ensure database of dos and don'ts of all possible hazards in the district.</li> <li>• Ensure distribution of IEC material to community for awareness generation about the same.</li> <li>• Publicise the information in the interest of public awareness through booklets, pamphlets, radio, television, film shows, newspapers, documentary films, door to door campaign, meetings, etc.</li> </ul>
21.	Public Works Department (B&R)	<ul style="list-style-type: none"> <li>• Ensure availability and functioning of all equipment like cranes, JCB, etc.</li> <li>• Prepare a data base of availability of heavy equipment like cranes, JCB with private agencies also.</li> <li>• Ensure, at disposal, the list of MAH units and other vulnerable buildings.</li> <li>• Prepare for prompt clearance of debris.</li> <li>• Prepare the demolishing squad for prompt demolition of unsafe buildings.</li> <li>• Prepare for prompt clearing and repairing of damaged roads, culverts, bridges and flyovers.</li> </ul>

		<ul style="list-style-type: none"> <li>• Prepare for construction of new temporary roads at short notice for diverting traffic from the affected area.</li> <li>• Prepare for construction of temporary facilities like that of medical post, temporary shelters, etc. at short notice.</li> <li>• Prepare for prompt establishment of helipad near the affected site for VVIP visits.</li> <li>• Prepare for restoration of government buildings damaged during disaster.</li> </ul>
22.	Regional Transport Authority	<ul style="list-style-type: none"> <li>• Make a database of private vehicles available with schools, colleges and other private agencies.</li> </ul>
23.	Revenue and Disaster Management Department	<ul style="list-style-type: none"> <li>• Ensure regular monitoring of rain gauge and regular updation of database for distribution and variation in rainfall.</li> <li>• Ensure proper mechanism in place for early warning of different hazards to village level through tehsildars, patwaris, DDPO.</li> <li>• Prepare Flood Control Order by 31st May of each year.</li> <li>• Ensure proper functioning of district Flood Control Room during monsoon period and otherwise, if required.</li> <li>• Identify villages vulnerable to flood and drought.</li> <li>• Prepare a database of critical and lifesaving infrastructure in the district</li> <li>• Prepare a database of safe locations for evacuation.</li> <li>• Identify possible safe sites for temporary shelters, relief camps and staging area.</li> <li>• Ensure availability of fully functional boats, life jackets and oars in view of flood condition of the district.</li> <li>• Prepare a database of voluntary organizations and service they offer. Ensure the authenticity of the same.</li> <li>• Identify competent persons / experts from various required fields for carrying out damage and need assessment post disaster.</li> <li>• Prepare proper mechanism for disbursement of compensation to victims or families of deceased.</li> <li>• Prepare a database of safe locations for relief distribution site for mass care and housing.</li> <li>• Identify site(s) for temporary burial.</li> </ul>

### 5.3 MEASURING COMMUNITY PREPAREDNESS

Generally community preparedness depends upon following four major components:

- Population characteristics (number of children, women, settlement etc.)
- Building and critical infrastructure such as road, drinking water, communication network, health and sanitation
- Physical environment
- Social environment (social groups)

In view of these components, risk assessment study has been conducted and identified by Shimla District. District is densely built and consists of a high number of urban population. Any major earthquake or

fire/chemical explosion can affect district very badly. Although many steps have been taken by the district but still a high degree of awareness and training is required to lay down an organization system within communities.

## **5.4 COMPONENTS OF PREPAREDNESS PLAN FOR DISTRICT SHIMLA (H.P)**

Looking at the complexity of repose mechanism during disasters two sets of components have been included into the revised and updated plan of district Shimla.

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### **5.4.1. COMPONENTS OF COMMUNITY PREPAREDNESS PLAN**

Several previous attempts have been made by researchers to measure community preparedness within various indicators. Some of the important components of measuring preparedness are given below:

- **Physical Safety:** It is concerned with the safety of the community members in view of the physical danger from these hazards. The parameters essentially tries to measure how effective structural mitigation measures are e.g. resistance of building structures for earthquakes, availability of safe shelters and its capacity etc.
- **Hazard awareness** i.e. awareness level about hazards which have a reasonably higher probability of occurrence.
- **Organization preparedness** i.e. how far the community is prepared to face disaster i.e. existence of committee at community level, task forces, volunteers of civil defence and other local volunteers , trained disaster management teams and community disaster management plan etc.
- **Infrastructure and services** which tries to measure current state of these services and how well restoring critical services are when disaster or any other calamity occur.
- **Recovery ability** i.e. ability of the community members to recover from the impact of the hazard.
- **Physical environment** i.e. State of environment to face hazards e.g. Condition of land surface, strata, soil and vegetation etc.
- **Social capital** i.e. degree to which social networking and cooperation exists among community members.
- **Psychological preparedness** i.e. how safe and prepared do community members feel in view of these hazards.
- **Cultural capital** i.e. cultural richness such as existence, recognition and use of traditional mechanism to cope with such disasters.
- **Household preparedness** i.e. preparedness of household members.

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### **5.4.2. COMPONENTS OF ADMINISTRATIVE PREPAREDNESS**

Administrative preparedness is another very important issue which helps in reducing relief and response time in a disastrous situation. Preparedness plan is based on below given components

- **Operation readiness** of facilities, equipment's and stores in advance.
- **Maintaining response inventory** of equipment's and materials required for response.
- **Assignment of responsibilities** to agencies and organizations.
- **Management training** of crisis group members, desk officers and officers of respective departments likely to be assigned management duties.

- Specialized trainings of district disaster committee members, officials, community organizations through seminars and workshop.
- Training of taskforces
- Raising community awareness
- Improving response mechanism through conducting practice drills etc.
- Annual updating of District and community level plans

**Table 5.2: Responsibility of various Stakeholders**

Name of the Stakeholders	Tasks and responsibilities
BSNL – Communications	<ul style="list-style-type: none"> <li>• Responsible for coordination of district level actions to assure the provision of telecommunication support;</li> <li>• Coordinate the requirement of temporary telecommunication in the affected areas;</li> <li>• Coordinate for the other network providers available to ensure timely restoration of the communication facilities;</li> <li>• BSNL has to coordinate and support Police Wireless systems to be setup at the time of emergency</li> </ul>
Department of Health and Family Welfare – Public Health	<ul style="list-style-type: none"> <li>• To coordinate, direct and integrate response;</li> <li>• Direct activation of medical personnel, supplies and equipment;</li> <li>• Provide systematic approach to patient care, Perform medical evaluation and treatment as needed;</li> <li>• Maintain patient tracking system to keep record of all patients treated;</li> <li>• Mass casualty Management</li> <li>• Mobilization of the private health services providers for emergency response.</li> <li>• In the event of CBRN disaster to provide for mass decontamination of the affected population;</li> <li>• Maintain record of dead and arrange for their post mortem.</li> <li>• Check stocks of equipment and drugs.</li> <li>• Arrangement of mobile hospitals for remote areas, also in case of damage to hospital building in the disaster provision to setup medical facilities in open area</li> </ul>
Irrigation and Public Health in Coordination with Urban & Rural Development Department - Sanitation / Sewerage Disposal	<ul style="list-style-type: none"> <li>• Make arrangement for proposal disposal of waste in their respective areas;</li> <li>• Arrange adequate material and manpower to maintain cleanliness and hygiene.</li> <li>• To arrange for the disposal of unclaimed bodies and keeping record thereof;</li> <li>• Hygiene promotion with the availability of mobile toilets;</li> <li>• To dispose of the carcass.</li> </ul>
HPSEB Ltd. – Power	<ul style="list-style-type: none"> <li>• Support to Local Administration;</li> <li>• Review the total extent of damage to the power supply installations by a reconnaissance survey;</li> </ul>

	<ul style="list-style-type: none"> <li>• To provide alternative means of power supply for emergency purposes;</li> <li>• Dispatch emergency repair teams equipped with tools, tents and food;</li> <li>• Hire casual labour for the clearing of damaged poles etc.</li> <li>• Make arrangement for and to provide the alternative sources of lighting and heating to the affected populations and for the relief camps.</li> </ul>
Department of Transport in coordination with HRTC, Civil Aviation, GAD-Transportation	<ul style="list-style-type: none"> <li>• Overall coordination of the requirement of transport;</li> <li>• Make an inventory of vehicles available for various purposes;</li> <li>• Coordinate and implement emergency related response and recovery functions, search and rescue and damage assessment.</li> <li>• Coordinate arrangement of vehicles for transportation of relief supplies from helipads/airports to the designated places;</li> <li>• Coordinate arrangement of vehicles for transportation of SAR related activities.</li> <li>• Act as stocking place for fuel for emergency operations;</li> </ul>
Civil Defence, Home Guards, Fire and Emergency Services - Search & Rescue	<ul style="list-style-type: none"> <li>• Establish, maintain and manage state search and rescue response system;</li> <li>• Coordinate search and rescue logistics during field operations;</li> <li>• Provide status reports of SAR updates throughout the affected areas.</li> <li>•</li> </ul>
HP PWD - Public Works and Engineering In close coordination with CPWD, National Highways Authority of India, MES, BRO	<ul style="list-style-type: none"> <li>• Emergency clearing of debris to enable reconnaissance;</li> <li>• Clearing of roads;</li> <li>• Assemble casual labour;</li> <li>• Provide a work team carrying emergency tool kits, depending on the nature of disaster, essential equipment such as Towing vehicles, Earth moving equipment, Cranes etc.</li> <li>• Construct temporary roads;</li> <li>• Making machinery and manpower available to the PWD and to keep national highways and other facilities in functional state.</li> <li>• Adequate road signs should be installed to guide and assist the relief work;</li> <li>• Clearing the roads connecting helipads and airports;</li> <li>• Restoring the helipads and making them functional;</li> </ul>
DEOC – Information & Communication with support from DIO / NIC	<ul style="list-style-type: none"> <li>• Operate a Disaster Welfare Information (DWI) System to collect, receive, and report and status of victims and assist family reunification;</li> <li>• Apply GIS to speed other facilities of relief and search and rescue;</li> <li>• Enable local authorities to establish contact with the state authorities;</li> <li>• Coordinate planning procedures between district, the state and the centre;</li> <li>• Provide ready formats for all reporting procedures as a standby.</li> <li>• Documentation of response/ relief and recovery measures;</li> <li>• Situation reports to be prepared and completed every 3-4 hours.</li> </ul>
Drinking water – IPH In Association with Urban & Rural Development	<ul style="list-style-type: none"> <li>• Procurement of clean drinking water;</li> <li>• Transportation of water with minimum wastage;</li> <li>• Special care for women with infants and pregnant women;</li> </ul>

	<ul style="list-style-type: none"> <li>• Ensure that sewer pipes and drainage are kept separate from drinking water facilities.</li> <li>• Support to local Administration;</li> <li>• Water purification installation with halogen tablets etc.</li> </ul>
<p>Shelter - Department of Revenue</p> <p>In association with HIMUDA, HP PWD, UD and Panchayati Raj</p>	<ul style="list-style-type: none"> <li>• Provide adequate and appropriate shelter to all population;</li> <li>• Quick assessment and identifying the area for the establishment of the relief camps;</li> <li>• Identification of public buildings as possible shelters;</li> <li>• Identifying the population which can be provided with support in their own place and need not be shifted reallocated;</li> <li>• Locate relief camps close to open traffic and transport links.</li> <li>• Locate adequate relief camps based on survey of damaged houses;</li> <li>• Develop alternative arrangements for population living in structures that might be affected even after the disaster.</li> </ul>
<p>Media - Department of Public Relations</p> <p>In Association with Local DD and AIR</p>	<ul style="list-style-type: none"> <li>• To Provide and collect reliable information on the status of the disaster and disaster victims for effective coordination of relief work at state level;</li> <li>• Not to intrude on the privacy of individuals and families while collecting information;</li> <li>• Coordinate with DOCs at the airport and railways for required information for international and national relief workers;</li> <li>• Coordinate with all TV and radio networks to send news flashes for specific needs of Donation;</li> <li>• Respect the socio-cultural and emotional state of the disaster victims while collecting information for dissemination.</li> <li>• Use and place geographical Information to guide people towards relief operation;</li> <li>• Use appropriate means of disseminating information to victims of affected area;</li> <li>• Curb the spread of rumours;</li> <li>• Disseminate instructions to all stakeholders.</li> </ul>
<p>Law &amp; Order - Police</p> <p>In association with Home Guards</p>	<ul style="list-style-type: none"> <li>• Having sound communication and security plan in place to coordinate law and order issues;</li> <li>• Training to security personnel in handling disaster situations and issues related to them.</li> <li>• To maintain law and order;</li> <li>• To take measure against looting and rioting;</li> <li>• To ensure the safety and security of relief workers and material;</li> <li>• To take specific measure for the protection of weaker and vulnerable sections of the society;</li> <li>• To provide safety and security at relief camps and temporary shelters.</li> </ul>
<p>Animal Care - Department of Animal Husbandry</p>	<ul style="list-style-type: none"> <li>• Treatment of animals;</li> <li>• Provision of vaccination;</li> <li>• Disposal of dead animals.</li> </ul>



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|--|--|
|  | <ul style="list-style-type: none"> <li>• To arrange for timely care and treatment of animals in distress;</li> <li>• Removal of dead animals to avoid outbreak of Epidemics</li> </ul> |
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### 5.4.3. EMERGENCY OPERATION CENTRE (EOC)

Establishment of Emergency Operation Centre (EOC) to ensure coordination at district headquarter among community organizations, district level organizations and State government during preparedness and response phase, EOC has to play an important role. Directing the operations at the affected site, the need for coordination at the district headquarter and the need for interaction with the state government to meet the conflicting demand at the time of disaster is the responsibility of the District Magistrate and his team. District EOC helps District Magistrate and his team to meet these conflicting demands. Keeping this in view, District Magistrate has established an EOC at district level. The building of District Magistrate Office is a temporary one and will shift to another place in future; therefore a temporary EOC has been established in the office. The EOC would be responsible to facilitate following activities.

#### Activities of EOC

- i. To ensure that warning and communication systems are in working conditions
- ii. Collection and compilation of district level information related to hazards, resources, trained manpower etc.
- iii. Conducting district, sub-division and community level mock drills
- iv. Networking and coordination with community, district and state level departments
- v. Monitoring and evaluation of community and inter-intra organization level disaster management plans
- vi. Develop a status report of preparedness and mitigation activities under the plan
- vii. Allocation of tasks to the different resource organizations and decisions making related to resource management
- viii. Reviewing and updating response strategy
- ix. Supply of information to the state government

Facilities with EOC Presently, the District Emergency Operation Centre is operating in 24/7 mode well-equipped with computer, wireless and telephone facilities. In future, EOC would include a well-designed control room with workstation, hotlines and intercoms by the year 2017.

Following other facilities shall be made available within the EOC:

- i. A databank of resources, action plans, district disaster management plan, and community preparedness plan would be maintained at EOC.
- ii. Maps indicating vulnerable areas, identified shelters, communication link system with state government and inter and intra district departments.
- iii. Inventory of manpower resources with address, telephone numbers of key contact persons has been maintained.
- iv. EOC have to identify desk arrangements during disaster situations

## 5.5 PREPARATION OF DISABILITY INCLUSIVE PLAN

Persons with Disabilities have difficulty in moving, hearing, seeing, communicating and/or learning. They have the same needs and perform the same activities as other members of the community (eating, dressing, working, etc.). However, persons with disabilities (PWDs) may need special support related to their disability and their living environment (assistive devices, caregiver, a modified physical environment or equipment) to enable them to participate fully in these daily activities. In an emergency situation, when all members of the community are placed in a vulnerable situation, a disabled person may face special challenges if these special needs are not met. Moreover, early warning provides a very important link between preparedness measures and response action, which in turn reduces the risk of exposure and injury of community members. A comprehensive early warning system is very important in any community, however, even more so in a community having disabled persons as they are frequently overlooked in disaster situations.

**Table 5.3: Type of impairments and warning systems**

Types of Impairments / Disabilities	Warning System
Visual Impairment	Auditory Signal System / Alarms Announcements Posters written with large characters and colour contrast
Hearing Impairment	Visual Signal Systems - Red Flag, Symbols Pictures Turn lights off-on frequently
Intellectual Impairment	Special Signals- Red flag, Symbols Clear and brief announcements by rescue workers
Physical Impairment	Auditory Signal System / Alarms Announcements

## 5.6 SEARCH & RESCUE

**Table 5.4: Search & rescue Team**

Designation of trained S&R Team member
<p>The Search &amp; Rescue team is formed as and when required and the members and equipment are taken according to the nature of the disaster (and also on their availability)</p> <ul style="list-style-type: none"> <li>• Police Officers (2 or more)</li> <li>• Home guards (2 or more)</li> <li>• Swimmers (In case of flood)</li> <li>• A construction engineer (From P.W.D.)</li> <li>• Driver (For Every vehicle)</li> <li>• Any person with the prior experience of the disaster (From Home Guard/Police Dept.)</li> <li>• A doctor or nurse or at least a person having first aid training</li> <li>• A Class IV Officer (Health Dept.)</li> </ul>

## 5.7 EARLY WARNING

Hazards	Warning Agency	Contact Details
Earthquake	Center: (IMD) Indian Meteorological Department / NEOC State: SDMA/SEOC District: DDMA/ DEOC	011-24619943 / 24624588 <a href="http://www.imd.gov.in">www.imd.gov.in</a> 1071 (National Helpline) 1070 (State Helpline) 1077 (District Helpline)
Landslide	(GSI) Geological Survey of India SDMA/SEOC DDMA/ DEOC	0172-2622529 Fax 0172-2621945. Mob: 094173-71954. <a href="mailto:Joginder.singh@gsi.gov.in">Joginder.singh@gsi.gov.in</a>
Heavy Rain / Snowfall / avalanche	(IMD) Indian Meteorological Department / SEOC DEOC	0177-2626211 <a href="http://www.weathershimla.gov.in">www.weathershimla.gov.in</a> 1070 1077
Flood/ Flash Flood	(CWC) Central Water Commission Irrigation and Public Health Dept. SEOC DEOC	0183-236105 1070 1077
Domestic / Forest Fire	Department of Fire Services/ Department of Forest	101
Epidemics	Health and Family Welfare Department	102/108
Human Induced Hazards	Himachal Pradesh Police	100

As soon as the warning of an impending calamity is received, the EOCs at the State, District and Block levels will be on a state of alert. The Incident Commander will take charge of the EOC and oversee the dissemination of warning to the community. The District Collector will inform the District Disaster Management Committees who will alert the local and Village level DMCs and DMTs to disseminate the warning to the community. On the basis of assessment of the severity of the disaster, the State Relief Commissioner (Incident Commander) shall issue appropriate instructions for the actions to be taken including evacuation. District Collector, will then supervise evacuation. In situations of emergency, the District Collector will use his own discretion on the preparedness measures for facing the impending disaster. At the village level members of the VDMCs and DMMs will coordinate the evacuation procedures to the pre-designated relief centres, taking special care of the vulnerable groups of women, children, old people etc. according to the plans laid down earlier.

**Operational check-up of Warning System:** Warning systems are checked periodically like, Satellite phone, Hot Line, Telephone connection, connectivity etc., In Pre-Monsoon meeting District Administration also give direction for checking warning system like, port signals.

## 5.8 EVACUATION

The plan allocates responsibility for management of each of the elements of shelter. Considering the wide range of services, agencies and issues to be managed, it becomes essential for 'shelter' to be managed within a structure, which facilitate the coordination of agencies and services and support of emergency workers. The following factors will be taken under consideration:

- Identification of appropriate shelter areas based on safety, availability of facilities, capacity and number of victims
- Approaches to the shelter location in light of disruption due to hazard impact and traffic blockades
- Temporary accommodation
- Provision of essential facilities like drinking water, food, clothing, communication, medical, electrical and feeding arrangements, etc.
- Security
- Financial and immediate assistance
- First-aid and Trauma counselling

## 5.9 DAMAGE & LOSS ASSESSMENT

Immediately after the disaster, there is an urgent need of damage assessment in terms of loss of life, injury and loss of property. The objectives of damage assessment are to mobilize resources for better rescue and relief, to have detailed information of damage extent and disaster and to develop strategies for reconstruction and restoration facilities. Damage is assessing with regard to building stock, standing crops, agricultural area, livestock lost, forest cover decimated, vital installations etc. In damage assessment of building stock, generally three types of flags are used; green, yellow and red. The green colour is given to the buildings that are safe and require 2-3 days to return to their original function. Yellow flags depict the considerable damage to the buildings and considered unsafe for living, as they require proper structural repairs and careful investigation. The red flag is assigned to buildings that are partially or completely collapsed. Immediately after a disaster event, damage assessment will be conducted in 2 phase's viz. Rapid Damage Assessment and Detailed Damage Assessment

## 5.10 CHECK AND CERTIFICATION OF LOGISTICS, EQUIPMENT AND STORES

Shimla District has various types of logistics and equipment. It will be checked and certified by concerned officer periodically. Disaster Management cell is regularly monitoring this activity and got certification of this equipment. (Detail information of Equipment is given in Annexure)

## 5.11 OPERATIONAL CHECK-UP FOR EMERGENCY OPERATION CENTRE

Operational check-up of Emergency Operation Centre are carried out month wise and check out all facility and equipment in DEOC and more about DEOC.

## 5.12 NGOS AND OTHER STAKEHOLDERS' COORDINATION

***Identification of their strengths and allocation of responsibilities in area / sector / duty / activities – Activate NGO coordination cell***

NGO and Voluntary group are doing very important activity and response during disaster. DDMA also organized capacity-building programmers, awareness programmers on Disaster Management for NGO and Voluntary group. For arrangement of water supply, temporary sanitation facilities, search and Rescue activity, Relief distribution can be sought with help of special agencies, NGOs and CBOs. (Information of NGO and Voluntary group refer Annexure)

### 5.13 AWARENESS GENERATION

As a part of Preparedness Awareness, generation among community will be continuous process. From District to Taluka, Village level awareness programme must be conducted with the help of Print Media, Electronic media, folk media authority can create awareness among community.

**Table 5.5: Awareness activity and responsible dept.**

Task	Activity	Responsibility
Information, Education and communication	Advertisement, hoarding, booklets, leaflets, banners, shake-table, demonstration, folk dancing and music, jokes, street play, exhibition, TV Spot, radio spot, audio-visual and documentary, school campaign, Rally, - Planning and Design - Execution and Dissemination	Information Dept. Education Dept. All line dept. Dist. Collectors Chief officer Other Dist. Authorities

### 5.14 COMMUNITY WARNING SYSTEM-EARLY WARNING SYSTEM (EWS)

Shimla district had taken the preparedness measures from village level to District level. At the Village level, village Task forces were formed and trained about First aid and Health, Search and Rescue and Disaster Management. Some volunteers were also trained in Disaster Management and plans like VDMP were prepared and updated. Officers reviewed the disaster preparedness of the villages and interacted with the Village level Disaster Management team members, in the pre-monsoon meeting all departments and stakeholders were asked to prepare departmental plan. SOP's were also discussed with them so that quick response can be assured and any kind of risk due to water logging, flood, heavy rainfall and dam overflow can be reduced.

### 5.15 MEDIA MANAGEMENT

The role of media, both print and electronic, in informing the people and the authorities during emergencies becomes critical, especially the ways in which media can play a vital role in public awareness and preparedness. Media through educating the public about disasters; warning of hazards; gathering and transmitting information about affected areas; alerting government officials, helping relief organizations and the public towards specific needs; and even in facilitating discussions about disaster preparedness and response. During any emergency, people seek up-to-date, reliable and detailed information. The District Government has established an effective system of collaborating with the media during emergencies. At the District Emergency Operation Centre (SEOC), a special media cell has been created which is made operational during emergencies. Both print and electronic media are regularly briefed at predetermined time intervals about the events as they occur and the prevailing situation on ground.

## 5.16 DOCUMENTATION

Documentation is very important activity in disaster management. DDMA also appoint duty for Documentation to the information department. Documentation should be in good manner. It should be reliable and authentic. It can be detailed or summarised form.

## 5.17 GENERAL PREPAREDNESS CHECKLIST FOR THE DISTRICT SHIMLA

- i. Deputy Commissioner, Shimla (H.P.) shall ensure that preparedness checklist is duly followed by each frontline department and status of the same is discussed in monthly meetings.
- ii. Head of department of each frontline department shall ensure that the departments are prepared to meet the challenges of any emergency/ disaster by duly following the preparedness checklists.
- iii. Nodal officers of each of the frontline departments shall ensure quarterly updation of District Disaster Management Resource Inventory and submission of the same to District Revenue Officer, Shimla (H.P.) by:
  - a. Adding to it any changes in the human resources of their department along with their updated contact numbers, if any.
  - b. Adding to the equipment list, relevant resources for response activities from both the government and private sector.
- iv. DRO shall ensure that the same has been updated and uploaded on website of District Administration on quarterly basis with the help of District Information Officer (DIO).
- v. Nodal officers of each of the frontline departments shall also report to Head of Department and/or Deputy Commissioner, Shimla (H.P.) about requisition of any relevant resource/equipment, not available with the Government and/or private sector, for disaster management activity.
- vi. District Disaster Management Authority (DDMA), Shimla (H.P.) shall ensure the establishment of Emergency Operation Centre, Shimla (H.P.) with the following:
  - a. Proper space for Planning and Logistics Section Chief and staff.
  - b. Proper space for control room with adequate communication equipment's including landline telephones, mobile phones, satellite phones, walkie-talkie, ham radio, computer/ laptop with printer facility, email facility, fax machine, television, etc.
  - c. Ensure power backup facilities along with availability of generator set.
  - d. Ensure proper space for meeting, conference, media briefing along with LCD, computer and video conferencing facilities.
  - e. Availability of District Disaster Management Resource Inventory, Shimla (H.P.) and also of the neighbouring districts (Hamirpur, Kangra, Solan, Bilaspur, Hoshiarpur, Rupanagar), Disaster Management Resource Inventory of the state and also of critical national resources.
  - f. Availability of Hazard Seasonality Map of Shimla (H.P.) district.
  - g. Availability of District Disaster Management Plan, Shimla (H.P.)

## 6. CAPACITY BUILDING AND TRAINING MEASURES

### 6.1 INTRODUCTION AND APPROACH

Developing a DDMP without building capacity or raising awareness amongst stakeholders can be detrimental to the development of a successful and sustainable plan. Stakeholders and communities are critical components to a successful, long-term, sustainable disaster management plan. Capacity Building develops and strengthens skills, competencies and abilities of both Government and non-government officials and communities to achieve their desired results during and after disasters, as well as preventing hazardous events from becoming disasters.

DDMA Shimla has been doing CBT activities in past years and planned for further measures to minimize the response time and mitigate the disaster risk. Following training cum Orientation Programme are already organised by DDMA Shimla:

- One day sensitisation programme for 50 school teachers on 11<sup>th</sup> of April 2016 at DC Office Shimla to Commemorate the Kangra Earthquake anniversary of 4<sup>th</sup> April, 1905.
- Regional Training Programme under Hazard, Vulnerability and Risk Assessment (HVRA) Himachal Pradesh Project
- Comprehensive Capacity Building Programme on basic Disaster Management for Civil Defence / Home Guards / NYKS / Red Cross / NCC / NSS volunteers
- Samarth 2016 with coordination with HPSDMA
- Formation and Training of Task Forces on following topics : i) Early Warning ii) Search & Rescue iii) First aid iv) water, sanitation and Hygiene v) Shelter Management (at Rohru & Theog Sub-Divisions of the District)
- District Level ToT on role of Panchayati Raj Institutions (PRIs) in Disaster Management from 21<sup>st</sup>-25<sup>th</sup> June, 2016
- Courses for the member of Panchayati Raj Institutions (PRIs) at Dodra Kwar and Rampur sub-division

### 6.2 TRAINING & CAPACITY BUILDING

To enhance organizational and capability skills to deal with emergency situations requires trainings and capacity building exercises of the various linked government and non-government officers. Since disaster management is a multi-organizations effort, it emphasizes on trainings in execution and coordination as well. Therefore wide ranges of trainings related to management skills are highly required for potential officers in order to equip them for specialized disaster related tasks. They require orientation of various aspects of crises management such as

- Skill training,
- Planning,
- Trainings on Emergency Response Functions such as first-aid, search and rescue, emergency operation center, emergency feeding and welfare, communication and damage assessment etc.
- Trainings for coordinated disaster management activities and response operations are highly required especially for the persons engaged in emergency services, government – line departments, non-government organizations and important private sector groups



- Training requirements are likely to comprise of core activities of emergency management such as Incident Response System, Emergency Response Functions and basic management skills. Persons to be trained shall be:
- Government Officers at par with the rank requirement under Incident Response System
- Team leaders and members under Emergency Support functions
- Quick Response Teams at headquarter and field level
- Community level taskforces including Volunteers, NGOs and home guard volunteers, school and college students, NCC and NSS scouts and NYKS etc.

District Administration can organize seminars and workshops with the help of State disaster management authority, Civil Defence and Home Guard, Firefighting department, Health departments etc. A record of trained manpower shall be maintained by each department and their representation shall be noticed during mock-drill.

### 6.3 INSTITUTIONAL CAPACITY-BUILDING

Institutional capacity-building will be structured upon a level-system that will be designed to bring officials and professionals from multiple fields and skill-sets at the district level. The District Disaster Management Authority, Shimla will utilize the abilities and expertise of representatives from following agencies, structured in the form of levels on the basis of priority.

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#### 6.3.1. CAPACITY-BUILDING

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##### 6.3.1.1. CDM / HIMACHAL INSTITUTE OF PUBLIC ADMINISTRATION (HIPA)

The HIPA holds responsibility at the State level for conducting training programs on Disaster Management in all the districts of Himachal Pradesh as well as in District Shimla. The trainings take place over three to five days and involve district officials from various departments, as per the specificities of the training being conducted. Trainings are conducted in the Institute of Shimla as well as within the districts, for which officials are nominated by the District Administration. It is incumbent upon these officials to attend the trainings for which they have been nominated, and upon completion of the program, they shall receive certification from HIPA. Then officials in charge of updating the DDMP, Shimla are also responsible for keeping track of all trainings conducted and at the time of updating the plan, they are to include the names and contact details of all officials from Shimla district who have attended any disaster management related training in the past six months. This will ensure the availability of trained human resources capable of dealing with disasters at the district level.

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##### 6.3.1.2. (DDMA) DISTRICT DISASTER MANAGEMENT AUTHORITY / HODS:

The key role of capacity-building and training of district level officials in Shimla lies with the District Disaster Management Authority (DDMA, Shimla). The Authority will ensure that participants from various departments are nominated for the various disaster management related trainings conducted by CDM, HIPA and any other State / National / International bodies or authorities that is competent to conduct/organise trainings in the field of disaster management. The role of the DDMA will, thus, be predominantly that of coordination and monitoring. Furthermore, capacity building at the institutional level should be done by carrying out various activities under the District Supportive Staff (DSS) Programme of UNDP–India. The DDMA will also be responsible for ensuring that the Heads of Department (HODs) of the

following departments discharge their responsibility of nominating officials from their departments for various disaster management trainings pertaining to their specific areas of work.

Nature of training	Target departments	Potential training institutes	Frequency	Timeline and Approach
Training doctors on emergency response	H&FW, CMOs, SMOs, MSs, Nurses, Medical Support staff from all district & Zonal Hospitals	EMRI, Red Cross, AIIMS Delhi	Quarterly	Long term / existing institutions
Training doctors on Mass casualty management	Surgeons, Paramedics from all district & Zonal Hospitals	St. John Ambulance, IFRC (Red Cross), AIIMS Delhi	Half Yearly	Short term / outside institutions
Training of Departmental Heads in the District	All the Head of Departments in the District, SDMs, BDOs, Tehsildars	DDMA, UNDP	Half Yearly	Medium term using local as well as outside institutions
Training of Engineers, Architects	Town & Country Planning, Urban Development, HIMUDA, Rural Development	IIT Mandi, NIT Hamirpur, IIT Roorkee	Half Yearly	Short term / outside institutions
Training of Teachers	Schools, Colleges, Department of Education	DDMA, UNDP	Annually	Medium term using local as well as outside institutions
Comprehensive training for DDMA district and sub division level officials	DDMA, Line departments, Officials from Municipality, Officials from and Sub division level officials	DDMA / HIPA	Annually	Regular
Relief Management	DDMA, Line departments, Officials from Municipality, Officials from and Sub division level officials	DDMA/HIPA	Annual	Regular
Search and Rescue Training	Police, Fire, Home Guards and Civil Defence	NDRF	Half yearly	Long term

**The HOD must ensure:**

**i. Agriculture / Horticulture Department**

- a. Formation and training of a Weather Watch Group for the purpose of monitoring crops in the district.
- b. Putting in place disaster management protocols for hazards of drought, flood, hailstorm, etc.
- c. Provision of training to farmers in alternate cropping techniques and mixed cropping.
- d. Formation of Rapid Damage Assessment Teams who will be capable of assessing the condition of soil, fields, irrigation systems and any other damage to crops and produce in post-disaster situations.

- ii. Animal Husbandry**
  - a. Training of Staff for reducing attacks stray animals and control of their population.
  - b. Formation of Rapid Damage Assessment teams capable of examining and assessing damage caused to livestock, feed and fodder, and other things within the domain of animal husbandry.
- iii. Civil Defence & Home Guards**
  - a. Provision of trainings for volunteers in Search and Rescue (SAR), First Aid, Traffic Management, Dead Body Management, Evacuation, Shelter and Camp Management, Mass Care and Crowd Management etc.
  - b. The purchase of SAR equipment's through the appropriate channels of the District Administration.
- iv. District Red Cross Society**
  - a. Provision of training for the preparation of ward-level and village level First Aid teams.
  - b. Ensure organisation of blood donation camps on a regular basis during normal times.
  - c. Organise drives to recruit volunteers to help with blood donation camps and other activities.
- v. Education Department**
  - a. Formation and training of damage and needs assessment teams within the department.
  - b. Provision of trainings in First Aid and basic survival skills for teachers and students in the district.
  - c. Education and awareness programs should be designed in such a way so that the disaster management education in the school/ college curriculum could be included.
  - d. Capacity-building at the institutional level should be done by carrying out various activities under the School Safety Programme (SSP).
- vi. Electricity Department**
  - a. The timely purchase of electric equipment's necessary for maintaining state of adequate preparedness and for speedy and efficient disaster response, through the appropriate channels of the District Administration.
  - b. To make the response task force for dealing power problems and provide trainings on electrical safety to departments and community.
- vii. Forest Department**
  - a. Formation and training of teams within the department for catching wild/ escaped animals who pose a threat to human safety.
  - b. To generate awareness among community on Forest Fires.
  - c. To generate awareness on afforestation among communities.
- viii. Himachal Pradesh Road Transport Corporation**
  - a. Provision of training to drivers, conductors and staff in First Aid and basic life saving techniques
  - b. Adequate stocking / replenishing of First Aid kits and maintenance of fire extinguishers in all vehicles and depots in the district.
- ix. Health Department**
  - a. Formation and training of damage and needs assessment teams within the department.
  - b. Provision of trainings for Quick Response Medical teams (QRMTs) of paramedics, mobile medical teams, psychological first aid teams and psycho-social care teams.
  - c. Timely procurement / purchase of portable equipment for field, hospital diagnosis, triage, etc.
  - d. Provision of trainings for health attendants and ambulance staff in First Aid and life-saving techniques.
  - e. Provision of training to members of local communities in health and hygiene practices.
  - f. Capacity-building at the institution all level should be done by carrying out various activities under the Hospital Emergency Preparedness Programme (HEPP).
- x. Irrigation Department**

- a. Provision of trainings to all human resources with regard to early-warning for flood.
- b. The timely purchase of early warning and communication equipment through appropriate channels of the District Administration.

**xi. Development and Panchayat Department**

- a. Providing Awareness or Trainings among community on Disaster Preparedness.
- b. Provision of training for formation of teams to engage with the issues of hygiene and sanitation at the village level through the Gram Panchayats.

**xii. Police Department**

- a. The efforts of the police go a long way in and avoid or control chaos at affected sites. They also help prevent human trafficking which is increasingly common in the after math of disasters.
- b. The trained police personnel should be placed on record within a district-level database of persons trained in disaster management .Trainings for the police personnel are thus, an important aspect of capacity-building in the district. District police also receives training specific to the role of the department from the Himachal Police Academy (HPA) in Shimla district.

**xiii. Fire Services Department**

- a. For capacity-building, Fire Services in Shimla district should be made responsible for conducting fire-safety trainings for all district officials as well as for societies, shopkeeper associations, etc. from time to time.
- b. Himachal Fire Services should also be made responsible for conducting safety audit so of various government and civilian buildings in order to check whether they are compliant with fire-safety norms.
- c. Furthermore, the Fire Services should conduct mock-drills for firefighting and evacuation procedures regularly, following a schedule stipulated by the District Disaster Management Authority (DDMA –Shimla). Training programs on disaster management that are relevant to the role of the Fire Services are conducted by CDM, HIPA from time to time, and the District Administration, Shimla should ensure that fire personnel are deputed for such trainings. The trained Fire Services personnel should be placed on record with in a district level database of persons trained in disaster management. Such trainings are thus an important aspect of capacity-building in the district.

In addition to these Disaster Risk Reduction (DRR) specific Capacity Building & Training initiatives of the Line Departments, these departments would include Disaster Mitigation and Preparedness as one of the integral part in the regular trainings conducted by these departments in consultation with DDMA.

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### 6.3.2. LEVEL-2 CAPACITY BUILDING

#### 6.3.2.1. CIVIL ENGINEERS (STRUCTURAL CAPACITY-BUILDING)

There is strong evidence that appropriate engineering intervention can significantly reduce the risk of disasters. Civil engineers also play an important role in post-disaster conditions – in rescue operations, damage assessment and the retrofitting of structures. Civil engineers need to keep themselves updated about the latest research and developments in construction technology, advances in construction materials and analysis or design procedures. Civil engineers should also take support from other branches of engineering for the better planning, execution and functioning of their building and infrastructure projects. Trainings to Civil Engineers will be provided by CDM, HIPA. Furthermore, at the district level, civil engineers will conduct training of masons for construction of earthquake-resistant structures. Such trainings will be facilitated by the DDMA.

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### 6.3.2.2. CORPORATE, PROFESSIONALS

National Disaster Management Framework emphasizes on the 'involvement of corporate sector in awareness generation and disaster preparedness and mitigation planning'. Keeping in mind the need to mainstream disaster management concerns at multiple levels of the corporate sector, the following steps should be taken into consideration:

- i. Through Corporate Social Responsibility (CSR), Corporate can assist in development projects, and thus help enhance the capacity at the district-level.
- ii. Conducting mock-drills at regular intervals to determine efficacy of Disaster Management plans.
- iii. Large-scale association with awareness generation initiatives aimed at building the knowledge, attitude and skills of the common people for a safer habitat.
- iv. To move away from relief centric approach to a pro-active approach through risk management measures and capacity building of industrial personnel through Business Continuity Planning (BCP), trainings and other measures.
- v. Training of a core team of structural engineers for retrofitting of existing industrial infrastructure as per requirement

## 6.4 STRENGTHENING OF DISTRICT (EOC)

As mentioned in previous Chapter, the Emergency Operations Centre (EOC) contains important equipment's and resources such as maps and communication equipment's including landline telephones, mobile phones, walkie-talkie, computer/laptop with printer facility, email facility, fax machine, television, etc. In addition, it will also contain printers, power sources and backups, copies of plans, etc. It is crucial to strengthen the district-level EOC. This can be done by:

- Ensuring regular training of all staff meant to be present in the EOC.
- Video-conferencing equipment
- Satellite Phones with annual subscription
- Wireless Phone Setup in the EOC
- Training and provision of HAM Radios

## 6.5 CAPACITY-BUILDING AT THE COMMUNITY LEVEL

Community Disaster Management Planning is one of the vital components of community preparedness. It involves all important parameters related to hazard awareness, evacuation planning, resource inventory, community level taskforces and committees etc. which helps community members in organizing themselves to combat disaster in a pre-planned manner and also focus on vulnerable groups – women, children, aged persons and persons with various kinds of disabilities. Preparation of community plans encourages promoting preparedness planning at community level. District Administration is also imparting trainings on regular basis to the volunteers of Home Guards, Nehru Yuva Kendra Sangathan, NGOs, and Self Help Groups etc. to involve them into community planning. The hazards of the district indicate that there is a vital need of awareness among community through public awareness programs on the following themes of disaster:

- Types of disasters and basic do's and don'ts related to those disasters.
- Post disaster starvation / Health (epidemic) problems
- Mitigation measures such as retrofitting techniques for hazard resistant building construction.
- Communication of information of all possible risks based on vulnerable areas, groups, structures / situations and related response such as evacuation in the district and to solve preparedness problems at community level.

Local residents are likely to be the first emergency responders to such incidents, particularly in remote areas and, therefore, critical to the successful outcome. The capacity building plan should cater to the 'differential capacity building needs' based on the functional responsibilities assigned to stakeholders. It is important to consider the special / specific needs of persons with disabilities in every phase of disaster management and risk reduction.

Disaster Management / Risk Reduction Phase:	Addressing Specific / Special needs of the PWDs:
Preparedness	Medical treatment / therapy / medications.
Immediate Response / Recovery	Assistive / Mobility aids
Mitigation / Rehabilitation	Infrastructure / relief accessibility
Development	Community attitudes towards PWDs

Volunteers and social organizations also play a vital role in spreading mass scale community awareness. Media can also play an important role in raising awareness and educating people. Capacity-building at the community level includes awareness, sensitization, orientation and developing skills of communities and community leaders. At the district-level, assistance will be provided by consolidating the know-how and practical training provided by NDRF, Civil Defence and NGOs, District Red Cross and Self-Help Groups (SHGs) and disseminating it within the communities. Multiple responsibilities within the arena of capacity-building and training will be delegated to local authorities, PRIs and ULB under the overall guidance of District authorities. It is also crucial to focus on imparting training, cultivating community awareness and ensuring skill development among members of the community. Furthermore, capacity-building at the community level should be done on the Public Private Partnership (PPP) model. This can be done by ensuring identification of local resources and developing local infrastructure through PPP. Community Based Disaster Risk Reduction (CBDRR) and Village Contingency Planning (VCP) are also critical for capacity building at the community-level and will be managed by the concerned departments in the district.

## 6.6 DEVELOPMENT OF IEC MATERIAL

Addressing the specific requirements of vulnerable regions and the risk mitigation and preparedness needs of identified communities, various IEC material like list of do's and don'ts, posters, leaflets, banners, training modules and audio visual material must be produced using capacity-building funds from the state. The aim is to develop a large body of advocacy and awareness materials, especially in vernacular languages, targeting vulnerable groups such as women, children, elderly, differently-abled, and marginalized and excluded groups.

## 6.7 SIMULATION EXERCISES

To encourage participation in a coordinated manner simulation exercises on various disasters are very important. These exercises help in institutional building at various levels. Mock exercises have been promoted at district and community level. These exercises help in improving response time and also test reliability. These mock-drill arranged by involving all required agencies. These drills also help in updating the response plans. District Disaster Management Authority is playing an important role in conducting mock-drills and to update plan.



## 7. RESPONSE AND RELIEF MEASURES

### 7.1 INTRODUCTION AND OBJECTIVE

The post disaster phase of Disaster Management looks into Relief, rehabilitation, reconstruction and recovery. The effective disaster management strategy aims to lessen disaster impacts through strengthening and reorienting existing organizational and administrative structure from district – state to national level. Relief on the contrary, is 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. Relief needs to be prompt, adequate and of approved standards. It is no longer perceived only as gratuitous assistance or provision of emergency relief supplies on time. Emergency response plan is, thus, a first attempt to follow a multi-hazard approach to bring out all the disasters on a single platform, incorporating disaster resilient features to ‘build back better’ as the guiding principle. It provides a framework to the primary and secondary agencies and departments, which can outline their own activities for disaster response. Response process begins as soon as it becomes apparent that a disastrous event is imminent and lasts until the disaster is declared to be over Disaster response is aimed at: Saving Life-Minimising the Loss- Stabilising the Situation.

### 7.2 RESPONSE PLANNING

The onset of an emergency creates the need for time sensitive actions to save life and property, reduce hardships and suffering, and restore essential life support and community systems, to mitigate further damage or loss and provide the foundation for subsequent recovery. Effective response planning requires realistic identification of likely response functions, assignment of specific tasks to individual response agencies, identification of equipment, supplies and personnel required by the response agencies for performing the assigned tasks. A response plan essentially outlines the strategy and resources needed for search and rescue, evacuation, etc.

**Table 7.1:** Response planning phases during the early warning

Pre-Disaster	Responsible Dept.	Post-Disaster	Responsible Dept.
Activate control room if necessary	DDMA will activate the control room at district level. Control room at Sub-Division and Tehsil level will be activate by concerned disaster management authority.	Quick Damage and Need Assessment	Multi-Sectoral committees encompass all line departments constituted by DDMA
Review situation	DDMA will review all the situation on the basis of data and reports provide by the line departments	Search and rescue	Home Guard / Civil Defence / Fire with coordination with Police and NDRF (if required)
Communicate warning (Inform community likely to be affected by the impending disaster)	DEOC will communicate the warning to all potential affected areas with support of DPRO, DRDA, Police, Home	Activate Line Departments / Agencies to Quick restoration of basic utilities and critical infrastructure e.g. Roads, Life Line	DDMA will coordinate with all line departments for quick restoration



Inform line departments / agencies to mobile resources / teams for quick deployment)	Guard, Fire and Local Administration.	Buildings i.e. Hospital, Blood Bank, Schools and Banks, Admin Building, Electricity, Water / Sanitation,	
Coordination with all line departments	Chief Executive officer appointed by DDMA will coordinate	Activate all Quick response Team QRTs / First Responder Team	DDMA will coordinate with all available QRTs in the District
Stocking of Essential and basic life line Items and materials	All frontline departments i.e. Medical, Food and Civil Supplies, IPH, PWD, HPSEB, Police	Sharing, reporting and communicating the info to the State and National Level and Requisition for assistance to prompt response or relief	Chief Executive officer appointed by DDMA will coordinate
Identification of temporary shelter	Revenue Dept. will identify the shelter with support of PWD, MC and Education	Activate and deploy the Incident Response Teams	DDMA Chairman
Evacuate people to temporary shelter with necessitated facilities	Police and Home guard will evacuate the people to safer place or identified temporary shelter in support of Fire Dept., NKYS, NCC, NSS and Paramilitary Forces i.e. IRB Battalion in District	Provide temporary shelter and basic necessitate facilities to people	Revenue Dept. will coordinate with all line departments
Remove assets from dangerous areas	PWD will facilitates all these activities in coordination with RTO, HRTC		

**Table 7.2: Response planning phases during the no early warning**

Activities	Responsible Dept.
Activate control room and forward the report to state and national level	DDMA will activate the control room at district level. Control room at Sub-Division and Tehsil level will be activate by concerned disaster management authority. CEO of DDMA will report to higher Authority
All heads of the departments will report to the Control Room	DDMA will coordinate with line departments
Activation of damages and needs assessment teams to undertake damages and needs assessment	Multi-Sectoral committees encompass all line departments constituted by DDMA will undertake an assessment of damages to assets and infrastructure and assess the needs of the community.

Restoration of Critical and life line infrastructure	PWD, IPH, HPSEB, Health and family Welfare, Food and Civil Supplies will initiate efforts to restore the infrastructure starting especially with the most critical infrastructure that could assist relief
Activate and deploy the Incident Response Teams	Chief Executive officer appointed by DDMA will coordinate
Provide relief to the affected communities	DDMA will coordinate with food and civil supplies, health and family welfare, Police, RTO, HRTC, PWD and IPH
Coordinate relief operations	DDMA and Revenue Dept. coordinate with Incident response team at Hierarchical admin level e.g. SDM, BDO, Tehsildar, ZP
Request for possible help from external sources / Resource's Mobilization	Chief Executive officer appointed by DDMA will coordinate

## 7.3 DISASTER RESPONSE FUNCTIONS TO BE CARRIED OUT

### 7.3.1. EARLY WARNING PHASE:

- Activation of Control Room / EOC: As soon as EW Message / Information is available through IMD / CWC / GSI, DDMA will activate EOC / CR
- Inform Community likely to be impacted
- Inform Line Departments/Agencies
- Hold Meetings of DDMA
- Requisition of NDRF
- Requisition of Paramilitary-IRB/TBP/SSB

### 7.3.2. IMMEDIATE POST DISASTER PHASE

- **Search & Rescue:** Home Guard / Civil Defence / Fire will carried out the search and rescue with coordination with Police and NDRF and the existed Paramilitary Forces within or nearby the district.
- **Quick Damage Assessments:** DDMA will constitute a multi-sectoral damage and need assessment team to prepare the *Damage and Need Assessment Report* for the DDMA to take further action. The multi-sectoral teams will be constituted and its members having local knowledge and will comes from different expertise to do the synthesis damage and need assessment compressively. The team will conduct damage assessment in the special following sectors

**Table 7.3: Damage assessment in context to Response**

#	Damages
1	Roads and Bridges
2	Life Line Buildings
3	Food and Civil Supplies
4	Houses

5	Water lines and Tanks
6	Electricity
7	Communication
8	Medical Infrastructure
9	Monuments
10	Agriculture Crops and Horticulture
11	Livestock
12	Forest

## 7.4 QUICK NEED ASSESSMENTS

Need assessment will be undertaken by a multi-sectoral team with a special focus on the following sectors mentioned in table 7.3

**Table 7.4:** Need assessment in context to Response

#	Sector of Need
1.	Temporary Shelter
2.	Food and Civil Supplies
3.	Medical / Health
4.	WASH
5.	Special Needs
6.	Psychosocial care
7.	Security needs in context to varying social groups
8	Restoration of essential services like, roads, water facilities, power, communication

## 7.5 RESOURCE MOBILIZATION

Resource mobilization is one of the most important and crucial activity when any disaster occurs in the district for responding to disaster in an efficient manner. The IDRN portal has information regarding the different kind of resources available for multi-hazard, with the various departments along with their location across district. It can lead to quick and immediate procurement of the required resources from the nearest available site and Dept. for response to any disaster.

Various resources required in the damages and needs assessment will be mobilized by the concerned departments. Following is the list of the departments which are responsible for mobilizing various needs identified in the damages and needs assessment:

**Table 7.5: Resource Mobilization and Responsible Dept.**

#	Identified Need	Action	Nature of resources	Responsibility
1.	Temporary Shelter	DDMA / Revenue Dept. will arrange relief camps / shelters. Wherever required Tents will be pitched in to accommodate affected people. Departments of Education, Health and Family Welfare will provide support	Tents, sleeping bags blankets and clothing's, Sanitizer and sanitary pads, stretchers	Revenue Dept. / DDMA / Health
2.	Food and Civil Supplies	Food and Civil Supplies Dept. will Provide food, Fuel, and Drugs	Essential food items and fuel	Food and Civil Supplies Dept.
3.	Medical	Medical Dept. will arrange the lifesaving medicines, blood, Doctors, Paramedical staff	Medicines, doctors, ANM, nurses, Asha Workers	Health and Family Welfare Dept. / Red Cross
4.	WASH	IPH will provide choline tables for water purification, drinking portable water, sanitation kits	Drinking water, sanitation	IPH
6.	Psychosocial care	Health and Family Welfare Dept./Red Cross will take care the reported Psychological and Mental Trauma cases	Psychosocial care	Health and Family Welfare Deptt./Red Cross
7.	Security needs in context to varying social groups	Maintain the Law and Order and security of Social group and tackle the human trafficking situation	Trained personnel	Police/Home Guard, Civil Defence
8.	Road clearance	To restore the road function, remove the debris and clearance of any blockage	Earth removers and man power	HPPWD, BRO
9.	Power storage	To restore the power, provide the temporary chargeable generators and batteries, Him Urja will provide the Solar Lights	DG sets, wires, manpower, batteries, search lights,	HPSEB and Him Urja
10	Communication	To restore the communication network	Network restoration, v-sets, satellite phones, walkie talkie	BSNL, NIC, Police

## 7.6 RESPONSE MANAGEMENT

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### 7.6.1. ACTIVATION OF EOC

The DEOC will function to its fullest capacity on the occurrence of disaster. The district DEOC will be fully activated during disasters. The activation would come into effect either on occurrence of disaster or on receipt of warning. On the receipt of warning or alert from any approved agency which is competent to issue any early emergency warning, or on the basis of reports from SDO (Civil) or any other agencies on the occurrence of a disaster, all community preparedness measures including counter-disaster measures will be put into operation. The Deputy Commissioner will assume the role of the Chief of Operations for Disaster Management. All the line Dept. senior official will be immediately reported to the DEOC. The DDMA will expand the Emergency Operations Centre to include Branch arrangements with responsibilities for specific tasks depending on the nature of disaster and extent of its impact. All the occurrences report would be communicated to the SEOC / SDMA, NEOC / NDMA and Supporting Agencies by means of telephone and subsequently fax periodically. The occurrence of disaster shall be immediately communicated to the stakeholders such as NGOs, trained SAR volunteers through SMS gateway (or telephonic in case of communication exist or any available communication network) for which specific provision of group mobile directory would be made. Main Roles of DEOC after activation

- Assimilation and Dissemination of Information
- Liaise between Disaster site and State Head Quarter
- Monitoring, coordinate and implement the DDMP
- Coordinate actions and response of different departments and agencies
- Coordinate relief and rehabilitations operations
- Hold press briefings

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### 7.6.2. INCIDENT COMMAND SYSTEM

As per the report received from the Rapid Damage Assessment Team, DEOC will be activated and the representative from all the nodal departments in the district will send their representative in the DEOC. The Deputy Commissioner shall assume the charge of the Incident Commander at the DEOC level. Immediately the member of the DDMA will prepare the Incident Action Plan and direct the respective departments to execute the plan on the incident site.

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### 7.6.3. ESTABLISHMENT OF INCIDENT COMMAND POST

To execute the Incident Action Plan, the Incident Command Post shall be established on site to execute the operation under unified command system when the no agencies involved in the operations are more than one department/agency. Every team will operate under the field incident command that will SDM for revenue, BDO for Rural Development, the Xen of the concerned department if departments involved are PWD, IPH, HPSEB, and District Fire Officer for fire Department, Commandant Home Guards, Dy. Sp for police department, RM for HRTC etc. These field incident commands will monitor the work of all their respective teams and SDM will also work as coordinating command between different departments / agencies involved.

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#### **7.6.4. COMPOSITION OF VARIOUS INCIDENT RESPONSE TEAMS**

To manage the disaster in an effective way every department will constitute Incident Response Teams in the district consisting of 3-7 person along with machinery / equipment which will operate under the supervisory officers who will be designated as leader who will be reporting to the officer who will be designated as supervisor who will be controlling 3-7 such types of teams ,who will further report to the officer who will be looking after 3-7 such types of divisions finally to the section chief who will be Xen of the departments for PWD,IPH, HPSEB departments.

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#### **7.6.5. RELIEF DISTRIBUTION**

Relief distribution will be coordinated by sub divisional, tehsil and respective disaster management committees. The onsite distribution will be done by incident response team. The updated needs will be communicated to the DDMA and the DDMA will ensure the regular supply of the required items. The relief distribution will include essential items which serves the basic needs of the affected community like LPG , medicines, clothes, food items, drinking water, soaps, blankets, items of special needs for women's, children's, handicapped and old aged.

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#### **7.6.6. SEARCH AND RESCUE MANAGEMENT**

Search and Rescue activities include, but are not limited to, locating, extricating, and providing immediate medical assistance to victims trapped in exigency situation. People who are trapped under destroyed buildings or are isolated due to any disaster need immediate assistance. The District Commissioner, in conjunction with local authorities will be responsible for the search and rescue operations in an affected region. At present, Nodal Dept. for this activity is NDRF and Home Guard / Civil Defence Department. The helping departments for search and rescue are P.W.D., Nagar Panchayat / Nagar Palika, Self-help groups, N.S.S, N.C.C, and PRIs. There are other bodies too that help these departments in this work, like, Health department, Fire department. In doing so, the DC will be guided by relevant disaster management plans and will be supported by Government departments and local authorities.

Dedicated search and rescue teams from various line departments has been formed to support the search and rescue operations in the district and more details given regarding this mentioned in Annexure-VII. Team members have to be periodically trained/retrained on the elements of collapsed structure, confined space search & rescue, and rope rescue etc.

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#### **7.6.7. INFORMATION MANAGEMENT AND MEDIA MANAGEMENT**

Media has to play a major during disaster. They will aid in information dissemination about help-line, aid-distribution camps, emergency phone number or the needs of the people. Further, they will also help in quashing rumours, for crowd management and prevent panic situation. Media will also help in mobilizing resources [money, volunteers etc.] from other areas. To disseminate information about various hazards in the district and the relevant dos and don'ts during and after a disaster encompass under the media management. This will be done through various media such as newspapers, television, radio, internet, media and information van, street theatre, etc. The DDMA will established an effective system of collaborating with the media during emergencies. At the District Emergency Operation Centre (DEOC), a special media cell will be created during the emergency. Both print and electronic media are regularly brief by some senior official designated from DDMA at predetermined time intervals about the events as they

occur and the prevailing situation on ground. The DPRO in consultation with the DDMA would take appropriate steps in this direction also too.

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#### **7.6.8. VIP MANAGEMENT**

It may be possible that the scale of a disaster may in addition prompt visits of the VVIPs/VIP which further requires the active management to ensure the effortlessly ongoing response and relief work without any interruption. DDMA will designate senior official to handle the VVIPs/VIPs visits to the affected areas and further to brief the VVIP/VIP beforehand about the details of casualties, damage and the nature of the disaster. The Police and Home guard will handle all the security of VVIPs/VIP during their visit. It would be desirable to restrict media coverage of such visits, in which case the police should liaise with the government press officer to keep their number to minimum.

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#### **7.6.9. NGO COORDINATION AND MANAGEMENT**

Non-governmental organizations (NGOs) will play as one of the most effective alternative means of achieving an efficient communications link between the disaster management agencies and the effected community due to their outreach at the grassroots level. As per the section 35 and 38 of the DM Act 2005 stipulates that the DDMA shall specifically emphasize the coordination of actions with NGOs. In typical disaster situation, DDMA with the support of DRDA, will coordinate the NGOs / CBO's and further manage their work in prompt response, relief and rescue, and also monitor the feedback at grassroots level by agreeable community participation.

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#### **7.6.10. DISPOSAL OF DEAD BODIES AND CARCASS**

District administration will coordinate to arrange the mass cremation burial of the dead bodies with support of police & forest Dept. after observing all codal formalities & maintain the video recording of such unclaimed dead bodies after properly handing over the same to their kith or kin. Dept. of animal husbandry in association with the local administration shall be responsible for the deposal of the animal carcass in case of mass destruction.

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#### **7.6.11. DEBRIS MANAGEMENT**

- Debris may be the result of natural, human-induced, and technological hazards.
- Some or all jurisdictions within Shimla may experience events which result in large amounts of debris that may adversely affect public safety.
- Communities have varying and unique circumstances that could impact the types and amounts of debris and the responses to debris cleanup. These may include types of local business/industry, land use, size of the community, topography, and economics.
- Jurisdictions must be prepared to conduct emergency debris removal on their own during the initial phases of an emergency or disaster and must consider public safety as their first and top priority.
- Individuals will be responsible for the removal and disposal of debris on private property.
- Debris management activities can be a major burden on the time and resources of everyone affected.
- Extraordinary demands will be placed on public and private resources for debris management following a disaster event.



- A coordinated community effort will be required to effectively collect, remove, and dispose of debris following a disaster.
- In order to combine local resources (personnel, equipment, supplies) various jurisdictions like District Administration, Municipal Corporation-Shimla & District Panchayat may join together to establish a local area of operations for collecting and handling the debris.
- Mutual aid from adjacent jurisdictions will be coordinated with pre-disaster planning.
- Temporary debris storage and reduction sites will be located in each of the local jurisdictions area of operations in order to provide a close by site thus reducing transportation time and costs.
- Pre-disaster planning will provide the jurisdictions knowledge of debris management and how to organize locally to conduct debris removal operations thus ensuring that cost effective and environmentally sound practices will be used.
- During major emergencies requests for state and/or federal disaster assistance may be necessary.

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### 7.6.12. TOURISM MANAGEMENT

Shimla has been blessed with all the natural bounties which one can think of. It has got a scenic location; it is surrounded by green hills with snow-capped peaks. The spectacular cool hills accompanied by the structures made during the colonial era create an aura which is very different from other hill. Also Shimla is well connected by roads, Rail and air therefore the tourist flow in the district is very high in summers and winter season.

Tourism in Shimla is probably more exposed to natural disasters than any other 'group' in the population. Tourism's concerns are required to be addressed, and at the same time is an important resource proactive approach is better than a reactive one. It is dependent on an intact ecosystem and on institutional structures that can respond to the needs of local people and visitors.

The tourism sector constitutes an important part of Shimla's economies and societies, and should therefore be actively involved in Disaster Risk Reduction (DRR) for a number of reasons. Foremost, tourism is about people. Tourists are potentially particularly vulnerable to natural disasters, because they are mobile, difficult to account for and not easy to reach with relevant information (e.g. warnings). Often, tourists travel in environments unfamiliar to them, their connectedness with the local communities is very small, they may face language barriers, they are potentially confused about traffic rules, and their predisposition towards positive holiday experiences might obstruct their capacity to absorb information related to natural hazards or disasters. Tourist destinations and their operators therefore have some responsibility to ensure tourists are protected from disasters or receive assistance following a disaster.

Having a plan is no guarantee that damage or loss is avoided but it does help in establishing important partnerships before an event, it provides outline that allow quick action in specific situations and it helps managers and operators to communicate effectively to the different target audiences. Such a proactive approach to disaster management is likely to protect the image of the destination and assist its long term sustainability. A comprehensive approach to DRR involves disaster reduction, readiness, response and recovery. This will be achieved by improving the local authorities' and the private sector's ability to manage natural and man-made disasters and by training the residents and tourists on how to properly prepare and react to disasters.

### 7.7 MEASURES TO BE TAKEN IN CASE OF EARTHQUAKE

*(By the City Disaster Management Authority, Municipal Corporation, Shimla)*

The Municipal Corporation Shimla is entrusted with the development related matters of the MC areas and providing basic civic amenities. However at the Disaster phase the Shimla Town will be managed largely with the coordination with the MC, Shimla.

### **Impact Assessment**

- The City Disaster Management Authority, City EOC would be fully activated and pre-designed response plan shall immediately be triggered according to the magnitude and epicenter of the earthquake.
- The Municipal Corporation / City Administration will gather information regarding the damages in respect of deaths, injuries and damages to the buildings / infrastructures.
- If required the Municipal Corporation will conduct an aerial survey to determine the scope of the damage, casualties, and the status of key facilities.
- City administration / City EOC / Municipal Corporation will identify areas and assess the requirement of police, armed forces, volunteer etc. for search and rescue operations. The priority of conducting these operations will be established by the City Disaster Management Authority, Municipal Corporation, Shimla.

### **Deployment of Search and Rescue Teams**

- As an immediate measure City Administration would deploy local SAR teams of Civil Defence/Home Guards, Police and Local Volunteers etc.
- The police force will also be deployed to undertake different types of search and rescue activities.
- Requirement of Armed Forces – Army, Air Force, CPMFs, NDRF etc. would be worked out and demand for the same shall be placed with the DDMA Shimla and SDMA.
- The ESF Department / City Administration shall arrange for local transportation (from airport/railway station to affected site) of NDRF teams and supplies POL etc. for their equipment/vehicles of NDRF.
- The police department shall control traffic to ensure that NDRF teams/other SAR and relief teams could reach the earthquake affected areas without delay.
- ESF Department / City Administration shall provide access routes for transportation of NDRF, other SAR and Relief Teams to the affected sites. If needed, roads and bridges will be repaired or reinforced even on a temporary basis or emergency detours be provided.

### **Emergency Medical Relief**

- The City Hospitals – IGMC, DDU etc., primary health centers, health department etc. would activate their respective emergency medical plan forthwith.
- NDRF teams are also trained in Emergency Medical Services (EMS) such as Medical First Response techniques with basic knowledge of life saving of disaster victims. Each NDRF battalion has 9 Doctors and 90 paramedics. NDRF teams shall provide EMS to the areas of their deployment during post disaster phase.
- If needed Ministry of Defence through DDMA Shimla and State Government would be requested to provide mobile field hospitals, Heli-ambulances. They will be activated to reach the earthquake affected areas immediately along with dressing material, splints, portable X-ray machines, mobile operation theatres, resuscitation equipment and life-saving drugs, etc.
- The Department of Health and Family Welfare at the City Level would coordinate with its counterpart at District and State level for medical assistance required for the State.

### **Supply of Relief Materials to affected States**

- The City Disaster Management Authority would assess requirement of relief items and material required for the affected areas. It would also project its demand to the District and State Government.
- The ESF departments both city and district level would arrange to supply relief material to the affected locations.
- The MC Shimla would consolidate demands received from the city and would coordinate with Deputy Commissioner for State assistance, if any.
- The City Disaster Management Authority / Municipal Corporation would appoint Nodal Officers at airports/helipads to coordinate, receipt and channelization of relief material. Adequate arrangement would be made for the transportation of relief material to different parts of the affected areas of city.
- A mechanism would be put in place for proper accounting for and distribution of the relief material received in the city.

### **Establishment and Running of Relief Camps**

- Municipal Corporation/City administration would establish relief camps as per requirement.
- ESF departments would arrangement for all basic amenities in these camps.
- These relief camps would be run and managed by the ward level DM Committees.
- Temporary shelters would be constructed as per requirement by the MC.

### **Repair and Restoration of Roads, Communication, Electricity and Water Supply**

- The Public Works Department would undertake repair, build temporary bridges, access ways and other temporary structures for restoration of National and State Highways and other roads.
- The PWD would also repair damaged helipads and make temporary helipads as per requirement.
- Communication network would invariably be damaged in an earthquake. The BSNL and other service providers would take immediate steps to restore communication in the affected areas. Secondary ESF departments / agencies for communication would also provide communication facilities for disaster communication and relief.

### **Damage Assessment of Public Building and Infrastructure and Individual Houses**

All Departments would constitute teams of officers/technical persons to:-

- Inspect buildings and structures that are critical to emergency service operations and mass care activities. Designate those that may be occupied and identify/mark those that are unsafe.
- Inspect buildings and structures that may threaten safety. Identify/mark those that are unsafe and may not be occupied.
- Inspect less critical damaged structures. Designate those that may be occupied and identify / mark those that are unsafe to occupy.
- Municipal Corporation/City Administration shall constitute teams of qualified technical personnel for damage assessment of individual houses. These teams shall also identify/certify those houses that are unsafe and may not be occupied.

- The Disaster Management Authority under Municipal Corporation and city administration in consultation with the IITs and NITs develop guidelines for assessment of damaged individual housing units.

### **Information Management and Helpline**

- Municipal Corporation, Disaster Management authority and City Administration shall set up Emergency Information Centre (EIC) at the City EOC level or other suitable location for release of consolidated information to all stakeholders including Media at the City Level.
- Helpline would be established at City EOC or other suitable location for providing information about victims to the next of kin, friends and others.
- EIC shall maintain all records and document of all major actions taken in managing the incident.

## **7.8 RELIEF MEASURES & MANAGEMENT**

### **Food & Nutrition**

People affected by disasters may be deprived of food and therefore food aid shall be provided to sustain life. The following measures will be taken:

- Where necessary free distributions of food shall be made to those who need the food most.
- The food distribution will be discontinued as soon as possible.
- Wherever possible dry rations shall be provided for home cooking.
- Community Kitchen for mass feeding shall be organised only for an initial short period following a major disaster particularly where affected people do not have the means to cook
- While providing food assistance, local food practices shall be kept in mind and commodities being provided must be carefully chosen, in consultation with the affected population.
- Foods must be of good quality, safe to consume, and appropriate and acceptable to recipients.
- Rations for general food distributions shall be adopted to bridge the
- gap between the affected population's requirements and their own food resources
- Food distributed should be of appropriate quality and fit for human consumption
- Food should be stored, prepared and consumed in a safe and appropriate manner at both household and community levels
- Food should be distributed in a responsive, transparent, equitable manner
- NGOs, CBOs and other social organizations should be involved for supplementing the efforts of the Government.
- The nutritional needs of the population should be met and malnutrition and micronutrient deficiencies of identified at risk groups addressed.

## **Water**

Water supply is invariably affected in natural disasters. Safe drinking water might not be available particularly in hydro-meteorological disasters. The following measures shall be taken by the District Administration:

- The District Administration shall identify alternative sources of water and make necessary arrangements for supply to the affected population.
- The District Administration shall ensure that affected people have adequate facilities and supplies to collect, store and use sufficient quantities of water for drinking, cooking and personal hygiene.
- It shall be ensured that drinking water supplied conforms to the prescribed quality standards
- It shall be ensured that water made available for personal and domestic hygiene should not cause any risk to health.

## **Health**

During post disaster phase many factors increase the risk of diseases and epidemics. These include poverty, insecurity, overcrowding, inadequate quantity and quality of water, poor environmental and sanitary conditions, inadequate shelter and food supply.

Medical Response: Medical response has to be quick and effective. The execution of medical response plans and deployment of medical resources warrant special attention at the State and District level in most of the situations. The following measures shall be taken by the District Administration:

- A mechanism for quick identification of factors affecting the health of the affected people shall be established for surveillance and reporting.
- An assessment of the health and nutritional status of the affected population shall be done by experts with experience of emergencies and, if possible, local knowledge.
- The voluntary deployment of the nearest medical resources to the disaster site, irrespective of the administrative boundaries, will be warranted.
- Adequate supply of medicines, disinfectants etc. shall be made.
- Where necessary inoculation shall be done.
- Vaccination of the children & pregnant women shall be undertaken.
- Vector-borne diseases are a major cause of sickness and death in many disaster situations. Vector control measures shall be undertaken.
- Water borne diseases may cause sickness and deaths and therefore adequate measures shall be taken to prevent such outbreaks.

## **Psychosocial Care**

Disasters cause tremendous mental trauma to the survivors. Psycho- social support and mental health services should be made available immediately in the aftermath of disaster so as to reduce the stress and trauma of the affected community and facilitate speedy recovery. The following measures shall be undertaken by district:

- A Nodal Mental Health Officer shall be designated for the District.
- Rapid needs assessment of psycho-social support shall be carried out by the Nodal Officer/ Health Department.

- Trained man power for psycho-social and mental health services shall be mobilized and deputed for psycho-social first aid and transfer of critically ill persons to referral hospitals.
- Psycho-social first aid shall be given to the affected community/ population by the trained community level workers and relief and rescue workers.
- Psycho-social first aid givers shall be sensitized to local, cultural, traditional and ethical values and practices.
- Psycho-social support and mental health Services shall be arranged in relief camps set-up in the post disaster phase.
- Where large number of disaster victims have to be provided psychosocial support a referral system for long term treatment shall be followed.
- The services of NGOs and CBOs may be requisitioned for providing psycho-social support and mental health services to the survivors of the disasters
- Community practices such as mass prayers; religious discourse etc. should be organized with four preventive and promotive mental health services.

### **Shelter**

In a major disaster a large number of people are rendered homeless. In such situations shelter becomes a critical factor for survival of the affected people in the initial stages of a disaster. Further, shelter becomes essential for safety and security and for protection from the adverse climatic conditions. Shelter is also important for human dignity and for sustaining family and community life in difficult circumstances. The following measures shall be taken by State/District authorities for providing shelter to the affected people:

- Disaster affected people who have lost their dwelling units or where such units have been rendered damaged/useless shall be provided sufficient covered space for shelter.
- Disaster affected households shall be provided access to appropriate means artificial lighting to ensure personal security.
- Disaster-affected households shall be provided with necessary tools, equipment and materials for repair, reconstruction and maintenance for safe use of their shelter.

### **Relief Camp**

The following steps will be taken for setting up relief camps in the affected areas:

- Adequate numbers of buildings or open space shall be identified where relief camps can be set up during emergency.
- The use of premises of educational institutions for setting up relief camps shall be discouraged.
- One member of the Incident Command Team of the district trained in running and management of relief camps will be deputed for management of relief camps.
- The requirements for operation of relief camps shall be worked out in detail in advance.
- Agencies to supply the necessary stores will be identified in the pre- disaster phase.
- The temporary relief camps will have adequate provision of drinking water and bathing, sanitation and essential health-care facilities.
- Adequate security arrangements shall be made by local police
- Adequate lighting arrangements shall be made in the Camp Area including at water points, toilets and other common areas.

- Wherever feasible, special task forces from amongst the disaster affected families will be set up to explore the possibility of provision of food through community kitchens, provision of education through the restoration of schools and anganwadis.
- Efficient governance systems like entitlement cards, identification cards, bank accounts for cash transfers etc. shall be developed.

### **Sanitation and Hygiene**

Sanitation services are crucial to prevent an outbreak of epidemics in post disaster phase. Therefore a constant monitoring of any such possibilities will be necessary. It should be ensured that disaster-affected households have access to sufficient hygiene measures. Soap, detergents, sanitary napkins and other sanitary items should be made available to ensure personal hygiene, health, dignity and well-being. In the relief camps, toilets should be sited, designed, constructed and maintained in such a way as to be comfortable, hygienic and safe to use

### **Provision of Intermediate Shelters**

In the case of devastating disasters, where extreme weather conditions can be life-threatening or when the period of stay in temporary shelters is likely to be long and uncertain, the construction of intermediate shelters with suitable sanitary facilities will be undertaken to ensure a reasonable quality of life to the affected people. Such shelters shall be designed to be cost effective and as per local needs.

### **Management of Relief Supplies**

Speedy supplies of relief materials shall be ensured in relief operations. A supply chain management system shall be developed. Standard Protocols shall be put in place for ensuring the procurement, packaging, transportation, storage and distribution of relief items. A mechanism shall be developed for receiving donations in cash or kind and their distribution.

DDMA, Shimla shall take all appropriate measures for transparency in the relief operations. Affected people shall be apprised of the nature and quantum of relief admissible to them. Proper formats will be developed to acknowledge the receipt of relief materials and their further distribution.



## 8. RECONSTRUCTION, REHABILITATION AND RECOVERY

The State has not faced any major catastrophic disaster in the recent past requiring large scale post-disaster reconstruction of houses, infrastructure and livelihood of people. However it has been regularly facing large number of minor disasters in every part of the State throughout the year. The affected people are being provided humanitarian relief as per the norms of the State Disaster Response Fund (previously Calamity Relief Fund). These norms cater to the immediate needs for subsistence but hardly meet the requirements of long term recovery and reconstruction. Therefore the needs of post-disaster reconstruction remain largely unfulfilled even for minor disasters. In case of catastrophic disasters the needs for large scale reconstructions would be much more compelling.

Hazard Vulnerability and Risk Analysis of Himachal Pradesh makes it absolutely clear that the potential risks of catastrophic disasters in the State are very high. Earthquakes of magnitude 8 and above are real time possibilities and Probable Maximum Loss (PML) in such disasters has been projected to impact severely on the State GDP for several years, affecting the gains achieved for human, social and economic development of the State. This highlights the need for reconstruction of the multi-dimensional damages due to disasters in planned, systematic and organized manners. The Shimla district falls under zone IV with major urbanization in the

**Reconstruction, Rehabilitation and Recovery** process demands co-ordinate focus on multi-disciplinary aspects of reconstruction and rehabilitation for recovery and is essential to understand disaster reconstruction, rehabilitation under the holistic framework of post disaster recovery. It will be in the form of recommendation rather than the rule.

Rehabilitation and reconstruction are primarily carried out by the local bodies (Gram Panchayats, District, Talukas, Municipal Corporations, Municipalities, etc.) and different Government departments and boards. The reconstruction and rehabilitation plan is designed specifically for worst case scenario. Post disaster reconstruction and rehabilitation should pay attention to the following activities for speedy recovery in disaster affected areas. The contribution of both government as well as affected people is significant to deal with all the issues properly. Immediate and Long Term recovery plan includes following broad activities:

- Damage assessment
- Disposal of debris
- Disbursement of assistance for houses
- Formulation of assistance packages
- Monitoring and review
- Relocation
- Town planning and development plans
- Reconstruction as Housing Replacement Policy
- Awareness and capacity building
- Housing insurance
- Grievance redressal

Sector specific approach and processes for Reconstruction, Rehabilitation and Recovery are as follows:

Sector	Approach	Process
<p>Public assets:</p> <ul style="list-style-type: none"> <li>• Roads and bridges</li> <li>• Culverts</li> <li>• Public buildings like hospitals and schools</li> </ul>	<p>Multi hazard resistant construction to be followed while reconstruction of public assets. For example</p> <ul style="list-style-type: none"> <li>• Hazard resistant buildings to be made with the help of certified engineers.</li> <li>• Use of non-shrinking mortar</li> <li>• Evacuation plans to be made for the public buildings</li> <li>• Non-structural mitigation measures to be taken into consideration</li> </ul> <p>Risk sensitive development will be ensured in each of the reconstruction Programme. For example:</p> <ul style="list-style-type: none"> <li>• Landslide and Flood zone mapping to be implemented</li> <li>• Detailed geological survey of the land to be used for reconstruction.</li> <li>• Recommendations from PDNA report to be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Detailed damages and needs assessment:</b> Multi sectoral / multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area.</li> <li>• <b>Develop a detailed recovery plan through multi departmental participation:</b> Specific recovery plan through consultative process of different line department are to be made.</li> <li>• <b>Arrange for funds from Central government, state government, multi-lateral agencies (World Bank or ADB)</b></li> <li>• <b>Multi sectoral Project Management Unit to be made.</b></li> <li>• <b>Monitoring and evaluation:</b> The process of monitoring and manipulation is to be done by SDMA.</li> </ul>
<p>Utilities</p> <ul style="list-style-type: none"> <li>• Water Supply</li> <li>• Electricity</li> <li>• Communication</li> </ul>	<p>Multi hazard resistant construction to be followed. For example:</p> <ul style="list-style-type: none"> <li>• Water pipelines, communication equipment used can be of such material which can resist impact of certain hazards</li> </ul> <p>Risk sensitive development will be ensured</p> <ul style="list-style-type: none"> <li>• Electric and communication junctions to be installed after considering landslide and flood zonation.</li> <li>• Recommendations from PDNA report to be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Detailed damages and needs assessment:</b> Multi sectoral / multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area.</li> <li>• <b>Develop a detailed recovery plan through multi departmental participation:</b> Specific recovery plan through consultative process of different line department are to be made.</li> <li>• <b>Arrange for funds from Central government, state government and multi-lateral (World Bank or ADB)</b></li> <li>• <b>Multi sectoral Project Management Unit to be made.</b></li> <li>• <b>Monitoring and evaluation:</b> The process of monitoring and manipulation is to be done by SDMA.</li> </ul>

<p>Housing</p>	<ul style="list-style-type: none"> <li>● Multi hazard resistant construction to be followed.</li> <li>● Risk sensitive development will be ensured</li> <li>● Owner driven approach will be preferred. For example: <ul style="list-style-type: none"> <li>○ National and State schemes like Pradhan Mantri Awas Yojna (rural / urban) and Mukhya Mantri Awas Yojna can be included in construction of the individual houses.</li> <li>○ Non-structural mitigation measures to be taken into consideration</li> <li>○ Use of non-shrinking mortar</li> <li>○ Further loans can be sourced through banks and other financial institutions.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <b>Detailed damages and needs assessment:</b> Multi sectoral / multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area.</li> <li>● <b>Develop a detailed recovery plan through multi departmental participation:</b> Specific recovery plan through consultative process of different line department are to be made.</li> <li>● <b>Arrange for funds from Central government, state government and multi- lateral (World Bank or ADB)</b></li> <li>● <b>Multi sectoral Project Management Unit to be made.</b></li> <li>● <b>Monitoring and evaluation:</b> The process of monitoring and manipulation is to be done by SDMA.</li> </ul>
<p>Economic restoration</p> <ul style="list-style-type: none"> <li>● Agriculture</li> <li>● Horticulture</li> <li>● Industry</li> <li>● Allied sectors</li> <li>● Tourism etc.</li> </ul>	<ul style="list-style-type: none"> <li>● Multi sectoral assessment</li> <li>● Assess direct and indirect losses.</li> <li>● Develop sectoral strategies the sectors that affected the most poor.</li> <li>● the sectors which are most critical for district's economy</li> <li>● Risk sensitive development will be ensured</li> <li>● Owner driven approach will be preferred</li> <li>● Provision of single window insurance claim system</li> <li>● Promote insurance facility for all sectors through government and private institutions</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Detailed damages and needs assessment:</b> Multi sectoral / multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area.</li> <li>● <b>Develop a detailed recovery plan through multi departmental participation:</b> Specific recovery plan through consultative process of different line department are to be made.</li> <li>● <b>Arrange for funds from Central government, state government and multi- lateral (World Bank or ADB)</b></li> <li>● <b>Multi sectoral Project Management Unit to be made.</b></li> <li>● <b>Monitoring and evaluation:</b> The process of monitoring and manipulation is to be done by SDMA.</li> </ul>

<p>Livelihood restoration</p>	<ul style="list-style-type: none"> <li>• Nature, number and types of livelihoods affected</li> <li>• Interim and long term strategies</li> <li>• Focus on livelihood diversification</li> <li>• Issues related to most poor, women, and marginalized sections</li> <li>• Livelihoods of people without assets (labor)</li> <li>• Role of NGOs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Detailed damages and needs assessment:</b> Multi sectoral / multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area.</li> <li>• <b>Develop a detailed recovery plan through multi departmental participation:</b> Specific recovery plan through consultative process of different line department are to be made.</li> <li>• <b>Arrange for funds from Central government, state government and multi-lateral (World Bank or ADB)</b></li> <li>• <b>Multi sectoral Project Management Unit to be made.</b></li> </ul> <p><b>Monitoring and evaluation:</b> The process of monitoring and manipulation is to be done by SDMA.</p>
<p>Psychosocial restoration</p>	<ul style="list-style-type: none"> <li>• Provisions like trainings from institute like NIMHANS, Mental hospitals and other specialized institutes</li> <li>• Spiritual leaders can help the community to cope up from the trauma</li> </ul>	<p><b>Arrange for funds from Central government, state government, multi-lateral (World Bank or ADB)</b></p>

## 9. FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP

### 9.1 EXISTING SOURCES OF FUNDS FOR DISASTER MANAGEMENT

#### 9.1.1. STATE DISASTER RESPONSE FUND (SDRF)

SDRF is a fund constituted under section 48(1) (a) of the Disaster Management Act, 2005 (53 of 2005), these guidelines are being issued under section 62 of the DM Act, 2005.

**Calamities Covered under SDRF:** The SDRF shall be used only for meeting the expenditure for providing immediate relief to the victims of cyclones, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanches, cloud burst and pest attack.

#### 9.1.2. NATIONAL DISASTER RESPONSE FUND (NDRF)

NDRF is a fund constituted under section 46 of the Disaster Management Act 2005. These Guidelines are issued under section 46 (2) of the Disaster Management Act, 2005 (here in after DM Act, 2005), to supplement funds from the State Disaster Response Fund (SDRF) of a State, to facilitate immediate relief in case of calamities of a severe nature.

**Calamities Covered under NDRF:** Natural Calamities of Cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, avalanches, Cloud burst and pest attack considered being of severe nature by Government of India and requiring expenditure by a State Government in excess of the balances available in its own State Disaster Response Fund (SDRF), will qualify for immediate relief assistance from NDRF.

#### 9.1.3. FLEXI-FUNDS UNDER CENTRALLY SPONSORED SCHEMES

NITI Aayog has issued instructions for Rationalization of CSS, vide OM No. O-11013/02/2015-CSS & CMC dated 17th August, 2016. These instructions are applicable for Centrally Sponsored Schemes with one of the key objective "To undertake mitigation / restoration activities in case of natural calamities, or to satisfy local requirements in areas affected by internal security disturbances. Therefore, the CSS mentioned in Chapter 4 of this plan are one potential source of funding for mitigation / restoration activities.

### 9.2 FUNDS TO BE CREATED UNDER DM ACT 2005

**District Disaster Response Funds (DDRF):** DDRF is proposed to be created at the District Level as mandated by Section 48 of the DM Act. The disaster response funds at the district level would be used by the DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines and norms laid down by the Government of India and the State Government.

**District Disaster Mitigation Funds (DDMF):** District Disaster Mitigation funds would be created at the District Level as mandated under Section 48 of the DM Act 2005. DDMF is to be used for the mitigation funds by the DDMA for the purpose of mitigation as per the HP State Disaster Management Rules 2011.

### 9.3 RESPONSIBILITIES OF THE STATE DEPARTMENTS AND AGENCIES

All State Government Departments, Boards, Corporations, PRIs and ULBS have to prepare their DM plans under Section 40 of The DM Act 2005. These Departmental DM Plans are already under preparation at the State Level 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.

### 9.4 TECHNO-FINANCIAL REGIME

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.

### 9.5 OTHER FINANCING OPTIONS

DDMA in coordination with the departments will identify other financing options for restoration of infrastructure / livelihoods, like utilization of flexi fund within Centrally Sponsored Scheme for mitigation / restoration activities in the event of natural calamities in accordance with the broad objective of the Central Sector Scheme.

Opportunities of Corporate Social Responsibility (CSR) & Public-Private Sectors funds' investments would also be explored and elaborated by the DDMA for increasing disaster resilience

## 10. DDMP: MONITORING, EVALUATION, UPDATION & MAINTENANCE

The District Disaster Management Plan is the sum and substance of the Horizontal and the Vertical disaster management plans in the district. District Disaster Management Plan of Shimla is a public document which is neither a confidential document nor restricted to any particular section or department of administration. The underlying principal of disaster management is that it has to be part of all departments and none can fold fingers against it.

### 10.1 AUTHORITY FOR MAINTAINING & REVIEWING THE DDMP

The District Disaster Management Authority (DDMA), Shimla will update the DDMP annually and circulate approved copies to all the stakeholder in Shimla District. DDMA, Shimla will ensure the planning, coordination, monitoring and implementation of DDMP with regards to the mentioned below clauses of the DM Act, 2005:

- Section 31, Clause (4) of DM Act 2005, mentions that the District Plan shall be reviewed and updated annually.
- As per sub-section (7) The District Authority shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

### 10.2 PROPER MONITORING & EVALUATION OF THE DDMPQ

Half-yearly meeting will be organized by the DDMA under the chairmanship of the Chairman, DDMA, Shimla to review disaster management activities in the state and updating the DDMP accordingly. All concerned departments and agencies have to participate and give recommendations on specific issues on Disaster Management and submit their updated reports quarterly.

### 10.3 POST-DISASTER EVALUATION MECHANISM FOR DDMP

The DDMA Chairman shall make special arrangements to collect data on a particular disaster irrespective of size and vulnerability. This post disaster evaluation mechanism shall be set up with qualified professions, experts and researchers and the collected data shall be thoroughly cross checked and documented in the EOC for further reference. The DDMA will evaluate the DDMP by conducting meetings and consultation with all stakeholders.

### 10.4 SCHEDULE FOR UPDATION OF DDMP

Besides the above (2 and 3) procedure of updating the DDMP shall be updated by:

- Regular data collection system from the district Emergency Operations Centre (EOC)
- Analysis of data
- Review by Chairperson, DDMA
- Updating and disseminating the updated plan

The updated data of DDMP will also be maintained at the DEOC website, ready for use in any situation under the supervision of DDMA, Shimla



The Chairman, DDMA will ensure regular updation of the DDMP by consulting the nodal officers of the frontline departments will update it on a biannual basis taking into consideration: -

- Inventory of equipment in the district (DDMRI),
- Human Resources, their addresses and contact details (DDMRI),
- Valuable inputs from actual disasters and updating Matrix of past disasters and HVCRA within the District
- Major change in the operational activities and location through SOPs & Checklists
- Lessons learnt from training, near-missed incidents
- Inputs from mock drills / simulation exercises
- Changes in disaster profile
- Technological developments / innovations in identifying potential hazards
- Updation of databases using new technologies like GIS
- Change in demography of surrounding population
- Changes in geo-political environment

#	Month	Purposed Activities
1	Oct	Review of DDMP by frontline departments
2	Oct-Nov	Submission of recommendations to DDMA
3	Nov-Dec	Amendments are distributed to all stakeholders
4	Dec-Jan	Submitted to SDMA for Approval / Uploading of updated plan at DDMA / SDMA website

## 10.5 UPLOADING OF UPDATED PLANS AT DDMA / SDMA WEBSITES

District Disaster Management Plan of the district is a public document & should be uploaded at the DDMA / SDMA websites under the supervision of the District Information Officer after each updation with prior approval of the Chairman DDMA.

## 10.6 CONDUCTING OF MOCK DRILLS

Section 30 (2) (x) of DM Act 2005, states that “District Authority shall review the state of capabilities for responding to any disaster or threatening disaster situation in the district & give directions to the relevant departments or authorities at the district level for their up gradation as may be necessary”. Similarly, Section 30 (2) (xi) of DM Act 2005, also states that “District Authority shall review the preparedness measures & give directions to the concerned departments at the district level or other concerned authorities where necessary for bringing the preparedness measures to the levels required for responding effectively to any disaster or threatening disaster situation”.

Mock-drills help in evaluating disaster preparedness measures, identify gaps and improving coordination within different government departments, non-government agencies and communities. They help in identifying the extent to which the disaster plan, ESF's, and SOPs are effective and help in revising the plan through lessons learnt and gaps identified. These drills enhance the ability to respond faster, better and in an organized manner during the response and recovery phase.

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### 10.6.1. THE RESPONSIBLE PARTIES FOR ORGANIZING DISTRICT DRILLS

Mock Drills will be conducted within District Shimla at various levels:

#### **Level 1: District Level**

Conducting of District Level Mock drills will be the responsibility of the Deputy Commissioner Shimla, along with Additional Deputy Commissioner Shimla, in association with Key Participants Involved in Conducting a Mock drill as the incident of disaster may be

- DDMA Shimla comprising of DC; Shimla; ADC Shimla; SP Shimla; SE (HPPWD, I&PH, Electricity); CMO Shimla, President Zila Parishad.
- Revenue Department
- SDM (C), Tehsildar, Block Officer
- Municipal Council / Nagar Parishad
- Elected representatives of Panchayat Samiti - Sarpanch, Gram Sevak,
- Fire Brigade Personnel's
- Home Guards, Volunteers.
- DPRO
- Transport Department
- Food and Civil Supply Department
- Para- military forces, ITBP Babeli and SSB Shamshi
- NDRF, SDRF as the situation of the incident may demand
- Rest as per the IRS framework in chapter 4.

#### **Level 2: Sub Divisional Level**

The Sub Divisional Magistrate (Civil) will be the concerned authority to conduct mock exercise at the Sub-Division level.

#### **Level 3: Block Level**

At Block Level the Block Development Officer will be the nodal authority to get the mock exercise conducted.

#### **Level 4: Panchayat Level**

The Pradhans will be nodal for organizing the mock drills at Gram Panchayat level with Village Disaster Management Committees in each village of district Shimla.

#### **Level 5: Departmental Level**

At the Departmental levels the HOD's of the concerned departments/ units are responsible for the on –site mock drills and off- site drills with the district administration for their respective departments and concerned areas.

Levels 2, 3, 4 and 5 will carry out the mock exercise with intimation of the same to the District Administration and sending in reports of the lessons learnt and gaps identified for further up gradation of the plans after the drill.

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### 10.6.2. SCHEDULE FOR ORGANIZING DRILLS

District administration shall hold mandatory mock drill **twice annually** for the monitoring, evaluation, updation and maintenance of DDMP. District administration will conduct mock drills at least **once in every six months** to evaluate their disaster management plans.

## 10.7 MONITORING & GAP EVALUATION

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### 10.7.1. CHECK ON PERSONNEL'S INVOLVED IN EXECUTION OF DDMP ARE TRAINED WITH LATEST SKILLS

The District Authority shall check whether all the personnel involved in execution of DDMP are trained & updated on the skills necessary in line with the updated SOPs. As per Section 30 (2) (xii) of DM Act 2005, the District Authority shall organize & coordinate specialized training programmes for different levels of officers, employees & voluntary rescue workers in the district.

Half yearly meeting for DDMP updation shall be organized by DDMA, under the chairmanship of Deputy Commissioner Shimla DC should ensure for maintenance of DDMP and analysis the identified gaps. All concerned departments and agencies have to participate and give recommendations on specific issues of District Disaster Management Plan, and submit their report.

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### 10.7.2. CHECK ON-SITE / OFF SITE PLANS OF MAJOR ACCIDENTAL HAZARD UNITS

All industrial units and power projects within Shimla district will submit their on-site/ off-site plans, after regular updation and maintenance to the DDMA for review and evaluation. They will regularly conduct on-site / off- site mock exercises annually or biannually as the case may be, to review, evaluate, and update their plans.

## 11. COORDINATION MECHANISM FOR IMPLEMENTATION OF DDMP

The Coordination between District and Local governments is vital for the proper disaster management. It requires both inter departmental and intra departmental coordination with all the stakeholder line departments and local bodies like, HPPWD, I&PH, HPSEB, Health and Family Welfare, fire and home guards, police, BSNL, Food and Civil Supply, forest, revenue Education, Agriculture horticulture, HRTC, Red Cross, MC, NGO's. CBO's and other local authorities These partnerships recognize that each level of the disaster management arrangements must work collaboratively to ensure the effective coordination of planning, services, information and resources necessary for comprehensive disaster management.

The DDMP of the district is a three tier disaster management coordination based on bottom to top approach i.e. tehsil level, Sub-Division level and District Level. This system enables a progressive escalation of support and assistance. The arrangements comprise of several key management and coordination structures. The principal structures that make up the arrangements are:

- Disaster management committees are operational at Tehsil, Sub-Division and district level. The above committees are responsible for planning, organizing, coordinating and implementing all measures required to mitigate, prevent, prepare, respond and recover from disasters the affected area under their jurisdiction.
- Emergency Operation Centers at Tehsil, Sub-Division and district level supports disaster management groups while coordinating information, resources, and services necessary for disaster operations.
- Functional agencies of district administration, DDMA and DDEC, are responsible to coordinate and manage specific threats and provide support to other agencies on and as required

### 11.1 INTRA DEPARTMENTAL COORDINATION

Each stake holder department i.e., HPPWD, I&PH, HPSEB, Health and Family Welfare, fire and home guards, police, BSNL, Food and Civil Supply, forest, revenue Education, Agriculture horticulture, HRTC, Red Cross will constitute departmental level disaster management committee headed by a gazette officer pertaining to that department. The committees will organize quarterly meetings of the committee members to analyses the preparedness level of the department in regard to disaster management. The committee will also decide the measures to be taken for reducing the gaps in their capacities and keep the proper record of the same.

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#### 11.1.1. SUB DIVISION LEVEL COORDINATION MECHANISM

As per the institutional mechanism, sub divisional officer (Civil) will call for the quarterly meeting the sub division level disaster management committee to review the preparedness level and plan to reduce the gaps identified. The chairperson will further report the situation to the DDMA and send the requisition of resources if required.

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### 11.1.2. TEHSIL LEVEL COORDINATION MECHANISM

As per the institutional mechanism, Tehsildar will call for the quarterly meeting at the tehsil level disaster management committee to review the preparedness level and plan to reduce the gaps identified at Tehsil level.

## 11.2 ARRANGEMENTS AT LOCAL LEVEL

It is the local level that manages disasters within their own communities. Tehsil, sub division and district levels are to provide additional resources, support, assistance and expertise as required. Local government is the key management agency for disaster events at local level. Local government achieves coordinated disaster management approach through Local Disaster Management committees.

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### 11.2.1. COORDINATION SYSTEM WITH INTER DEPARTMENTS AND AT DISTRICT LEVEL

The District Magistrate / DC is the head of the District administrative set up and chairperson of the DDMA as per the DM Act, 2005. She / He has been designated as the responsible officer in the District. The heads of different departments in the District will have separate roles to play depending on the nature and kind of disaster. The roles and responsibilities of the members of the DDMA will be decided in advance in consultation with the concerned members

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### 11.2.2. PRE DISASTER COORDINATION

Minimum Annual meetings for review of preparedness and discussing the roles and responsibilities of the line departments, tehsils and Sub Divisions. The meeting agenda would be discussing the capacity of each department in terms of SAR equipment's and manpower and regular Updation of the same

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### 11.2.3. DISASTER PHASE COORDINATION

Coordination through phone or any other mode of communication in a disaster phase is not possible hence all the line departments and training institutes in the district should report to the DEOC as soon as the disaster strikes. After loss/damage assessment at the DEOC, the RO (D.C) would direct various stake holders to deploy their resources and task forces in the affected areas. Relief camps would be setup at a pre-defined location.

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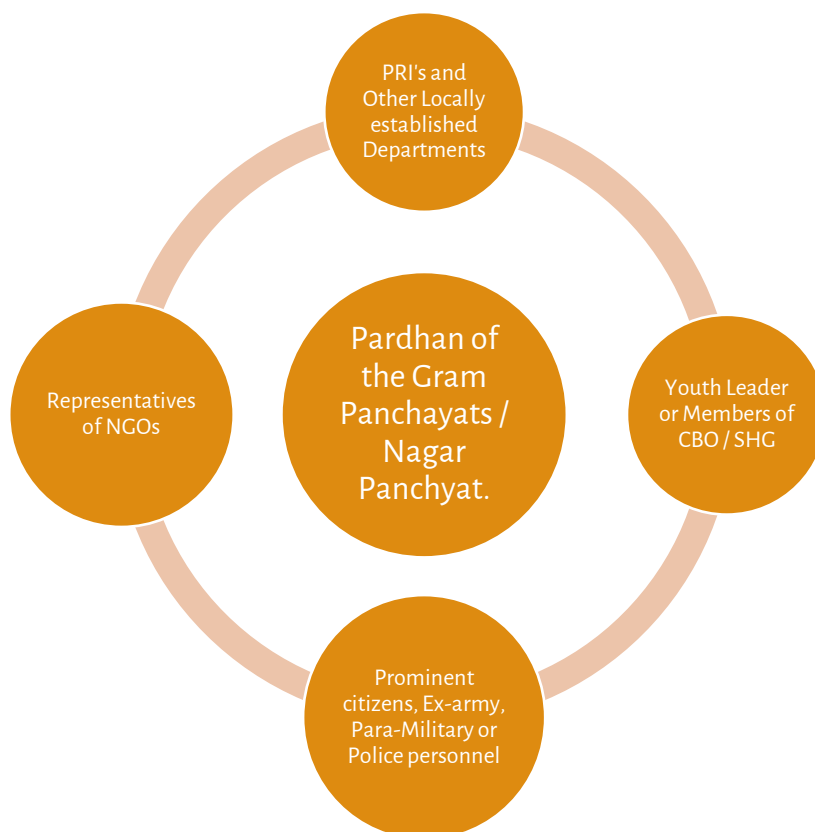
### 11.2.4. POST DISASTER COORDINATION

In the post disaster phase, the RO would take updates on the conditions of basic amenities like water, food, roads, law and order etc. from the respective departments. An assessment of relief given and need of rehabilitation would also be taken in the post disaster phase.

## 11.3 COORDINATION MECHANISM WITH COMMUNITY

The community will be coordinated through the village disaster management committees. The mentioned committees generally comprise of Frequency of local Committee meetings. Local Committee meetings must be held at least once in every six months at particular time and place decided by the chairperson of

the group. In addition, the chairperson of a Local Committee must call a meeting if asked, in writing, to do so by:



The District Authority for the Disaster district in which the Local Committee is situated; or At least one-half plus one of the members of the Local Committee.

- To help the Local government to prepare a local disaster management plan for its area;
- To identify, and provide advice to the relevant District Authority about support services required by the Local Committee to facilitate disaster management and disaster operations in the area;
- To ensure the community is aware of ways of mitigating the adverse effects of an event, and preparing for responding to and recovering from a disaster;
- To manage disaster operations in the area under policies and procedures decided by the district Authority;
- To provide reports and make recommendations to the relevant District Authority about matters relating to disaster operations;
- To identify, and coordinate the use of resources that may be used for disaster operations in the area
- To establish and review communication systems in the Local Committee, and with the relevant District Authority and other Local Committees in the situation of disaster.
- To ensure that information about a disaster in the area is promptly given to the relevant District Authority, and
- To ensure risk management and contingency arrangements of essential services within the Local government area. Further information about the functions of the Local Authority may be found under sections 41 of the DM Act 2005

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### 11.3.1. COORDINATION MECHANISM WITH NGOS, CBOS, SELF HELP GROUPS (SHGS)

The strong linkages which NGOs CBOs have with grassroots communities can be effectively harnessed for creating greater public awareness on disaster risk and vulnerability, initiating appropriate strategies for strengthening the capacity of stakeholder groups to improve disaster preparedness, mitigation and improving the emergency response capacities of the stakeholders.

In addressing the emerging concerns of climate change adaptation and mitigation, NGOs can play a very significant role in working with local communities and introducing innovative approaches based on the good practices followed in other countries.

NGOs can bring in the financial resources from bi-lateral and multilateral donors for implementing pragmatic and innovative approaches to deal with disaster risk and vulnerability, by effectively integrating and converging the various government programs, schemes and projects to create the required synergy in transforming the lives of at-risk communities.

The DDMA will maintain a proper record of the NGO's and CBO's working in the district and also map the available resources for them. The DDMA will appoint a Nodal officer for coordination with NGO's, CBO's and SHG's. The DDMA will call annual meeting of NGO's, CBO's & SHG's for mapping their resources. The meeting will be coordinated by the designated Nodal officer.

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### **11.3.2. COORDINATION WITH OTHER DISTRICTS AND STATE**

The DDMA will call annual meeting with neighboring district authorities pertaining to Disaster risk reduction and capacity building by reducing the existing gaps through regular coordination. The DDMA will participate in the meetings called by SDMA or other State level authorities to promote coordination with other districts and state authorities.



## 12. STANDARD OPERATING PROCEDURES (SOPS) AND CHECKLIST

The following SOPs are designed to guide and initiate immediate action. The DDMA and the district administration will initiate action and build and expand the scope of these actions based on unfolding situation.

### 12.1 EARLY WARNING MANAGEMENT

Actions	Responsibility
Obtain early warning inputs from IMD, CWC, MHA / NDMA / SDMA control rooms, GSI, Snow and Avalanche study centre	In charge - DEOC
Notify the early warning to Chairman and the members of the DDMA, Nodal officers of the line Depts., ADMs, SDM, Dy SPs	In charge - DEOC
Disseminate early warning to divisions, blocks and Panchayats	ADM / SDM. Superintendent of Police
Flash warning signals on all television and radio networks	District Information Officer
Establish disaster dash board on the official district website	District Information Officer
Inform communities / public / villagers about the disaster warning using vehicles mounted with loudspeakers	Tehsildars / Nayak Tehsildars / Patwari
Use PA systems facilities at Temples, Mosques, Gurdwaras and Churches to announce about the impending disasters	Tehsildars / Nayak Tehsildars / Patwari
Share early warning information with educational information and instruct closure of institutions if required	Tehsildars / Nayak Tehsildars / Patwari

### 12.2 EVACUATION WHEN THERE IS EARLY WARNING

Actions	Responsibility
Obtain early warning inputs from IMD, CWC, MHA / NDMA / SDMA control rooms, GSI, Snow and Avalanche study centre	In charge – DEOC
Notify the early warning to Chairman and the members of the DDMA, Nodal officers of the line Depts, ADMs, SDM, Dy SPs	In charge - DEOC
Hold meeting to assess situation and make a decision whether to evacuate specific communities / population	Chairman DDMA
Communicate decision regarding evacuation to concerned Revenue and Police officers	Chairman DDMA
Evacuating people to safer places	Concerned SDMs and Tehsildars
Deploy teams for law and order maintenance, traffic management as wells as cordoning specific areas	District Superintendent of Police
Establish routes, shelters and other logistics arrangements	Revenue Dept.
Establish information desk,	Revenue Dept.
Establish helpline numbers	BSNL

### 12.3 EVACUATION WHEN THERE NO EARLY WARNING

Actions	Responsibility
Activation of the DEOC	In charge DEOC
Notify about the disaster event to Chairman and the members of the DDMA, Nodal officers of the line Depts., ADMs, SDM, Dy SPs	In charge - DEOC
Hold a meeting to assess situation and make a decision whether to evacuate specific communities / population	Chairman DDMA
Communicate decision regarding evacuation to concerned Revenue and Police officers	Chairman DDMA
Evacuating people to safer places	Concerned SDMs and Tehsildars
Deploy teams for law and order maintenance, traffic management as well as cordoning specific areas	District Superintendent of Police
Establish routes, shelters and other logistics arrangements	Revenue Dept.
Establish information desk, helpline etc.	Revenue Dept.

### 12.4 SEARCH AND RESCUE

Actions	Responsibility
Activation of the DEOC	In charge DEOC
DDMA to review disaster situation and make a decision to deploy search and rescue teams in anticipation of a disaster	Chairman DDMA
Deploy district level search and rescue teams in identified locations	Chairman DDMA
Deploy Fire & Emergency Service teams for search and rescue	District Fire Officer
Deploy Home Guards rescue teams	District Commandant - Home Guards
Requisition of NDRF	Chairman DDMA
Establish on site coordination mechanism	ADM / SDM
Assign area of search and rescue responsibility for different teams deployed on site	ADM / SDMA
Establish Staging Area for search and rescue resources	ADM / SDM
Establish Camps for the responders with adequate food, water, sanitation facilities	ADM / SDM
Deploy teams for law and order maintenance, traffic management as well as cordoning specific areas	District Superintendent of Police
Identify nearest helipad and ensure it is in operating condition	ADM / SDM
Establish triage	CMO / MO
Transport critically injured	CMO / MO / 108 Ambulance / Red Cross

Establish onsite medical camps or mobile camps for first aid	CMO / MO
Establish information desk and dead body identification	ADM / SDM
Evacuating people to safer places	Concerned SDMs and Tehsildars
Deploy volunteers for supporting auxiliary functions such as crowd management, route management, first aid, information management	ADM / SDM
Rescue animals in confined spaces	Assistant Director - Animal Husbandry

## 12.5 RELIEF OPERATIONS

Actions	Responsibility
Undertake sub division wise / block wise / tehsil wise relief needs assessment in terms of food, water, shelter, sanitation, clothing, utensils, medical and other critical items	ADM / SDM
Identify suitable and safe facilities and establish relief camps	ADM / SDM / Tehsildar
Establish adequate lighting arrangement at the relief camps	HPSEB
Ensure adequate security arrangement at the relief camps and for the affected communities	District Superintendent of Police
Ensure adequate water and sanitation facilities in relief camps and other affected communities	SE – IPH
Set up RO plants / water purification plants or other suitable facilities for immediate water supply	SE-IPH
Supply, procure and provide food to the affected communities	District Supply Officer
Airdrop dry and un-perishable food to inaccessible location safe drinking water	DM / ADM / SDM
Provide essential items lost due to disasters such as utensils	ADM / SDM
Supply, procure and provide water to the affected communities	SE, IPH
Make required shelter arrangements including temporary camps	ADM / SDM / Tehsildar
Establish medical facilities at relief camps and at communities	CMO / MO / Red Cross / 108 Ambulance
Ensure suitable vaccination to prevent disease outbreak	CMO / MO
Arrange for psychosocial support for victims at the camps	CMO / MO
Ensure child friendly food for the children in the camps	DSO
Ensure nutritious food for pregnant and lactating mothers in the camps	DSO
Ensure medical care facility for pregnant women for safe delivery	CMO / MO
Involve and coordinate NGO participation	SDM / Tehsildar
Put in place grievance handling mechanism to prevent discrimination	SDM / ADM / Tehsildar

Ensure adequate availability of daily need items such as food, medicine, consumables etc. to ensure their access to affected communities	ADM / SDM / DSO
Provide adequate and weather, gender, culture appropriate clothing to the affected communities and especially address the needs of women, children, aged and physically challenged	ADM / SDM / DSO
Ensure adequate transportation facility to transport relief items	District RTO
Maintain proper records of and documents of beneficiaries and relief distribution	ADM / SDM / Tehsildar
Ensure adequate and appropriate heating facilities depending on the weather situation	DFO
Supply fire wood, cooking gas, POL for the kitchen	DSO / DFO
Record and maintain documents of ex-gratia payments	ADM / SDM / Tehsildar
Provide first aid and medical treatment to the injured animals	Veterinary Officer
Establish animal shelters wherever required	Director – Animal Husbandry
Arrange fodder for animals	Director – Animal Husbandry
Wherever required involve Animal Welfare Board and the Civil Society Organizations	Director – Animal Husbandry
Establish banking facilities for people to withdraw cash	District Lead Bank

## 12.6 GUIDELINES FOR SETTING AND RUNNING THE RELIEF CAMPS

- On receipt of report from Revenue officials, the DC / SDM(C) will order to set up a relief camp at pre-decided location as per District/ Sub-divisional disaster management plan.
- In case new location is to be selected for the camp due to unavoidable circumstances, following points should be considered for arriving at a decision.
  - Camp should preferably be set up in an existing built up accommodation like a community hall.
  - It should be located at a safe place which are not vulnerable to landslides, flood etc.
  - It should be accessible by motor vehicles, if possible.
  - Adequate space for roads, parking's, drainage, should also be there.
  - The area should not be prone to endemic disease like malaria.
- Wide publicity should be given about the location of the camp and affected people should be evacuated and brought to the camp directly.
- Emergency relief materials which include drinking water, food, bedding (mattress, sheets & blankets), baby food, mosquito repellents etc. should be arranged as early as possible.
- Control room/ help desk should be setup in the relief camp immediately.

### 12.6.1. SHELTER

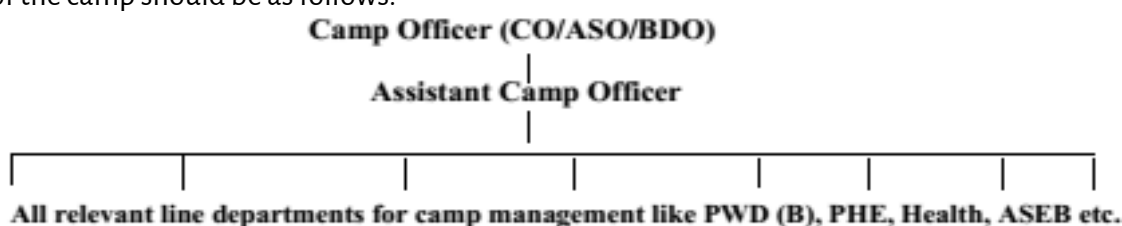
- The shelter should be such that people have sufficient space for protection from adverse effects of the climate.
- Ensure sufficient warmth, fresh air, security and privacy for their health and wellbeing.

- Tents should not be constructed too closely together and reasonable distance should be kept between the camps to provide some form of privacy.
- Priority should be given to widows and women headed households, disabled and elderly people in tent / room distribution.

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### 12.6.2. GENERAL ADMINISTRATION OF THE CAMP

- One responsible officer preferably CO/ASO should be designated as Camp Officer by the DC/SDM(C) who will ultimately be responsible for general management of the Relief Camp. He/ She will co-ordinate & supervise the works of other officers in the camp. Administrative structure of the camp should be as follows:



- One help desk/ control room/ officer room should be designated where inhabitants can register their complaints

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### 12.6.3. BASIC FACILITIES

#### 12.6.3.1. LIGHTING ARRANGEMENT AND GENERATOR SET

- A technical person, preferably from electricity or PWD (E) Dept. should be detailed to supervise the proper lighting arrangement in and around the camp and operation and maintenance of the generator set.
- One big candle and one match box should be provided in every room/tent.
- Petromax or emergency light should be arranged in sufficient numbers in the camp.
- Approach to toilet and water source should properly be illuminated

#### 12.6.3.2. WATER FACILITIES

- Total requirement of drinking water, water for toilets, bath & washing of clothes and Utensils should be assessed and proper arrangement should be made accordingly.
- One Sr. Officer of IPH Dept. should be detailed for maintaining water supply in the camp.
- Separate bathing units must be constructed for male & female

#### 12.6.3.3. 12.8.3 SANITATION, FOOD- STORAGE & DISTRIBUTION, CLOTHING

- Toilet should be minimum 10 mtrs and maximum 50 mtrs away from shelter / tent / room Sufficient stock of bleaching powder, toilet cleaner and others item should be maintained

#### 12.6.3.4. FOOD- STORAGE & DISTRIBUTION

- As far as practicable and as per available space cooked food may be served in hall or at one place for convenience of cleaning, hygiene, disposal of waste and smooth arrangement.
- Food should be culture specific and as per food habits of the community. People of rural area may not like bread & butter

- Packed food like biscuit, tinned food, ready to eat meals, noodles etc. should be properly checked that they are not expired before distribution.
- Separate queue may be allowed for women infirm & elderly people to collect relief aid.

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#### 12.6.3.5. CLOTHING

- People in the camp should be provided sufficient clothing to protect themselves from the adverse effects of the climate.
- Culturally appropriate clothing should be made available.
- Women and girls should be provided necessary sanitary protection.

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#### 12.6.3.6. MEDICAL FACILITIES & PSYCHO-SOCIAL SUPPORT

- One Doctor along with team of paramedical staff should be detailed on roster system around the clock in the camp
- A separate room or tent should be made available for the medical team.
- A rapid health assessment of all the inhabitants in the camp should be done on weekly basis
- Cases of snake bites are also reported from relief camp. Necessary arrangement should be made in nearest health institution for adequate stock of anti-venom injection.
- Psychological support is best obtained from the family. Therefore, even in abnormal conditions, family should be kept together.

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#### 12.6.3.7. SPECIAL ARRANGEMENT FOR WOMEN, CHILDREN, AND PHYSICALLY CHALLENGED AND ELDERLY PERSONS

- Since women are more vulnerable during disaster, their specific needs must be identified and taken care of.
- Female gynecologist and obstetrician should be available at hand to take care of maternity and child related health concern.
- Ensure that children inoculated against childhood disease within the stipulated time period.
- For safety and security of the women and children vigilance committees should be formed consisting of women.
- Women Police Officer should be stationed within the camp to record and redress any complaints made by women.
- Security measures should be taken in the camps to prevent abduction of women, girls and children.

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#### 12.6.3.8. VERMIN CONTROL

- Insect and rodents are the avoidable pests in the relief camp. They spread diseases, spoil foods and other material
- Fogging may be arranged to prevent mosquitoes and other flying insects.
- Waste segregation should be promoted and collected on daily basis

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#### 12.6.3.9. SECURITY

- Security, peace and order must be maintained in the relief camp. The youths in the camp may be involved for providing better security environment.
- Police personnel should be detailed on roster basis.
- Adequate employment of force should be ensured on the boundary and gate of the camp.

### 12.6.3.10. ENTERTAINMENT, RECREATION & IEC PROGRAMME

- Literary clubs/ Organizations may be promoted to arrange books & magazines for camp populations.
- Camp population may be kept engaged by providing entertainment & recreational facilities to them.
- Temporary Aaganwadi centres may be opened in the camp with the help of ICDS project officers for small children.
- Temporary schools may be setup in the camp involving volunteers from the campaign habitants. SSA may provide free textbook, stationary, Siksha-Mitra etc. Reputed
- NGOs may also be allowed to run temporary schools in the camp.

### 12.7 RESTORATION OF ESSENTIAL SERVICES

Actions	Responsibility
Assess, priorities and develop work plan for debris removal and road clearance	SE / EE –PWD
Constitute teams with equipment for debris removal and road clearance	SE / EE PWD
Assess and priorities and develop work plan for restoration of power supply	SE / EE HPSEB
Constitute teams / crew to undertake restoration of power supply	SE / EE HPSEB
Assess, priorities and develop work plan for restoration of water supply	SE / EE - IPH / Concerned ULB
Constitute teams / crew to undertake restoration of water supply	SE / EE - IPH / Concerned ULB
Assess, priorities and develop work plan for restoration of telecommunication services	SE / EE - BSNL
Constitute teams / crew to undertake restoration telecommunication services	SE / EE - BSNL
Deploy temporary / portable exchanges in critical locations for immediate restoration of telecommunication services	SE / EE – BSNL
Assess, priorities and develop work plan for restoration of road network	SE / EE – PWD
Constitute teams / crew to undertake restoration of road network	SE / EE - PWD
Constitute teams / crew to undertake restoration of road network in rural areas	SE / EE Rural Development
Coordinate with Army / SDMA for erection of bailey bridges / temporary road links where bridges are washed out	DC / ADM

### 12.8 12.8. DEAD BODY DISPOSAL

Actions	Responsibility
Establish village / ward level committee for identification of dead bodies	ADM / SDM / ULB



Prepare a record of details of the bodies retrieved in the Dead Body Inventory Record Register, allocate individual Identification Number, photograph, and prepare Dead Body Identification Form	Tehsildar / SDM
Identification of the dead bodies and handing over to the next of kin	Village level / ward level committee
Transport unidentified dead bodies to the nearest hospital or mortuary at district / sub division / block level	SDM / ADM
Make public announcement for establishing identity	SDM / ADM
Handover the identified dead bodies to the next of kin	SDM / ADM /Tehsildar
In case of unidentified dead bodies – prepare inventory, allocate individual identification number, photograph, finger print, obtain DNA sample if possible and fill Dead Body Identification Form	SDM / ADM /Tehsildar
Preserve the information recorded as forensic information	SDM / ADM /Tehsildar
Undertake last rights of unclaimed / unidentified dead bodies as per established religious practices	SDM / ADM /Tehsildar
Coordinate with NGOs and obtain their support	SDM / ADM /Tehsildar
Preserve the bodies of foreign nationals (if any) by embalming or chemical methods and then placed in body bags or in coffins with proper labelling for handing over and transportation of such bodies to Ministry of Extern Affairs, or to the Consular offices of the concerned countries and other actors such as International Committee of the Red Cross	SDM / ADM /Tehsildar

## 12.9 CARCASS DISPOSAL

Actions	Responsibility
Prepare a record of details of the animal carcasses retrieved	SDM/ADM/Tehsildar / Patwari
Identify owners of the livestock and hand over the animal carcasses	SDM / ADM / Tehsildar / Patwari
Photograph all unidentified animal carcasses preferably before transportation for disposal	SDM / ADM / Tehsildar / Patwari
Transport unidentified or unclaimed animal carcasses to the designated site for disposal	Assistant Director Dept. of Animal Husbandry
Maintain a record of carcasses buried or handed over	SDM / ADM / Tehsildar / Patwari
Follow suggested guidelines for burial of carcasses or composting	SDM / ADM / Tehsildar / Animal Husbandry

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## 12.9.1. GUIDELINES FOR DISPOSAL OF ANIMAL CARCASSES

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### 12.9.1.1. GUIDELINES FOR BURIAL

- Burial shall be performed in the most remote area possible.
- Burial areas shall be located a minimum of 300 feet down gradient from wells, springs and other water sources.
- Burial shall not be made within 300 feet of streams or ponds, or in soils identified in the country soil survey as being frequently flooded.
- The bottom of the pit or trench should be minimum 4 to 6 feet above the water table.
- Pits or trenches shall approximately be 4 to 6 feet deep. They should have stable slopes not steeper than 1-foot vertical to 1-foot horizontal.
- Animal Carcasses shall be uniformly placed in the pit or trench so that they do not exceed a maximum thickness of 2 feet. The cover over and surrounding shall be a minimum of 3 feet. The cover shall be shaped so as to drain the runoff away from the pit or trench.
- The bottom of trenches left open shall be sloped to drain and shall have an outlet. All surface runoff shall be diverted from entering the trench.
- Burial areas shall be inspected regularly and any subsidence or cavities filled.

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### 12.9.1.2. GUIDELINES FOR COMPOSTING

- Select site that is well drained, at least 300 feet from water sources, sinkholes, seasonal seeps or other landscape features that indicate hydrological sensitivity in the area.
- Lay 24-inch bed of bulky, absorbent organic material containing sizeable pieces 4 to 6 inches long. Wood chips or hay straw work well. Ensure the base is large enough to allow for 2-foot clearance around the carcass.
- Lay animal in the center of the bed. Lance the rumen to avoid bloating and possible explosion. Explosive release of gases can result in odour problems and it will blow the cover material off the composting carcass.
- When disposing large amounts of blood or body fluid, make sure there is plenty of material to absorb the liquid. Make a depression so blood can be absorbed and then cover, if a blood spill occurs, scrape it up and put back in pile.
- Cover carcass with dry, high-carbon material, old silage, sawdust or dry stall bedding (some semi-solid manure will expedite the process). Make sure all residuals are well covered to keep odours down, generate heat or keep vermin or other unwanted animals out of the window.
- Let it sit for 4 to 6 months, then check to see if carcass is fully degraded.
- Reuse the composted material for carcass compost pile, or remove large bones and land apply.
- Site cleanliness is the most important aspect of composting; it deters scavengers, and helps control odours and keeps good neighborly relations.

**Note:** Animals that show signs of a neurological disease, animals that die under quarantine and those with anthrax should not be composted.

## 12.10 INFORMATION AND MEDIA MANAGEMENT

Actions	Responsibility
Establish a media center at EOC or Deputy Commissioner's office	District PRO
Designate Official Spokes Person	Dy Commissioner
Prepare Press releases	DPRO
Decide on the time of press releases	District PRO
Decide on time and frequency of press conference	DPRO
Arrange for press conferences at the designated place and time	DPRO
Set up interaction times of media with senior officers	District PRO
Provide logistics support to the media during their visits to the disaster sites	District PRO
Scan media reports on disaster response and take necessary action	District PRO

### 12.10.1. GUIDELINES FOR INFORMATION MANAGEMENT

- Flash warning signals on all television and radio networks
- Coordinate, collect, process, report and display essential elements of disaster-related information
- Update and feed information to key government agencies
- Provide accurate information through print and electronic media as well as its website for easy availability and appropriate access to the members of public.
- Provide situation updates to all television and radio networks at regular intervals
- Keep the public updated and well informed about the status of the disaster
- Develop appropriate graphics and pictures to disseminate useful information among all participating agencies as well as the people
- Provide ready formats to collate information on different aspects of the disaster from the concerned state / district to facilitate accurate communication
- Document all response / relief and recovery measures
- Prepare situation reports every 3-4 hours during the initial response phase of a disaster and thereafter twice or once daily

## 12.11 VIP VISIT MANAGEMENT

Actions	Responsibility
Receive information about VIP visits	Dy Commissioner / Protocol Officer
Make arrangements for receiving VIPs	Dy Commissioner / Protocol Officer
Prepare a detailed plan and minute to minute schedule for VIP visit	Dy Commissioner / Protocol Officer
Prepare latest detailed folder containing detailed information and submit the same to the visiting VIP	Dy Commissioner / District Information Officer
Designate nodal officials for each location of VIP visit such as Hospital, Disaster affected communities, Relief camps etc	Dy Commissioner / Protocol Officer





