



DISTRICT DISASTER MANAGEMENT PLAN

Kangra
HIMACHAL PRADESH

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1. INTRODUCTION

Kangra is a town in Kangra District of Himachal Pradesh state in northern India, and lends its name to the district of the same name. Kangra was called Nagarkot in ancient history. It is a town at the confluence of the Bener River and Majhi River. **Dharamshala city, Headquarter of the District** is also a tourist spot and is now home-in-exile to the Tibetan Guru Dalai Lama. Many ancient temples like the *JAWALAJI* Temple, *BRIJESHWARI* temple, *CHAMUNDA* temple, *BABA BAROH* and *BAIJNATH* temple are located here. Kangra fort is also a popular tourist attraction.

Despite all, vagaries of nature can cause disaster of such magnitude and such intensity that it becomes impossible to respond unless there is preparedness to cope with the effect in the pre-as well as post-disaster period. Preparedness is the best response to such situation in order to mitigate the effects and to reduce losses in terms of life and property. With increasing anthropogenic pressures, natural disaster have become all the more unpredictable and the fury unleashed by natural forces on human kind all the more ferocious causing far greater loss of life and property.

In 1905, District Kangra experienced one of the major earthquakes of the recorded seismic history of India having a magnitude of 8.0 on Richter scale in which approx. 20,000 persons lost their lives. The towns of Kangra and Dharamshala were razed to the ground and no Government functionary remained even to report the mishap to the higher authorities. While there is no doubt that human kind has now got to evolve and change its approach by restoring ecological balance, it is also true that human kind has got to be prepared for the worst. Increasing population densities, environmental degradation, and climate change meeting with vulnerability make the impacts of natural or human induced hazards worse.

Table 1: Administrative setup of District Kangra

Administrative Setup	
No. of Sub Divisions as per Census (2011)	10 – Dharamshala, Kangra, Dehra, Jawali, Fatehpur, Jaisinghpur, Jawalamukhi, Nurpur, Palampur, Baijnath
No. of Tehsils	19
Sub Tehsil	11
Development Blocks	15
Panchayats	760
Villages	3908

Today with latest technology and resources we better be prepared to deal with such catastrophe. However, all these resources require integration under unified plan to be more effective and accessible. With passing of Disaster Management Act, 2005 and the inclusion of disaster management in the seventh schedule of the Constitution, due importance has been given to Disaster Management and each district is required to make an integrated District Disaster Management Plan. Therefore, this plan has been made to deal with worst case scenario with full involvement of community.

1.1 AIMS & OBJECTIVES OF THE DISTRICT DISASTER MANAGEMENT PLAN

Aim:

The aim of the District Disaster Management Plan (DDMP) is to guide all stakeholders in taking action to prevent damage to or loss of life, property and environment through prevention, preparedness, mitigation and quick and coordinated response to save all lives.

Objectives:

1. To provide a multi disaster action plan to administration and other institutes with predefined set up consisting specific roles and responsibilities of primary and supportive agencies as well as communities of the district.
2. To facilitate the list of all the resources related to disaster management within the district available with primary, secondary agencies or to procure.
3. To provide direction to key institutions for setting up a goal of disaster risk reduction and mitigating the impact of hazards by building capacity of the district.
4. To facilitate linkage between development and disaster risk reduction (DRR) through integration of DRR measures into developmental planning.
5. To provide operational structure and the coordination mechanisms of various agencies along with the standards of service to be required from them.
6. To provide information and monitoring tools, system of communication, and the evaluation components for timely revision.

1.2 AUTHORITY FOR DDMP: DM ACT 2005

On 23rd December, 2005, the Government of India took a defining step by enacting the Disaster Management Act, 2005, which envisaged creation of Authorities at all three levels as below:

- National Disaster Management Authority (NDMA),
- State Disaster Management Authorities (SDMA),
- District Disaster Management Authorities (DDMA).

In Section 31. (1) There shall be a plan for disaster management for every district of the State and Section 31. (2) The District Plan 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. As per "Section 25" the Constitution of District Disaster Management Authority was done on 01.06.2007. And as per "Section 30, Sub Section 02, (i) "The District Authority may prepare a disaster management plan including district response plan for the district and according to (xv) it may prepare, review and update district level response plan and guidelines.

1.3 EVOLUTION OF DISTRICT PLAN

In the process of evolution of the plan from the year 2012 to year 2016 – 17 the following factors were taken into consideration and the factors are shown as figure below.

For updating the District Plan of Kangra District, Details of the district are used from the last approved copy of the plan in year 2012. And in evolution various consultations were done with the stake holders and the line departments such as CMO, Kangra and Commandant Home guards/ Fire services etc. and many online

references were also made to District plans of other districts, State plan, National DDMP template, Websites of various Departments, google, and the necessary assistance was provided by District Administrators and UNDP - India.

1.4 STAKEHOLDERS AND THEIR RESPONSIBILITIES

Table 1.1: Stakeholder of District Kangra and Their responsibilities

#	Stakeholders	Responsibilities
1.	DDMA - Kangra	<ul style="list-style-type: none"> • Updation and implementation of DDMP. • Conducting meetings on disaster management. • Building capacity by trainings and awareness • Managing all resources at district level • Coordinating with stakeholders and liaisoning • Enable local authorities to establish contact with the state authorities and Other departments • Coordinate planning procedures between district, the state and the center; • Provide ready formats for all formal reporting procedures as a standby.
2.	DEOC - Kangra	<ul style="list-style-type: none"> • Receive and process disaster alerts and warnings from nodal agencies • Other sources and communicate the same to all designated authorities. • Monitor emergency operations. • Facilitate coordination among primary and secondary ESFs / Departments / Agencies • Requisitioning additional resources during the disaster phase. • Issuing disaster / incident specific information and instructions specific to all concerned. • Consolidation, analysis, and dissemination of damage, loss and needs assessment data. • Forwarding of consolidated reports to all designated authorities.
3.	NDMA	<ul style="list-style-type: none"> • To coordinate and monitor with states about the DM Policy and DM Plans • Facilitating resources on demands raised by State administration.
4.	HPSDMA, Shimla	<ul style="list-style-type: none"> • Coordinating DRR activities and implementation thereof. • Facilitating resources on demands raise by District administration.
5	NDRF 7th Battalion, Nurpur & Bhatinda	<ul style="list-style-type: none"> • Carrying out search and rescue on requisition by District as well as state administration. • Strengthening the response mechanism through trainings and awareness in Lo state.
6	Armed Forces / Air force Base for rescue (Sarsava, Sahranpur, UP)	<ul style="list-style-type: none"> • Coordinate with administration in response as well as capacity building. • Facilitate administration with the key resources in disaster. • Dedicated For rescue sortie operations in the state.

7	Himachal Police Kangra for Law & Order	<ul style="list-style-type: none"> • Having sound communication and security plan in place to coordinate law & order issues; • Training to security personnel in handling issues of disaster situations
8	Department of Irrigation & Public Health (Drinking & potable water)	<ul style="list-style-type: none"> • Procurement of clean drinking water; • Transportation of water with minimum wastage; • Special care for women with infants and pregnant women; • Ensure that sewer pipes & drainage are kept separate from drinking water facilities.
9	HPSEB Ltd. "Electricity"	<ul style="list-style-type: none"> • Provide and coordinate with State and support until the local authorities are prepared to handle all power related problems; • Identify requirements of external equipment required such as DG sets, generators etc; • Damage Assessment
10	HP PWD - Kangra	<ul style="list-style-type: none"> • Emergency clearing of debris to enable reconnaissance; Clearing of roads; • 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. • Construct temporary roads; Keep national and other main highways clear from disaster effects such as debris etc. • Coordination with private services providers for supply of earth moving equipment etc.
11	Fire Services - Kangra	<ul style="list-style-type: none"> • To strengthen community response through trainings and awareness camps. • To train first responders at village / Panchayat level in firefighting. • To mitigate the fire risk by auditing and inspection and fighting fire disaster. • To assist Search and rescue team in fire situations.
12	Public Health (CMO, MS RPGMC, Tanda, MS ZH ,Red Cross Society,)	<ul style="list-style-type: none"> • To coordinate, direct and integrate State level response and activation of medical personnel, supplies and equipment; • Provide human services under the Department of health; • To prepare, keep and check ready Mobile Hospitals, stocks of equipment and drugs; • To network with private health service providers; • To provide ready ambulances and transform other vehicles into ambulance to meet the transportation requirement at mass level. • To provide improvised as well as ready medical resources. • To provide resources for mass level water decontamination
13	Municipal Corp. Dharamshala	<ul style="list-style-type: none"> • Land Usage • Solid/ liquid waste treatment and management • Make arrangement for proposal disposal of waste in their respective areas; • Arrange adequate material and manpower to maintain cleanliness and hygiene

14	PRI's	<ul style="list-style-type: none"> Strengthening the community based response by awareness and implementation of DM policy and guidelines Preparing the Community as first responder and local authorities as per Village Disaster Management Plan.
15	(HRTC & RTO for Transportation)	<ul style="list-style-type: none"> Overall coordination of the requirement of transport in implement emergency related response and recovery functions, search and rescue and damage assessment; Make an inventory of vehicles available for various purposes; In response to disasters catering the need of transportation through buses and other vehicles; Providing drivers and other skilled manpower for repair and maintenance.
16	Civil Defense, Home Guards, and Emergency Services (Search and Rescue)	<ul style="list-style-type: none"> Establish, maintain and manage search and rescue response system; Coordinate search and rescue logistics during field operations; Provide status reports of S&R updates throughout the affected areas.
17	DFSC for Food & Civil Supplies	<ul style="list-style-type: none"> Identify requirement of food and clothing for affected population; Control the quality and quantity of food, clothing & basic medicines Ensure the timely distribution of food and clothing to the people; Ensure that all food that is distributed is fit for human consumption.
18	Media, information and communication (Department of Public Relations office)	<ul style="list-style-type: none"> To provide and collect reliable information on the status of the disaster and disaster victims for effective coordination. Coordinate with all TV and radio networks to send news flashes for specific do's, don'ts & needs. To disseminate the updates and directions to public through radio broadcasting. Respect the socio-cultural and emotional state of the disaster victims while collecting information for dissemination.
19	Forest (DFO for Removal of trees & fuel wood & afforestation)	<ul style="list-style-type: none"> Removal of fallen trees and Afforestation or shifting of trees. To provide fuel wood for the relief camps and public; Have adequate storage of fuel wood and make arrangement for distribution thereof; To provide fuel wood for cremation.
20	Education	<ul style="list-style-type: none"> Building capacity at school level through various competitions and awareness campaign. To train the volunteers through NCC/ NYKS/ NSS etc. in Firefighting, First aid, and other disciplinary & volunteering.
21	DRDA, Revenue, Agriculture & Horticulture	<p>Gathering damage reports from the ground through PRI's and Patwaris.</p> <p>Providing details for the relief and other resources</p> <p>Implementation of VDMP's</p>

1.5 HOW TO USE THE PLAN

The objective of this plan is to formulate an integrated District level Disaster Management Plan for District Kangra to integrate District Functionaries or Line Departments. Resources to mitigate risk of disasters identified are prepared to deal with them, build capacities to handle them efficiently and effectively, to have prompt and integrated response in case of disaster by speedy planned evacuation, search and rescue, medical aid and restoration of essential services, finally to initiate rapid recovery by effective rehabilitation and reconstruction

This plan deals with detailed hazards, risk vulnerability and capacity analysis, integrated institutional mechanism to implement the plan, resource inventory, mitigation plan, response plan, reconstruction plan, standard operating procedures for different committees and Govt. Departments, budgetary and financial allotments, modalities for monitoring, periodic evolution and update.

This plan has been prepared by District Administration by upgrading the previous plan. Endeavour is to make the plan simple and short so that even a lay man can understand it. This plan has been kept open ended to assimilate all the new inputs and feedbacks so that it evolves with time. Mechanism has been incorporated in plan to get quarterly inputs and the complete plan to be reviewed annually.

The Disaster Management Plan provides for uniformity in approach and perception of the various issues at hand thus avoiding undue complications. The plan at the same time provides for the coordination mechanisms for different agencies right from the field level to the District Head Quarter and beyond. Thus, it ensures efficiency in terms of response and optimal utilization of resources. Moreover, it keeps the administration in a state of readiness to face any eventuality.

1.6 MECHANISM FOR APPROVAL OF THE PLAN

The Line Departments and other Stake Holders of District submits a copy of its disaster management plan, and of any amendment thereto to the Deputy Commissioner for Approval of that Plan.

The Chairman of District Authority shall submit a copy of the district disaster management plan, and of any amendment thereto to the Himachal Pradesh State Disaster Management Authority for Approval of the Plan

1.7 REVIEW AND UPDATING DISTRICT PLAN:

District Disaster Management Plan prepared by District Authority shall be reviewed annually and either be updated or reaffirmed in statutory compliance of DM Act 2005. The plan may be used to summarize the accomplishments of the past year reflecting the updates and help the administration to prioritize mitigation goals for the next year.

Reviewing and updating the plan should be mandatory after following events:

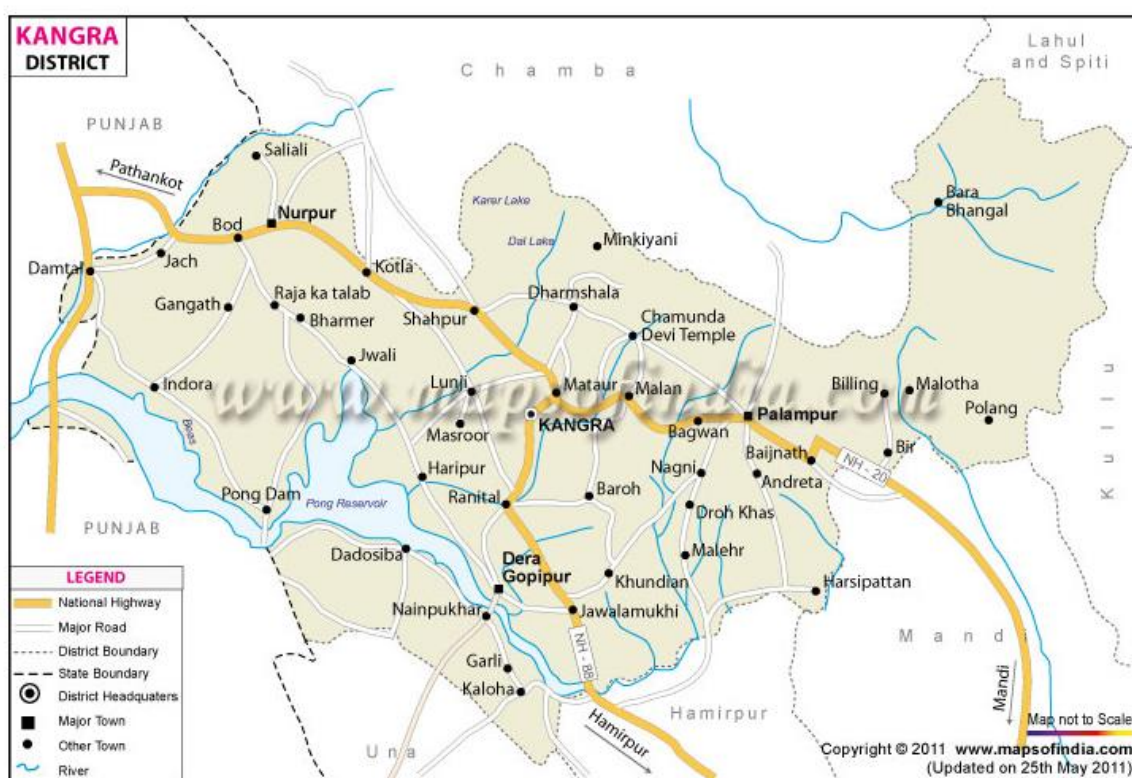
- A major accident or incident.
- A formal update of planning guidance or standards.
- Major Drills or Exercises.
- A change in the district's demographics or hazard or threat profile.

- The enactment of new or amended laws or ordinances

2. HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESSMENT (HVCRA)

Basic profile of District Kangra:

Kangra is one of the 12 districts of Himachal Pradesh with highest population and 4th largest in area. As per past experiences, Kangra is more vulnerable to earthquakes and other risks due to its higher population density.



Map of District Kangra

Table 2: General Details of the District Kangra as per Department of Statistics:

Administrative Setup	
No. of Sub Divisions as per Census (2011)	10 – Dharamshala, Kangra, Dehra, Jawali, Fatehpur, Jaisinghpur, Jawalamukhi, Nurpur, Palampur, Baijnath
No. of Tehsils	19
Sub Tehsil	11
Development Blocks	15
Panchayats	760
Villages	3908

Table 2.1: District Kangra Land Usage

Geographical Area (Source: Department of Economics and Stat, Kangra HP)	
Total Area sq. Kilometres	5,739 km
Altitude	1220 mtr. (Head Quarter)
Longitude	Between 75° to 77°45 East Longitude
Latitude	Between 31°2 to 32°5 North Latitude
Major River	Beas river.
Rainfall in year 2015	Normal: 1582 – Actual 1434 = (-) 148 Deficient

Table 2.2: General information on district Kangra

General	
Population	15,10,075
Sex ratio (females per thousand males)	(750591 Male / 759484 Female) 1012
Density per sq. kilometer	263
Literacy rate (%)	85.7
Total Banks	382
Name of the Lead Bank	Punjab National Bank
Number of Fair Price shops	1016
Petrol Pumps (IOC +BPC +HPC +IBPC)	70
Electrified Villages	100%
Villages with Potable / Drinking Water	100%
Roads	Total Length = 5746 KMS
Horticulture Total Fruits	39440 Hects.
Production Total Fruits	52186 tonnes
Tourist Arrival For The Year 2015 (Indian + Foreigner)	2509813

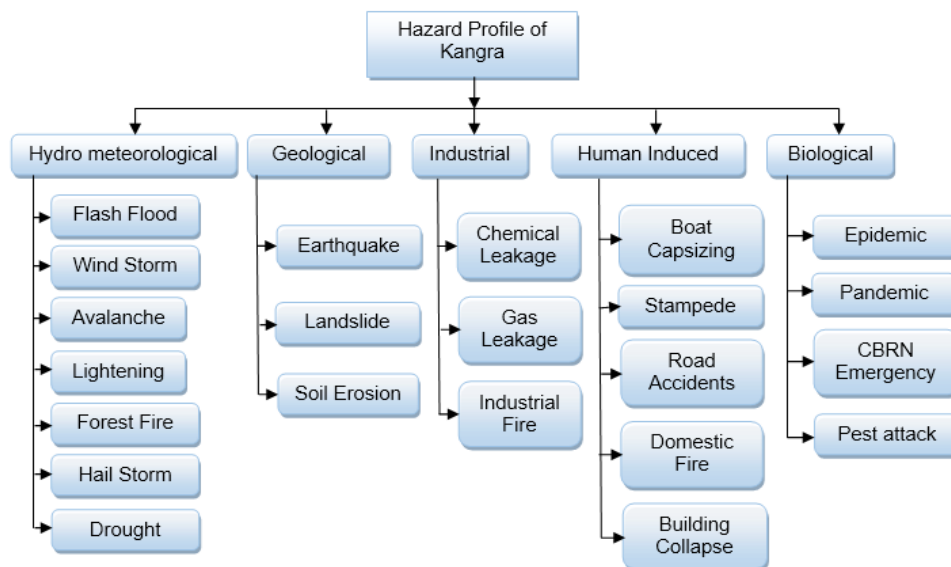
2.1 SOCIO - ECONOMIC PROFILE OF THE DISTRICT

The section would also provide an analysis on issues and challenges in sustainable development of the district. An official Census 2011 detail of District Kangra has been released by Directorate of Census Operations in Himachal Pradesh. In 2011, Kangra had population of 1,507,223 of which male and female were 748,559 and 758,664 respectively. There was change of 12.56 percent in the population compared to population as per 2001. The Economy of Kangra District consists mostly of agriculture and farming. Tea cultivation plays a vital role in the economy. "Kangra Tea" is famous worldwide for its rich aroma, colour and taste. A few other industries that have been established in the region, including water packaging,

construction materials, and potato chips. The areas of Palampur and Baijnath are surrounded by lush, green tea estates. Tourism is also an important part of the economy, with Bir in particular becoming a strong hub for ecotourism and aero sports. As Himachal is known as Dev Bhoomi, District Kangra is blessed with many temples of Goddess and green valleys.

2.2 HAZARD ANALYSIS OF DISTRICT KANGRA

District Kangra is prone to various hazards both natural and manmade. In the District the geological hazard, mainly earthquakes, landslides and soil erosion are most critical, the flash flood, cloud burst,



drought and forest fire is also hydro metrological hazard. The road accident, wind storm, epidemic and domestic fire could also occur but cause damage locally only.

Fig: The diagrammatic representation of hazards profile of District is as under

2.2.1 EARTHQUAKE

As per the BIS seismic zoning map 98.6% area of Kangra is liable to the severest design intensity of MSK IX. And as per Distribution of House by Predominant Materials of Roof and Wall and Level of Damage Risk out of 503,503 total Buildings in Kangra 301773 buildings are found to be made out of Unburnt Brick / mud walls leading to Very High risk of Damage,

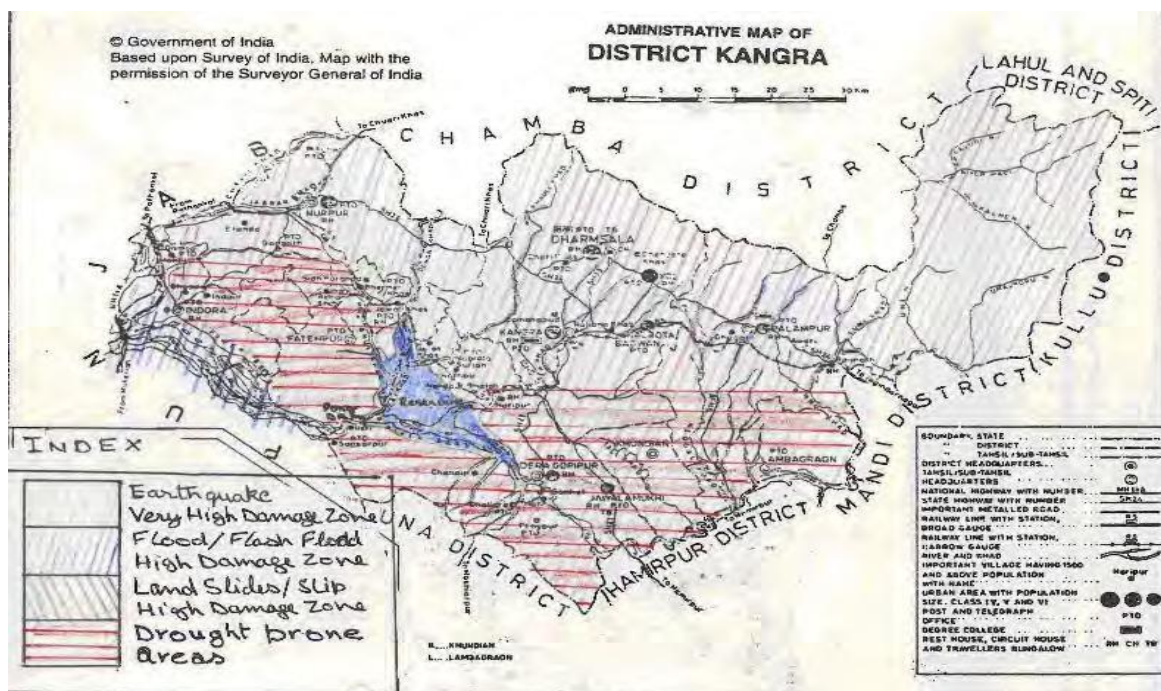
Table 2.3: Estimation of Loss in Earthquake as per Housing Report

#	Item	Scenario if all the buildings are without earthquake resistance		Scenario of all buildings are with earthquake resistance	
		Physical Damage	Loss in INR* (million)	Physical Damage	Loss in INR* (million)
1.	Loss of lives	65,000	6,500	12,000	1,200
2.	Total collapses of buildings (G5)	1,36,339	9,540	8,298	580

3.	Destroyed buildings (G4) 2+3 Buildings to rebuild	2,63,356 3,99,695	18,430 27,970	94,997 1,03,295	6,650 7,230
4.	Heavily damaged buildings (G3; to repair and retrofit)	9,15,602	12,820	3,12,382	4,370
5.	Moderately damaged buildings (G2; to repair and retrofit)	3,57,510	3,750	6,48,040	6,800
Total Loss			51,040		19,600

Source: Arya As, 12th World Conference on Earthquake Engineering, Auckland, 31st January-4th February, paper No.2824.

*INR-Indian rupees, 1US\$INR 40.0 in 1997; G5, G4, G3, G2 are grades of damage defined in MSK Intensity scale. Loses estimated in 1997 at 1997 costs.



The damage and loss scenario could be more disastrous now as the population of the State and district Kangra and built-up environment has increased many times since 1991. Present estimate of devastation in a repeat hypothetical earthquake is that (a) loss of more than 340,000 lives will occur if the earthquake will happen at midnight of winter months and half of this number if it will occur in the morning when people are awake and sleeping, (b) the urban facilities particularly hospitals, schools, communication buildings, transportation routes in the hilly region and water supply facilities will be badly damaged. The fragility of the present situation was amply demonstrated by the rather small earthquake of M=5.7 occurring on April 26, 1986 causing economic loss of about Rs. 66.00 crore.

2.2.2 LANDSLIDES

The hills and mountains of District Kangra are liable to suffer landslides during monsoons and also in high intensity earthquake. The vulnerability of the geologically young and not so stable steep slopes in various Dholadhar, Chamba Dhar ranges, has been increasing at a rapid rate in the recent decades due to inappropriate human activity like deforestation, road cutting, terracing and changes in agricultural crops requiring more intense watering etc.

2.2.3 FLOOD

River Beas and its tributaries constitute the main drainage system in Kangra district except for the extreme north-eastern part in Bara Bhangal area where it forms a part of the river, Ravi. Generally, the drainage system is marked by structural and slope conditions. The Beas River enters the district near village Harsi from the east and flows towards the west before it leaves Kangra (and Himachal Pradesh) at Mirthal in Punjab. The major southernly flowing tributaries are Neugal, Awa, Binnu, Baner, Naker, Gaj and Dehar *khads*. All these *khads* being snow fed are perennial. Northernly flowing streams are ephemeral. The various *khads/* streams and their catchment areas are given in below Table. Banganga, Dehar, Neogaland Awa originate from high Dhauladhar ranges in the north. Banganga, Gaj, Dehar, Bohl and Nand *Khads* join the Pong reservoir directly, while Neugal and Awa join the Beas River in the upstream of Nadaun. These *khads* have deep valleys in the hilly area. The valleys are wide in the Kangra valley region where the slope/ gradient of the rivers is gentle. The course of these rivers is structurally controlled. The gradient and flow are being utilized both for irrigation and power generations. A number of micro hydal projects are under construction on these *khads*. The water of these rivers is also used for irrigation by diverting its flows through *kuhls* (gravity channels). The northerly flowing tributaries '*choes*' are ephemeral and have flash floods during the monsoons. The width of these stream channels varies from less than a kilometre to more than 2 km. The channel areas are generally devoid of vegetation. The important *khads* are Pragpur, Nalsuha, Chanour and Dada Siba.

Table 2.4: Main Tributaries of Beas River in Kangra District

#	Name of River/ Khad	Catchment Area (sq km)	Remarks
1	Nandkhad	39	Joins directly
2	Buhl khad	104	Pong Dam
3	Deharkhad	477	Pong Dam
4	Gajkhad	616	Pong Dam
5	Bunnerkhad	782	Pong Dam
6	Polakhad	47	Pong Dam
7	Nakerkhad	184	Joins Beas river
8	Neogalkhad	--	Joins Beas river
9	Binno	--	Joins Beas river

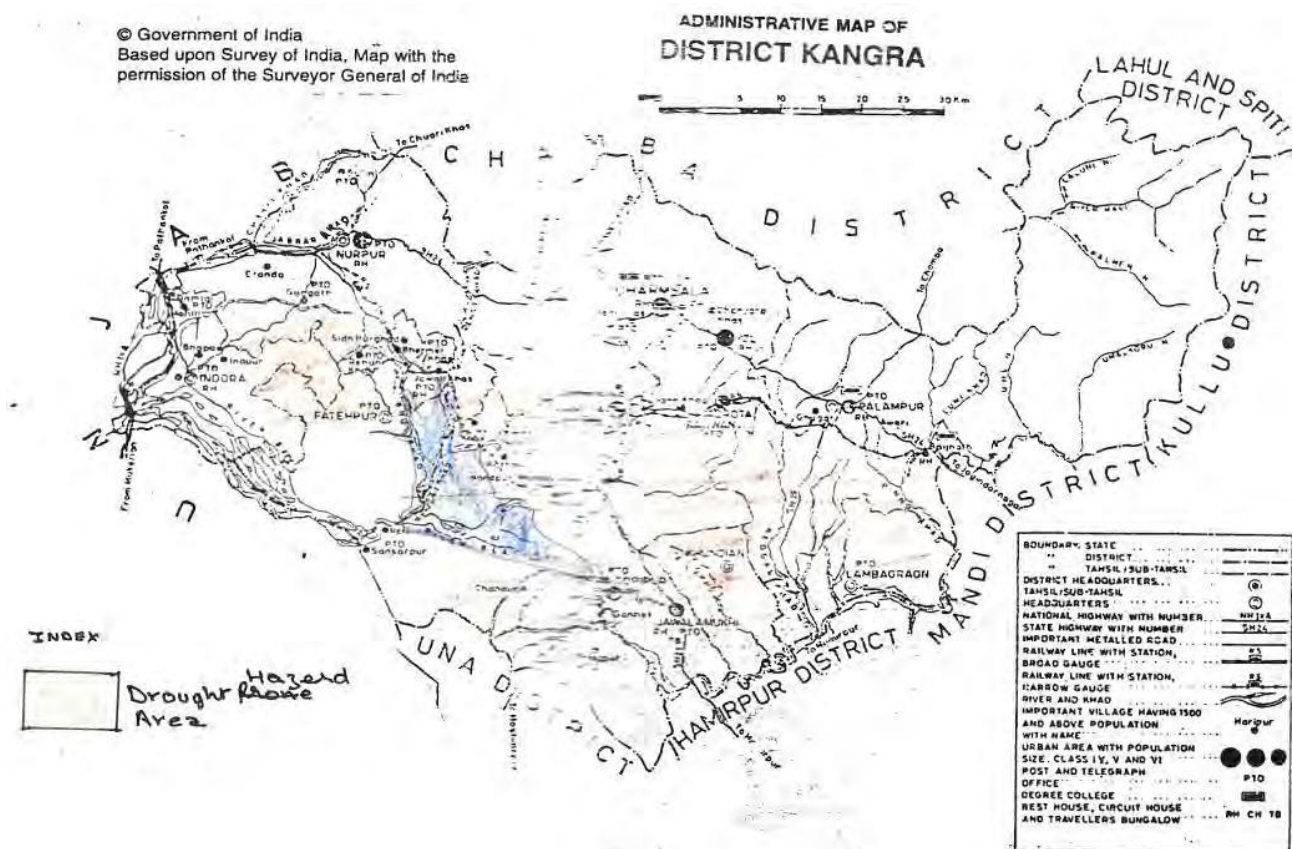
Flood mainly occurs due to over-topping of rivers, heavy rainfall, melting of snow and bank erosion because of steep slopes of river. The flood problem in the state is mainly during the months of June to August when the south west monsoon is in progress and snow is melting in the higher reaches. Floods are one of the worst disasters of the district that not only causes huge economic loss in the form of damage to houses, public utilities, and property but also many human lives and cattle heads are also lost. Almost all rivulets of the district carry heavy discharge during the monsoon when their catchments receive intense and heavy rainfall. Pong dam also prone to flood during rainy season. Major Tehsils wrap by Pong dam are Fatehpur, Jawali, Indora and Jaswan Kotla.

2.2.4 CLOUD BURST & FLASH FLOOD

Most of the part of district Kangra is hilly and it is prone to cloud burst and may lead to flash floods in local water channel during rainy season. The flash floods are events that are sudden, severe and short lived. It is a sudden and often destructive surge of water down a narrow channel or sloping ground, usually caused by heavy rainfall. Flash-floods are mostly the result of cloudbursts or blockage of river channel due to landslides. Main affected tehsils are Palampur, Baijnath, upper region of Shahpur, Multhan and upper part of Dharamshala etc. One of the other possible reason for the Flash flood is due to Dam burst caused by Earthquake or Landslide. The risk of cloudburst in the higher region occurred in 2009 causing life loss of 2 women and 1 injury recently.

2.2.5 DROUGHT

The crops of maize, rice (Dhan), wheat, vegetables and orchards have been affected due to uncertain rain and climatic changes in the area. The drought has also damaged cash crops like tomato, carrot, Potato, cauliflower, and cabbage. These crops depend on water sources, which are fed by the monsoons. Moreover Low belt region and rain shadow area of changar region of district is prone to drought whenever there is lean monsoon/ winter rain season because agriculture depends for irrigation on the rain. Major damage in district was occurred in April 1994. Main area was Jawalamukhi and Dehra.



2.2.6 WIND STORM

Wind storm is regular phenomena in entire district during summer season. Wind imparts both hilly and plain of the district. No major loss has been reported or recorded in the district apart of falling of trees on account of windstorm.

2.2.7 FIRE

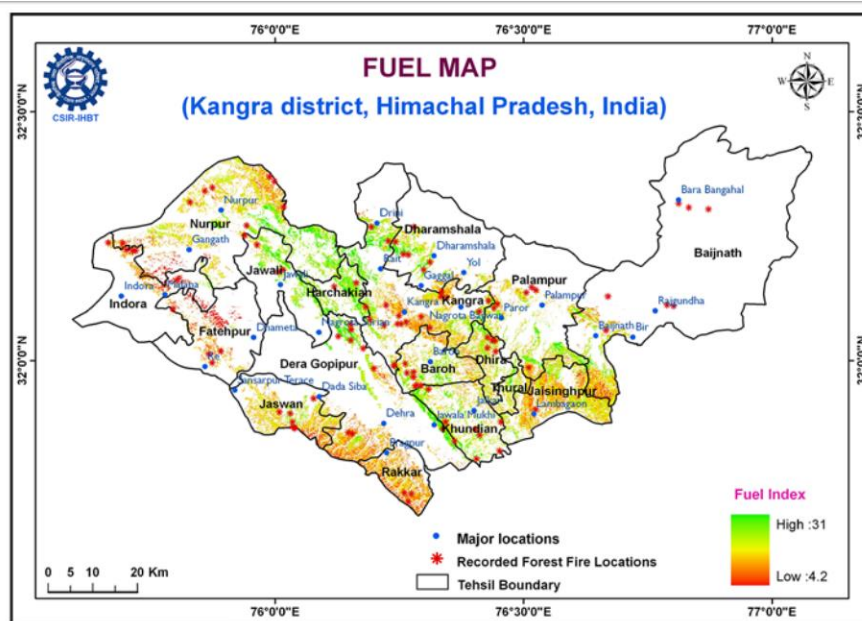
District Kangra is prone to urban local fires also causing loss of several lives and property. And the table given below provides the details the reason for these fire could be use of Wood in buildings the main reason behind the accidents varies on case to case basis.

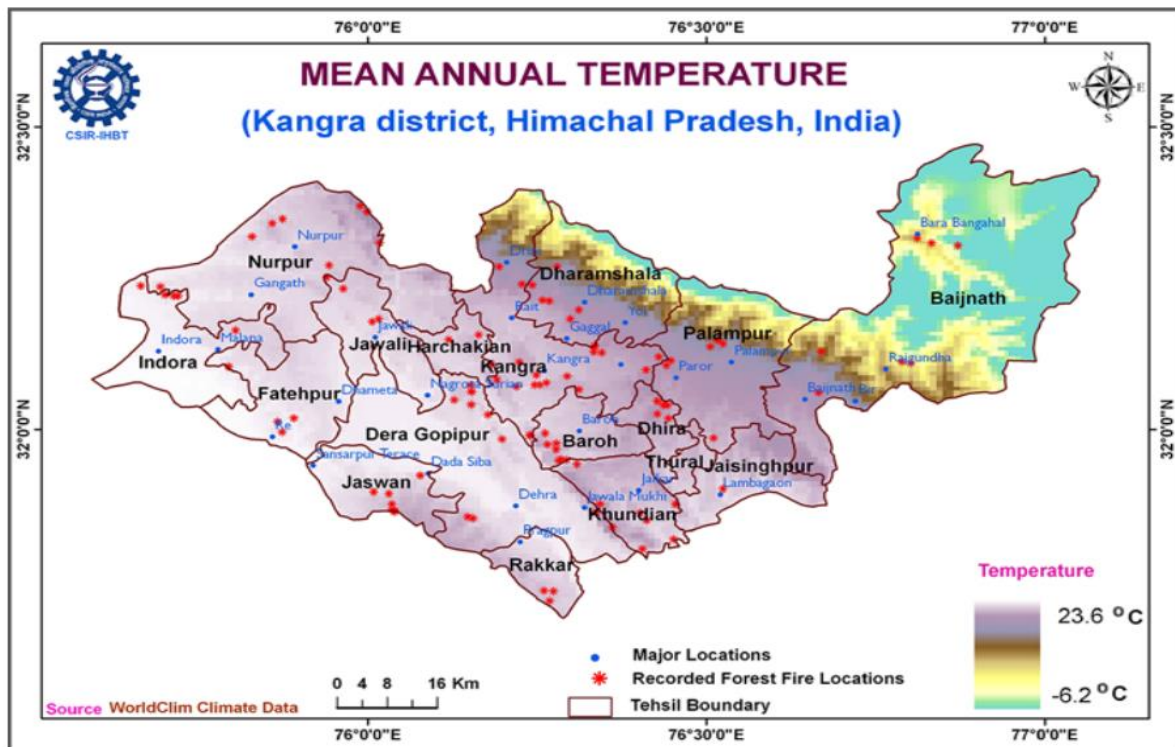
Table 2.5: Incidents related to Fire Disaster in District Kangra (Source: Kangra Abstract 2014-2015)

Year	Fire Station	No. of incidents	Details of Human Lives		Details of Cattle		Loss of property
			Saved	Lost	Lost	Lost	In Lacs
2008	3	187	5	5	1	-	47.22
2009	3	273	21	10	1	1	107.89
2010	3	251	21	5	-	-	151.36
2011	3	1062	106	11	12	-	197.72
2012	5	458	90	48	7	5	294.09
2013	5	237	14	2	-	70	380.28
2014	5	276	35	11	22	7	243.13

2.2.8 FOREST FIRE

A Study was conducted by a groups of CSIR Scholars on “Identifying triggers for forest fire and assessing fire susceptibility of forests in Indian Western Himalaya using geospatial techniques” and as per the paper the following points were concluded. And the risk of forest fire in Kangra district is elaborated. Mostly Forest fire occurs in summer period from April to June. The forest fires destroys the existing vegetation, killing plants, numerous insects, small animals and reptiles essential for balancing the eco-system. The local myth in the area is that lush green grass grows after fire. On the contrary, the ash content increases the acidic nature of the soil, thereby leading to soil erosion. Continuous fires in fact make the grass coarser. Relatively, forest fires destroy the natural binding of rocks, leading later to landslides in the area. The major reason for the forest fire is hot summers and large number of pine trees plantation. Since the fires normally break out in inaccessible and mountainous regions, fire stations are of nominal help. Main region of forest fire area are as follows:





Map: (From Source: Research Gate Paper number Nat Hazards (2015) 78:203–217)

Overall, 3305 villages were identified as forest fire-sensitive villages. (Nurpur (436) had maximum number of forest fire-sensitive villages followed by Palampur (350), Dhara Gopipur (243), Jaisinghpur (242), Khundian (229), Kangra (182), Baroh (169), Baijnath (164), Dharamshala (155), Fatehpur (154), Nagrota Bagwan (139), Dhira (128), Rakkar (109), Shahpur (109), Jawali (100), Jwalamukhi (96), Jaswan (90), Thural (83), Indora (71) and Harchakian (56).

A total of 544 villages were identified as 'high' forest fire sensitive, 1218 as medium forest fire sensitive, 1502 as low forest fire sensitive and 41 as very low forest fire-sensitive villages (Table 5). Jaisinghpur tehsil was observed to possess highest number (91) of 'high' forest fire-prone villages. The maximum number of 'medium' forest fire-prone villages was found in Khundian (150). Nurpur had highest number of 'low' forest fire-prone villages (232). The maximum numbers of 'very low' forest fire-prone villages were found in Nurpur (18) tehsils.

Table 2.6: Tehsil-wise area (%) under forest fire-prone forest fire susceptibility

Tehsil	Dominant fire-sensitive forest type	Very high	High	Medium	Low	Very low
Bajnath	Mixed forest	0.03	26.99	32.36	40.54	0.07
Baroh	<i>P. roxburghii</i>	0.13	18.34	43.67	37.87	0
Dhera Gopipur	Mixed forest	0.02	16.67	33.75	49.56	0
Dharamshala	<i>P. roxburghii</i>	0.23	30.24	49.63	19.86	0.04
Dhira	<i>P. roxburghii</i>	0.26	21.87	44.43	33.44	0
Fatehpur	Khair forest	0	13.30	3.51	71.96	11.23
Harchakian	<i>P. roxburghii</i>	0.43	21.41	70.22	7.94	0
Indora	Khair forest	0	12.61	6.36	70.77	10.26
Jaisinghpur	Mixed forest	0.09	37.40	22.19	40.30	0.02
Jaswan	Mixed forest	0	17.74	27.05	55.20	0.01
Jawali	<i>P. roxburghii</i>	0.17	11.73	77.64	10.41	0.05
Jwalamukhi	<i>P. roxburghii</i>	0.37	14.53	73.07	12.02	0
Kangra	Mixed forest	0	13.10	31.31	55.59	0
Khundian	<i>P. roxburghii</i>	0.10	14.49	59.93	25.47	0
Multhan	–	0	0	0	0	0
Nagrota Bagwan	Mixed forest	0.08	23.44	34.74	41.74	0
Nurpur	Mixed forest	0.14	13.39	44.83	40.54	1.10
Palampur	<i>P. roxburghii</i>	0.25	23.65	49.57	26.48	0.04
Rakkar	Mixed forest	0	24.06	6.89	69.05	0
Shahpur	<i>P. roxburghii</i>	0.80	15.87	73.38	9.92	0.03
Thural	<i>P. roxburghii</i>	0.27	39.94	32.98	26.81	0

Table 2.7: Tehsil-wise number of forest fire-sensitive villages

Tehsil	High	Medium	Low	Very low
Bajnath	33	56	74	1
Baroh	30	74	65	0
Dhera Gopipur	21	77	144	1
Dharamshala	42	61	51	1
Dhira	23	64	41	0
Fathepur	3	14	122	15
Harchakian	8	44	4	0
Indora	3	11	54	3
Jaisinghpur	91	47	104	0
Jaswan	7	20	63	0
Jwalamukhi	9	39	48	0
Jawali	8	77	15	0
Kangra	33	44	105	0
Khundian	18	150	61	0
Multhan	0	0	0	0
Nagrota Bagwan	27	44	68	0
Nurpur	38	148	232	18
Palampur	84	143	121	2
Rakkar	19	1	89	0
Shahpur	13	80	16	0
Thural	34	24	25	0

2.2.9 ROAD ACCIDENTS

Main reason of road accident is high frequency of vehicles on state Highway because it is connected to tourist places in entire district. Congested link road and reckless driving in the district also lead to road accidents in this reason. Unplanned construction of roads in rural area, over speed on state highway and lack of safety measures are also same of the reasons for road accidents. Road accidents are frequent mostly of vehicles coming from other states that carry passengers in trucks in ties and occasionally accidents take place. In district Kangra 9 out of 10 sub divisions possess hot spots for accidents and have been identified on the basis of 108 response to accidents the suggestions has also provided to mitigate the risk.

Table 2.8: Accidents by sub-division and Suggestions

#	Sub Division	Accident Spot	Nearest Landmark	Nature of Accident / s	General Timing of Accidents	Suggestions
1	Jawalamukhi	Kathog	5 km Jawalamukhi to Dehra Road	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Mostly during Day Time	<ul style="list-style-type: none"> Presence of Traffic Personnel Correction of Road Alignment (Sharp Curve) Road Condition needs to be improved Railing / Parapet on the edge of the road
2	Dehra	Hanuman Chowk	Chowk	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Railing / Parapet with Indicators on the edge of the road Presence of Traffic Personnel / check (Alcoholic Drivers) Correction of Road Alignment (Sharp Curve)
3	Jawali	Maira	Near Maira Bridge	<ul style="list-style-type: none"> Collision between Heavy & Light motor Two Wheeler Skid Vehicles falling down in valley 	Mostly during Night Time	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Presence of Traffic Personnel / check (Alcoholic Drivers) Correction of Road Alignment (Sharp Curve) Road Condition needs to be improved Railing / Parapet with Indicators on the edge of the road
4	Fatehpur	Kathiyar Dam	Near Dam	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Railing / Parapet with Indicators on the edge of the road Presence of Traffic Personnel / check (Alcoholic Drivers) Correction of Road Alignment (Sharp Curve)

5	Dharamshala	Dharamshala	Kotwali Bazar	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Presence of Traffic Personnel / check (Alcoholic Drivers)
6	Bajjnath	Pasi Chowk	Near Bridge	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Presence of Traffic Personnel / check (Alcoholic Drivers) Correction of Road Alignment (Sharp Curve) Railing / Parapet with Indicators on the edge of the road
7	Nurpur	Kandwal	Near Nagni Mata Temple	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Presence of Traffic Personnel / check (Alcoholic Drivers) Railing / Parapet with Indicators on the edge of the road
8	Palampur	Raja ka Baag	Near Park	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Presence of Traffic Personnel / check (Alcoholic Drivers) Railing / Parapet with Indicators on the edge of the road Speed Breaker
9	Jaisinghpur	Chunga Devi	Near Temple	<ul style="list-style-type: none"> Collision between Heavy & Light motor vehicle Two Wheeler Skid Vehicles falling down in valley 	Both during Day & Night	<ul style="list-style-type: none"> Appropriate Signboard (Reflective material) Correction of Road Alignment (Sharp Curve) Presence of Traffic Personnel / check (Alcoholic Drivers) Railing / Parapet with Indicators on the edge of the road

Table 2.9: Road Accidents in District Kangra (Source: Kangra Abstract 2014- 2015)

Year	Number of Accidents	No. of Deaths	No. of Injured persons	No. of Accidental Vehicle
2010-11	579	100	1025	596
2011-12	627	129	1019	627
2012-13	569	162	1029	603

2013-14	567	118	958	627
2014-15	511	107	826	543

2.2.10 STAMPEDE

Himachal Pradesh is known as Dev Bhumi (land of God) and Kangra has lots of temples in all parts of the district. During the festivals and fairs these temples are visited by thousands of pilgrims. These heavy rushes are managed by the Home Guards and Police Department. There is no other strong mechanism to deal with the situation.

2.2.11 INDUSTRIAL

Kangra has small scale industries in Nurpur, Kangra, and Palampur. In 2001 one person lost his life and seven were injured due to the blast in the industry at Nurpur sub-division. All industries are following prevention norms regarding the hazards and no major industrial disaster has occurred in the district.

Table 2.10: As Per DDMP 2012

Industries	
Total units	7435 Nos (small scale)
Total workers	25048 Nos.
Production in Rs.	
Hosiery	Rs. 290.2 Lac.
Rolled steel	934954 Nos
Poultry	Rs.350.6 Lac
Pipes	Rs. 48 Lac
Brass ware	Rs.102 Lac.

Table 2.11: Hazard Risk calendar of District Kangra

Hazard Type	Seasonal Hazard Risk											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Earthquakes Zone IV/V												
Floods												
Landslides												
Forest and Domestic Fires												
Road Accidents												
Cloud Bursts												
Drought												

2.3 HAZARD RISK ANALYSIS OF SUB DIVISIONS, DISTRICT KANGRA

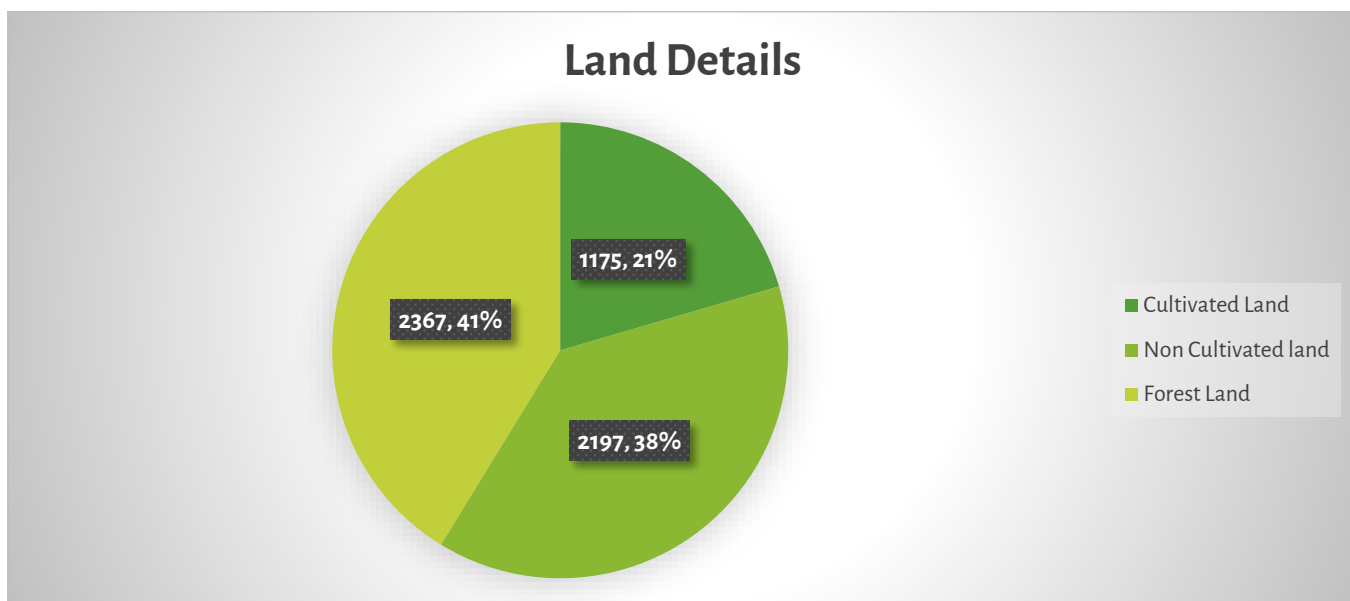
Hazard Type	Name of Sub-Division & Hazard Risk									
	Dharamshala	Kangra	Bajjnath	Palampur	Nurpur	Jawali	Jawalamukhi	Dehra	Jaisinghpur	Fatehpur
Earthquakes Zone IV/V	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Very High
Floods	High	High	Moderate	Moderate	Moderate	High	High	High	High	High
Landslides	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Very High
Forest Fires	Moderate	High	Moderate	High	High	Moderate	High	High	High	High
Domestic Fires	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Road Accidents	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Cloud Bursts	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low
Drought	Moderate	High	Moderate	Moderate	Moderate	Moderate	High	High	Moderate	Moderate
Wind Storm	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

2.4 VULNERABILITY ANALYSIS

Kangra district is highly vulnerable to certain natural and Human Induced disasters. The Kangra district is prone to major disasters like: Earthquake, Landslide, flash floods, fire accidents, drought, road accidents, Industrial hazard, and stampede.

2.4.1 PHYSICAL VULNERABILITY

The risk of any region depends on the exposed vulnerable elements in that area. Major important elements management plan is the inventory of important facilities and wide road network to reach each and every house in town and village. If road network will not be wide it is difficult to approach the area during an earthquake. In order to prepare the earthquake risk map of Kangra district it is important to prepare different vulnerable elements in different layers in GIS format. Especially old building and road network in Kotwali bazar, Kangra Mandir Bazar. The age and construction material used of the building are more important to decide their vulnerability. Further Mcleodganj town is most vulnerable to such hazard because it is situated not only south of MBT but an active fault is also passing in NW-SE direction crossing through the centre of the Mcleodganj Bazar and extending up to Naddi after passing through the Dal lake. The road network in surrounding villages is also very poor; it is very difficult to even take ambulance at each house, which will be great hindrance to earthquake disaster management. Second most important aspect is use of building code in different coming up constructions. A lot of wood is used in the house construction in the district hence the houses are also vulnerable to fire hazard resulting due to earthquake shaking. Steep slopes in the district would result into landslides and block the arteries of the district resulting in delay in emergency response.



Roads

Schools

Hospitals

Bridges

Houses

Transmission lines

Water lines

Critical Buildings

2.4.2 SOCIAL VULNERABILITY

District Kangra of Himachal Pradesh is the most populated district and hence the district covers substantial numbers of different sections such as given below and

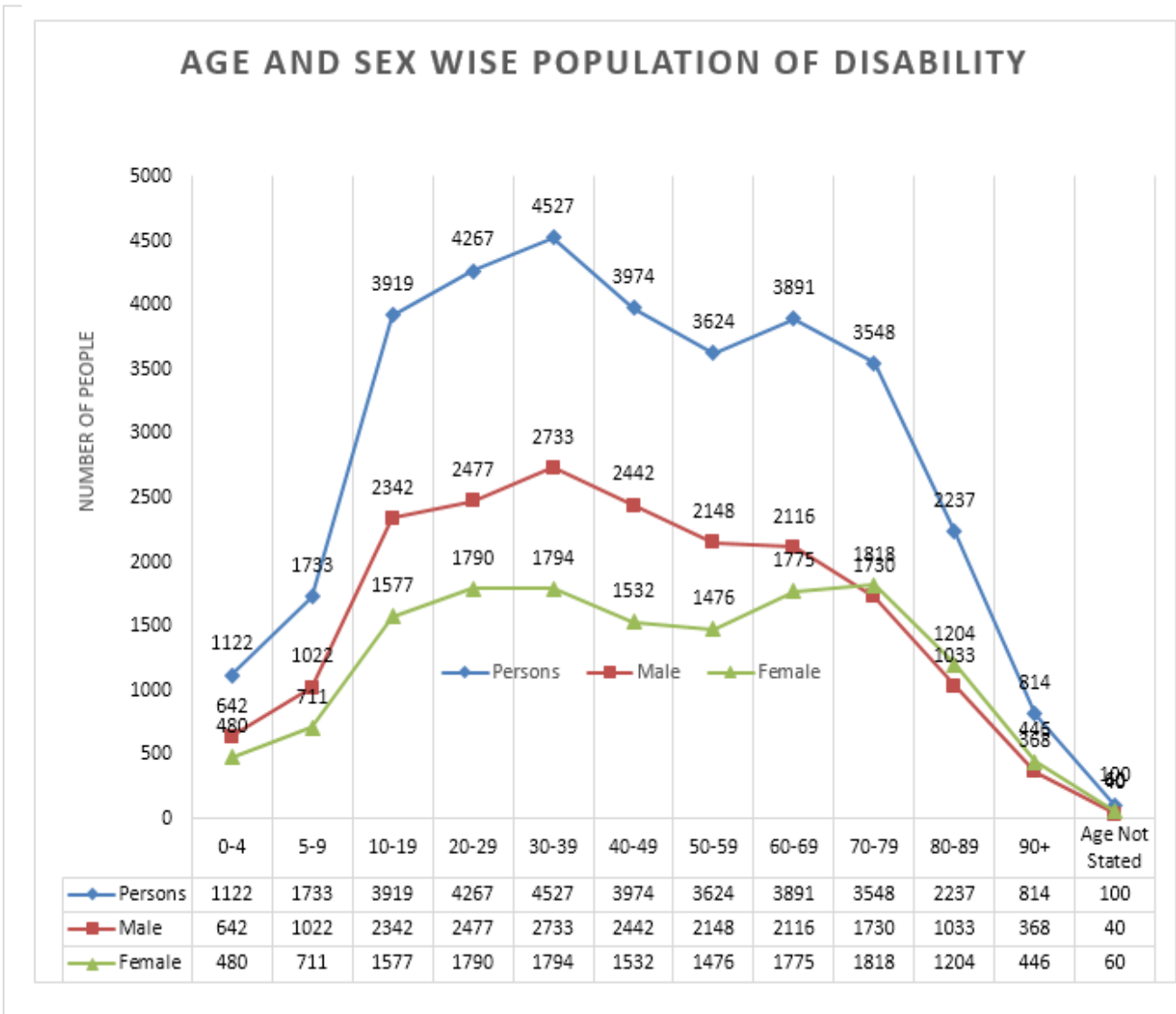
Population As per 2011 Census	
Population	1510075 Growth from 2001 (12.77%)
Male	750591
Female	759484
Rural	1,423,794
Urban	86,281
Sex Ratio	1012 (No. of females per 1000 males)
0-6 population	Total = 164,607: Male – 87,741; Female – 76,866
Density of Population	263 per sq. km.

- Person With Disability : 33756
- Families under Below Poverty Lines : 63250
- Scheduled Tribes : 84564
- Scheduled Caste :
- Woman and children Below 6 years: 847225

Table: Total number of disabled persons District Kangra (Source Census 2011)

	Males	Females	Persons
Rural	17994	13915	31909
Urban	1099	748	1847
Total	19093	14663	33756

Chart: 2.1 Detail of Disabled person in District Kangra (Source: Census–2011)



2.4.3 ECONOMIC VULNERABILITY

As per Census 2011, 21% of the land is cultivated and Majority of the people resides in rural area depending on the Agricultural and Horticultural Produce, Animal husbandry is also vital for livelihoods of the people of Kangra which are vulnerable to Monsoons and major hazards such as Earthquake, Landslide, Fire that results in substantial amount of loss to the people. Kangra being a home in Exile to Tibetan Guru Dalai Lama, and religious cum Tourist place the impacts of major hazards directly reflects on the tourist inflow and economy. Kangra district is also strong in employment rate basically in Government Sector. However the Numbers of Industries in the district are increasing annually. Which increases the economical vulnerability of the district.

2.4.4 OVERALL VULNERABILITY OF THE DISTRICT

On the basis of above analysis the overall vulnerability of the district is high. The figure below which the HP State Council for compiled for the State shows Kangra to be very high vulnerable district for hazard susceptibility.

Fig: Overall Vulnerability of Himachal Pradesh Source: HP state Council for Env. Sc. & Tech

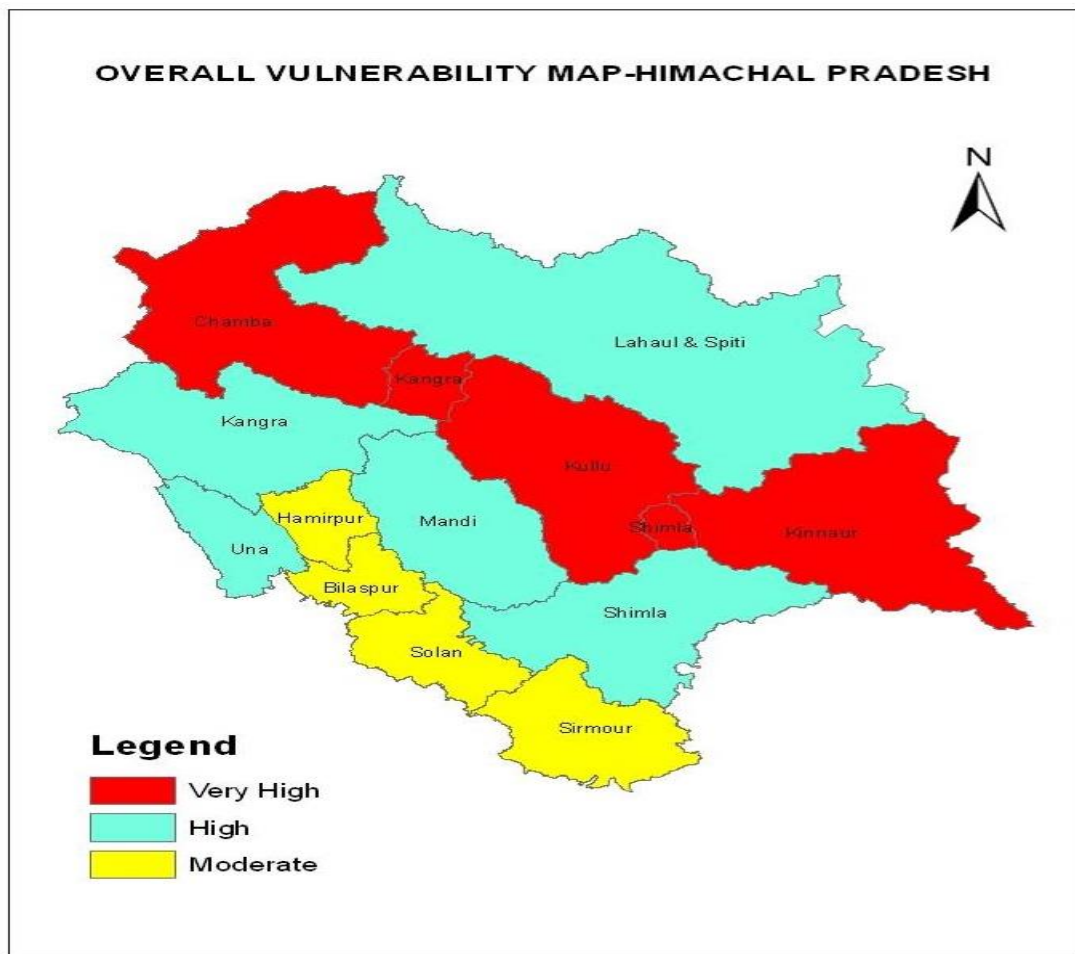


Table: Showing overall Vulnerability of District Kangra to various Hazards

Elements at Risk	Degree of Vulnerability to Various Hazard								
	Earthquake	Landslide	Flash Floods/ GLOF	Snow Avalanche	Drought	Forest Fires	Domestic Fires	Dam Failure	Road Accidents
Community	Very High	High	Very High	Low	High	High	Very High	High	High
Infrastructure	Very High	Very High	Very High	Low	Moderate	Moderate	Low	High	Low
Houses	Very High	Very High	High	Low	Low	Low	Very High	High	Nil
Social Sector	Very High	High	Moderate	Low	Moderate	Low	Very High	Low	High
Livelihood Sector	Very High	High	Moderate	Low	Very High	High	High	High	Low
Environment	Very High	Very High	Very High	Low	Very High	Very High	Very High	Very High	Low

2.5 CAPACITY AND RESOURCE ANALYSIS

The vulnerability of the district to various hazards is high to very high. In view of the hazard and vulnerability profile of the district the capacity and resource analysis of the district to deal with various disasters is important. And hence the capacities within the district are listed below:

2.5.1 FIRE STATIONS

District Kangra has five fire stations Dharamshala, Palampur, Kangra, Jawalamukhi and Nurpur. But these fire stations have limited resources to deal with forest fire during summer season. Some areas of district are situated between the dense pine forest and during the forest fire they lose property as well as life. Due to limitation of firefighting equipment in fire department they are unable to overcome from these situations. These fire stations can be trained and equipped for multi-hazard response.

2.5.2 HOME GUARDS

Ninth Battalion of Home Guards, training center is stationed at Dhano, District Kangra with the total strength of 917. This human resource is trained in DM. But they are deployed for non-disaster duty. Sometime they are unable to provide there service for disaster related matters. Present deployed cops details as per **Table**.

Table: - Home Guards Strength in District Kangra

#	Company Placed in	Strength	Man	Women
1	Dharamshala (2 Coy.)	231	139	92
2	Palampur	110	110	-
3	Indora	100	110	-
4	Nurpur	110	110	-
5	Kangra	110		
6	Shahpur	110	110	-
7	Dehra	110	110	-
8	Technical	26		

2.5.3 POLICE NETWORK IN KANGRA

District Kangra has one Police training center at Daroh and 17 Police stations and 18 Police posts. 01 Company of 3rd IRB Battalion is situated at Sukoh. Resources Such as Wireless and VHF are available with department As on Year 2015 the total strength of police force in the district was 1343 and the break-up of the same is given as under:-

Police Staff (2014-2015)	Number
ASI and above	168
Head Constables	201

Constables	934
Cook	15
Other staff (Technical) Govt -11 other - 24	35

2.5.4 ARMY NETWORK AND CENTRAL PARAMILITARY FORCES

The district has good presence of army at Yol Cantt Dharamshala 9th Core Army, one unit at Palampur and of Seema Sashastra Bal (SSB) at Sapri, Jwalamukhi. Both have good coordination with the local administration. During the disaster these army plays valuable role to save the victims. They may be provided with key resources so that trained manpower could deal with any type of disaster.

2.5.5 HEALTH INFRASTRUCTURE, MEDICAL FACILITIES AND MANPOWER

Health Infrastructure in Kangra District for year –2014 to 2015 is provided in **Table** and the Manpower/ Staff and other details are provided in Table: –

Table: Health Infrastructure in Kangra District for year –2014 to 2015

Category	Medical / Health Centers
Allopathic– 579	i) Tanda Medical College -1 ii) Regional Hospital-1 iii) Civil Hospital-6 iv) Community health centre-15 v) Primary Health Centre-97 vi) Health Sub Center - 440 vii) Private Hospital/Nursing Homes –19
Ayurvedic– 236	i) College / Hospital-1 ii) District Hospital-1 iii) Dispensary -234 (includes 1 homeopathy)
Bed Capacity	Allopathic: 1139 + Ayurvedic: 60 = Total: 1169.
Veterinary– 413	i) Hospital - 60 ii) Dispensaries -338 iii) other (Farms, diagnostic center, institutions etc) –15

2.5.6 POWER PROJECTS

The district has five power projects under the HPSEB Palampur circle. These projects are Khouli HEP 12.00 MW, Gaj HEP 10.5 MW, Banner HEP 12.00 MW and Binwa HEP 6.00 MW. -The project management has trained manpower and has machinery and equipment too to deal with emergencies. These resources can be requisitioned by the district administration during emergencies.

2.5.7 EARLY WARNING SYSTEM NETWORK

District Kangra have no any machinery mechanism for Early Warning System. All departments have manual mechanism e.g. security guard, VHF etc. for early warning the power projects have their own networks too. The IMD department has also installed rain and snow gauges and temperature monitoring equipment at Naddi. However, the lack of coordination and mechanism of sharing information is a serious impediment in acting timely on the information so received.

2.5.8 CBOS AND NGOS

There are not many NGOs working in the district. However many community based organisations are in existence. Their training and orientation has not been done. However, their networking and orientation in DM is under way. The list of NGOs / CBOs working in the district is as per Table: -

Table: - NGO's & CBO's of Kangra

#	Name of Office	Name of Person	Phone No. Office
1	Tapovan Trust	Kasama Matre	01892-234322
	Co-ordinator	Mr Anand	01892-234322
2	Nehru Yuvak Kendra		
	District Youth Co-ordinator	Shantanu	98161-33484
3	Blue Cross	Col Jai Ganes	94180-25140
4	Viklang Sangh	Taqdir Singh	98163-77545
5	Meditation	Ajay Kumar	94180-36956
6	Alankit	Ashish Gaurav	97808-36956
7	Zoom	Dhiraj	98050-54371
8	Jan Seva Kendra	Deepak Chandla	98164-42200
9	Gunjan	Sandeep Parmar	01892-224255
10	Director, Jagori	Mrs. Abha	01892-234974
	Jagori		98165-79397

2.5.9 LANDING SITES

The list of landing sites which can be of immense help in disaster is given below. However, non-availability of re-fueling facility in the area may hinder the smooth operations of air relief operations.

Table: - List of Helipads in Kangra

#	Name Of Helipad/ Station	Latitude	Longitude	REF	Altitude
1	Baijnath	32.03	76.38		930
2	Dharamsala	32.10.35	76.18.28		4000 Ft.

3	Gagal	32.09.9	76.15.8	A.323/78	2600
4	Jaisingpur	31.53.9	36.35.8	A.328/55	1800
5	Nurpur	32.11.0	75.53.6	A.317/96	
6	Palampur (Ar)	32.07.0	76.33.5	A.332/68	4500
7	Palampur (Un)	32.06.1	76.32.9	A.331/67	4000
8	Pong Dam	32.01.0	75.54.1	A.305/84	
9	Rehan	32.09.7	75.54.5	A.314/90	1700
10	Sapri	31.53.5	76.17.9	A.317.64	1600
11	Yeol	32.09.5	76.22.2	A.326/75	3700
12	Dharamshala Army Ground	32.15	76.1		1630M
13	Dhaliara	31. 50.85	76. 11. 371		
14	Shahid Bhuvnesh Dogra Ground Dehra	31. 52. 53.6 N	76. 12. 46.4 E		

2.5.10 CONNECTIVITY

District Kangra is covered by the road network of 5746 Kilometers and the other connecting links for district are as below:

Air	<ul style="list-style-type: none"> • Air Port at Gagal (Kangra) Connecting Air Port at Pathankot Punjab.
Rail	<ul style="list-style-type: none"> • Single narrow gage line from Pthankot (Punjab) to Jogindernagar (Distt.Mandi) passes through district as shown in map. Rail Junction at Pathankot & Delhi- • Jammu Route • National High way passing through Distt.
Roads	<ul style="list-style-type: none"> • NH-1-A-Jalandhar to Shrinagar - Short stretch • NH-20-from Pathankot to Mandi. • N-88 – From Matour to Shimla.

2.6 IMPORTANT GAPS IN EXISTING CAPACITY TO DEAL WITH DISASTERS

A capacity gap analysis was conducted in 2012 as a part of the preparation of this DDMP, the Gaps were revisited and updated. Following are the revised gaps:

- Authorities were not aware of their roles and responsibilities regarding Disaster Management.
- No Quick Response Team has been constituted for emergency response in the district.
- Disaster management teams and disaster management committees are not trained and formed in many villages.
- The Early Warning System in the district is not adequate and the mechanism to disseminate the Warning messages to the vulnerable community.
- Lacking of participation of local NGOs/ SHGs and other local bodies
- Unplanned development and not even involvement of DRR integration in development planning and program
- Lack of clarity of roles of various departments and stakeholders involvement of local people to save forests
- Lacking of earthquake resistance buildings
- Unavailability of road at many village
- Presence of dilapidated buildings and trees are in populated areas. Similar situation exist for many life line buildings as well.
- Congested pedestrian/ roads in city/ town and limited alternate routes.
- Lack of specialized SAR equipment and other Disaster management tools and PPE's in possession of Home guards and key stakeholders.
- Many life line buildings e.g. Hospital and schools are not pre-planned to handle the any huge disaster.
- Communication – landline and mobile based communication only lack of traditional ways of communication and information.
- No efforts have been taken to transfer the risk by way of insurance etc.
- No utilization of funds in disaster mitigation by Line Departments and stakeholders.
- No provision of insurance of the repaired buildings/ houses allotted under Relief.

Table: Hazard/ Risk Assessment of Kangra District (V= Vulnerability, P= Probability of occurrence, R=Rating, H=High, M=Medium, L=Low)

Hazard	Definition	Why Selected	Who/ What at risk	P (R)	V (R)	Rank (PxV)
Earthquake	The sudden motion or trembling of the ground produced by abrupt displacement of rock material, usually within the upper 10-20 miles of the earth's surface	<ul style="list-style-type: none"> • Major Earthquakes in the past • Zone V and Zone IV • Highly Populated district 	<ul style="list-style-type: none"> • Human Life, Cattle Life, Kutcha and Pacca Houses, Community Infrastructure • Public Infrastructure • Critical and Life Line Buildings 	Very High (3)	H (3)	9
Landslides	The downward and outward movement of slope-forming materials reacting to the force of gravity. The term landslide is generalized and includes rock falls, rockslides,	<ul style="list-style-type: none"> • In monsoon small Landslides are very common and the chances of Major 	<ul style="list-style-type: none"> • Human Life, Kutcha and Pacca Houses, Community/ Public 	Very High (3)	H (3)	9

	block glide, debris slide, earth flow, mud flow, slump, and other such terms that describe mass wasting.	Landslide remains high due to geology. <ul style="list-style-type: none"> Potential for major damages to Roads and Bridges 	Infrastructure road bridges and dams			
Flood	A general and temporary condition of partial or complete inundation on normally dry land from the Riverine flooding due to high rainfall or fluctuating lake levels	<ul style="list-style-type: none"> Past occurrences of severe riverine flooding, High losses from previous floods. Dam maintenance & Land slide / earthquake could lead to dam failure. 	<ul style="list-style-type: none"> Agriculture crops, Transport, Houses (Mostly Kacha houses in rural area), Constructions, Drinking Water, Cattle, Irrigation equipment, Educational Institutes, 	High (2)	M (2)	6
Road Accidents	Road accidents occurs due to drivers negligence and other reasons	<ul style="list-style-type: none"> As per topology of district the road accidents are common Limited width and roads lead to traffic Loss due to Road Accidents is very high 	<ul style="list-style-type: none"> Pedestrian, Tourists, Drivers, Buses etc 	Very High (3)	M(2)	6
Forest / Wild / House Fire	A forest/wildfire is an uncontrolled fire in an area of combustible vegetation that occurs in the countryside or a wilderness or forest area, sometimes in close proximity to development.	<ul style="list-style-type: none"> History of previous occurrences, Potential for loss of life Research analysis as discussed in Hazard section Potential for Social environmental impacts 	<ul style="list-style-type: none"> Human Life, Cattle Life, Houses and Property 	High (3)	M (2)	6
Drought	A prolonged period with no rain, particularly during the planting and growing season in agricultural areas.	<ul style="list-style-type: none"> History of previous occurrences Importance of large water users and agriculture to the district economy 	<ul style="list-style-type: none"> Crops, Drinking Water, Livelihood Options 	Medium (2)	L (1)	2
Climate Change	Climate change, also called global warming, refers to the rise in average surface temperatures on Earth.	<ul style="list-style-type: none"> Annual rise in temperature Impact on Horticulture and Agriculture Changes in the Seasons and rainfall. 	<ul style="list-style-type: none"> Economy, Environment, Cattle life, Crops 	Low (1)	L (1)	1
Chemical, Biological, and Radiological (CBR)	Emergency related to Chemical, Biological, and Radiological materials	<ul style="list-style-type: none"> Use of Chemicals in Industries and their transportation 	<ul style="list-style-type: none"> Human Life, Environment & Eco-System, Economy 	Low (1)	H (1)	1

3. INSTITUTIONAL MECHANISM

The Disaster Management Act, 2005 lays down institutional, legal, financial and coordination mechanisms at the National, State, District and Local levels. These institutions are not parallel structures and will work in close harmony. The new institutional framework is expected to usher in a paradigm shift in DM from erstwhile relief centric approach to a proactive regime that lays greater emphasis on preparedness, prevention and mitigation.

3.1 DM ORGANIZATIONAL STRUCTURE AT NATIONAL LEVEL

Institutional Arrangements for Disaster Management at National Level

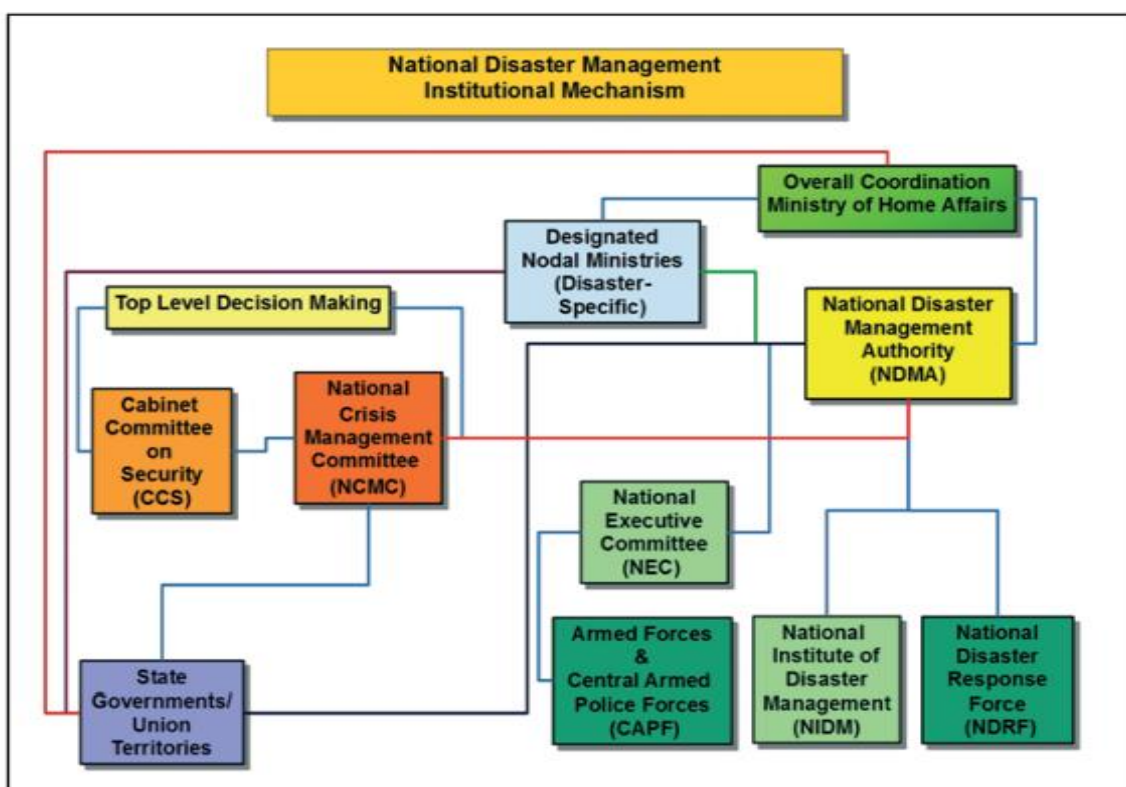


Table: National Institutions and their roles

Name	Name	Vital role
Cabinet Committee on Security (CCS)	<ul style="list-style-type: none"> • Prime Minister, • Minister of Defence, • Minister of Finance, • Minister of Home Affairs, and • Minister of External Affairs 	<ul style="list-style-type: none"> • Evaluation from a national security perspective, if an incident has potentially security implications. • Oversee all aspects of preparedness, mitigation and management of Chemical, Biological, Radiological and Nuclear (CBRN) emergencies and of disasters with security implications • Review risks of CBRN emergencies from time to time, giving directions for measures considered necessary for disaster prevention, mitigation, preparedness and effective response

National Crisis Management Committee (NCCM)	<ul style="list-style-type: none"> • Cabinet Secretary / Chairperson • Secretaries of Ministries / Departments and agencies with specific DM responsibilities 	<ul style="list-style-type: none"> • Oversee the Command, Control and Coordination of the disaster response. • Give direction to the Crisis Management Group as deemed necessary • Give direction for specific actions to face crisis situations
National Disaster Management Authority (NDMA)	<ul style="list-style-type: none"> • Prime Minister (Chairperson) • Members (not exceeding nine, nominated by the Chairperson) 	<ul style="list-style-type: none"> • Lay down policies, plans and guidelines for disaster management • Coordinate their enforcement and implementation throughout the country • Approve the NDMP and the DM plans of the respective Ministries and Departments of Government of India • Lay down guidelines for disaster management to be followed by the different Central Ministries, / Departments and the State Governments
National Executive Committee (NEC)	<ul style="list-style-type: none"> • Union Home Secretary (Chairperson) • Secretaries to the GOI in the Ministries / Departments of Agriculture, Atomic Energy, Defence, Drinking Water and sanitation, Environment, Forests and Climate Change, Finance (Expenditure), health and Family Welfare, Power, Rural Development, Science and Technology, Space, Telecommunications, • Urban Development, Water Resources, River development and Ganga Rejuvenation. • The Chief of the Integrated Defence Staff of the Chiefs of • Staff Committee, ex Officio as members. • Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, 	<ul style="list-style-type: none"> • To assist the NDMA in the discharge of its functions; • Preparation of the National Plan. • Coordinate and monitor the implementation of the National Policy. • Monitor the implementation of the National Plan and the plans prepared by the Ministries or Departments of the Government of India. • Direct any department or agency of the Govt. to make available to the NDMA or SDMA's such men, material or resources as are available with it for the purpose of emergency response, rescue and relief. • Ensure compliance of the directions issued by the Central Government, Coordinate response in the event of any Threatening disaster situation or disaster. • Direct the relevant Ministries / Departments of the Govt, the State Governments and the SDMA's regarding measures to be taken in response to any specific threatening disaster situation or disaster. • Coordinate with relevant Central Ministries / Departments / Agencies which are expected to provide assistance to the affected State as per Standard Operating Procedures (SOPs). • Coordinate with the Armed Forces, Central Armed Police Forces (CAPF), the National Disaster Response Force (NDRF) and other uniformed services which comprise the Govt's Response to aid the State authorities. • Coordinate with India Meteorological Department (IMD) and a number of other Specialised scientific institutions which constitute key early warning and monitoring agencies.

	Shipping, Road Transport and Highways and Secretary, NDMA are special invitees to the Meetings of the NEC.	<ul style="list-style-type: none"> • Coordinate with Civil Defence volunteers, home guards and fire services, through the relevant administrative departments of the State Governments
National Disaster Response Force (NDRF)	<ul style="list-style-type: none"> • Specially trained force headed by a Director • General Structured like Para military forces for rapid deployment 	<ul style="list-style-type: none"> • Provide assistance to the relevant State • Government/ District Administration in the event of an imminent hazard event or in its aftermath • NDRF Battalion located at Jachh, Nurpur, District Kangra, HP and Bhatinda, Punjab have been given the responsibility for deployment in Kangra, Himachal Pradesh.
National Institute of Disaster Management (NIDM)	<ul style="list-style-type: none"> • Union Home Minister; • Vice Chairman, NDMA; • Members including Secretaries of various nodal Ministries and Departments of Government of India and State Governments and heads of national levels scientific, research and technical organizations, besides eminent scholars, scientists and practitioners. 	<ul style="list-style-type: none"> • Human resource development and capacity building for disaster management within the broad policies and guidelines laid down by the NDMA • Design, develop and implement training • Programme Undertake research. Formulate and implement a comprehensive human resource development plan • Provide assistance in national policy formulation, assist other research and training institutes, state governments and other organizations for successfully discharging their responsibilities • Develop educational materials for dissemination • Promote awareness generation.
National Integrated Operations Centre (NIOC)	<ul style="list-style-type: none"> • Minister of Home Affairs 	<ul style="list-style-type: none"> • The National Integrated Operations Center is being maintained and run on 24 x 7 basis at MHA, North Block, New Delhi with latest and state of the art equipment. An alternate NIOC has been established at National Disaster Management Authority (NDMA) which is a mirror image of the National IOC and will be a back-up to handle any eventuality if for any reason the NIOC at MHA becomes non-operational.

From time to time, the central government notifies hazard-specific nodal ministries to function as the lead agency in managing particular types of disasters (see Table for current list of disaster specific nodal ministries notified by GoI).

Table: 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, Forest sand 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	Rail Accidents Min. of Railways (MoR)
14	Road Accidents	Min. of Road Transport and Highways (MoRTH)
15	Urban Floods	Min. of Urban Development (MoUD)

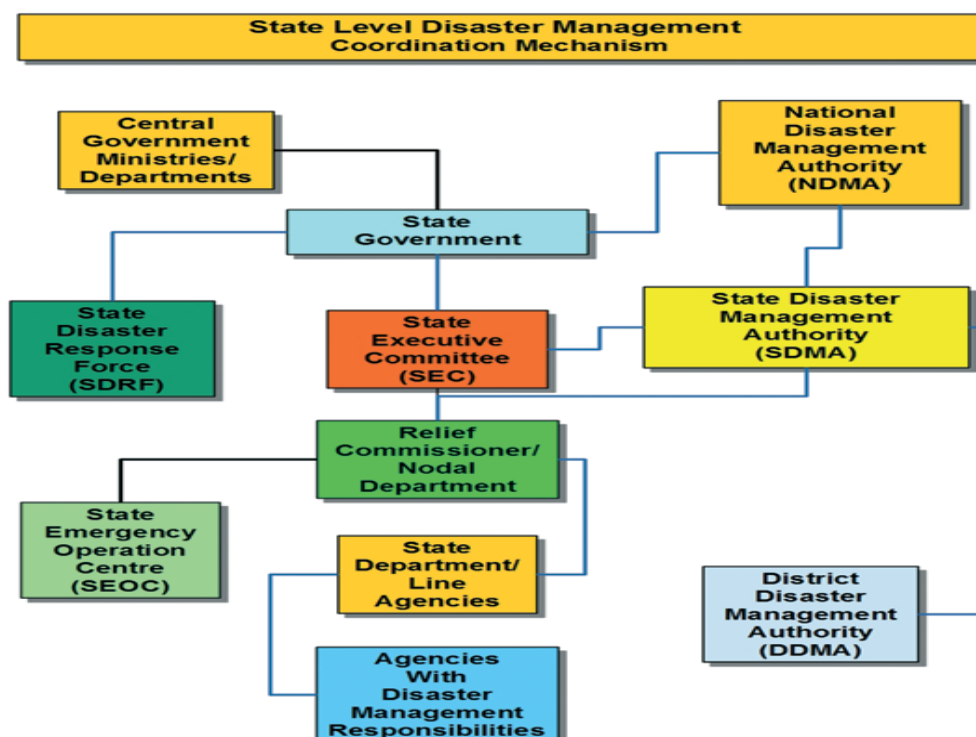
3.2 DM ORGANIZATIONAL STRUCTURE AT STATE LEVEL

At the State level, the State Disaster Management Authority under the chairmanship of the Chief Minister stood constituted on 1.6.2007 and 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.

Members of SDMA

1.	Hon'ble Chief Minister	Chairman
2.	Hon'ble Revenue Minister	Member
3.	Chief Secretary	Chief Executive Officer, ex officio
4.	ACS cum FC (Revenue)	Member
5.	Principal Secretary (Home)	Member
6.	Principal Secretary (PWD/I&PH)	Member
7.	Principal Secretary (Health)	Member
8.	Director General of Police	Member
9.	Secretary (Revenue)	Member Secretary

Institutional Arrangements for Disaster Management at State Level



The SDMA will, inter alia approve the State Plan in accordance with the guidelines laid down by the NDMA, approve DMPs prepared by the departments of the State Government, lay down guidelines to be followed by the departments of the Government of the State for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects, coordinate the implementation of the State Plan, recommend provision of funds for mitigation, preparedness measures, review the developmental plans of the different Departments of the State to ensure the integration of prevention, preparedness and mitigation measures and review the measures being taken for mitigation, capacity building and preparedness by the departments.

SDMA Roles and Responsibilities

As per Section (18) of Disaster Management Act 2005, SDMA has been designated by certain Roles and Responsibilities:

- Laying down policies and plans for disaster management within the State.
- Approve the disaster management plans 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 purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance therefore.
- Coordinate the implementation of the State Plan.
- Recommend provision of funds for mitigation and preparedness measures.
- Review the development plans of the different departments of the State and ensure that prevention and mitigation measures are integrated therein.
- Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government of the State and issue such guidelines as may be necessary.

3.2.1 STATE EXECUTIVE COMMITTEE

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

3.2.2 STATE CRISIS MANAGEMENT GROUP

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

The State Crisis Management Group's function is:

- To create a dedicated body that will assess, plan and implement the vital aspects of disaster management (Prevention, mitigation, preparedness and response);
- To ensure smooth coordination between Central and State Governments in the event of a disaster.
- To create a unified command, control and co-ordination structure for disaster management, integrating the various wings and agencies of government that are necessary for emergency response, as well as for preparedness, mitigation and prevention activities.

3.2.3 STATE EMERGENCY CONTROL ROOM / HIMACHAL PRADESH STATE DISASTER MANAGEMENT AUTHORITY

There is a State Emergency Control Room in the **HP Secretariat, Chotta Shimla, Shimla, and Himachal Pradesh 171001** to provide Secretarial support to the Himachal Pradesh State Disaster Management Authority and also facilitate the functioning of the Authority. **1070** is the Helpline Line No. of State Emergency Control room which is operational 24 x 7. This Control Room will receive the information from various sources. It shall be in constant contact with the District Disaster Control Rooms, Police Control Rooms. The State Emergency Control Room will receive the information, record it properly and put up to the State Disaster Management Authority instantly. Similarly the instructions passed by the State Authority shall be conveyed to the addressees and a record maintained to that effect.

The Himachal Pradesh State Disaster Management Authority is involved in the Management of large scale Disasters. The Divisional Commissioner in consultation with other members of the Authority shall decide its involvement after the receipt of the report from the Deputy Commissioner of the Districts.

3.3 DM ORGANIZATIONAL STRUCTURE AT DISTRICT LEVEL

3.3.1 DISTRICT DISASTER MANAGEMENT AUTHORITY (DDMA)

The DDMA for the district has been notified on 1.6.2007 as table: Below:

Table – 3.1 DDMA Structure

#	Officer	Position
1	Deputy Commissioner	Chairman
2	Superintendent of Police	Member
3	Chief Medical Officer	Member
4	Superintendent Engineer (I & PH)	Member
5	Superintendent Engineer (Power)	Member
6	Superintendent Engineer (PWD)	Member
7	Chairman Zila Parishad	Member
8	Additional District Magistrate	Member Secretary

As per section 25 (3) of the Act, where there is a Zila Parishad in the district, the Chairperson thereof shall be the co-Chairperson of the District Authority and section 25 (4) states that an officer not below the rank of Additional District Magistrate or Additional Deputy Commissioner as the Chief Executive Officer of the District Authority for exercising the powers and perform functions prescribed by the State Government or designated by the District Authority. The DDMA may meet when necessary with time and place being selected by the Chairperson. Under section 28 District Authority as and when considers necessary, constitute one or more advisory committees and other committees for the efficient discharge of its function and appoint from amongst its members the Chairperson of the committee formed and any person associated with the committee or sub – committee will be paid allowances as may be prescribed by the State Government.

DDMA Roles and Responsibilities

The roles and responsibilities of the DDMA have been elaborated in Section 30 of the DM Act, 2005. It will, inter alia preform the following roles and duties as per the act:

- i. Prepare, Coordinate and monitor a disaster management plan including district response plan for the district;
- ii. Ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities;
- iii. Ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and State Authority are followed by all the departments of Government at the district level and by the local authorities in the district;

- iv. Review the state of capabilities for responding to any disaster or threatening disastrous situation in the district and give directions to the relevant departments or authorities for their up gradation as may be necessary;
- v. Organize and coordinate specialized training programmes for different levels of officers governmental and non-governmental organizations and voluntary rescue workers in the district;
- vi. Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
- vii. Ensure that the Departments of the Government at the district level and the local authorities prepare their response plans in accordance with the district response plan;
- viii. Lay down guidelines for, or give direction to, the concerned Department of the Government at the district level or any other authorities within the local limits of the district to take measures to respond effectively to any threatening disaster situation or disaster;
- ix. Advise, assist and coordinate the activities of the Departments of the Government at the district level, statutory bodies and other governmental and non-governmental organizations in the district engaged in the disaster management;
- x. Provide necessary technical assistance or give advice to the local authorities in the district for carrying out their functions;
- xi. Review development plans prepared by the Departments of the Government at the district level, statutory authorities or local authorities
- xii. Identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centres or camps and make arrangements for water supply and sanitation in such buildings or places;
- xiii. Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;
- xiv. Ensure communication systems are in order, and disaster management drills are carried out periodically;
- xv. Perform such other functions as the State Government or State Authority may assign to it or as it deems necessary for disaster management in the District.

3.3.2 SUB-DIVISIONAL LEVEL DISASTER MANAGEMENT COMMITTEE

Sub Division level Disaster Management Committee headed by Sub Divisional Officers (Civil) of the respective Sub Divisions shall be established in all Sub Divisions and the constitution of Sub Division Level Committees may as under:-

Table 3.2: Members of Sub-Division Level - Disaster Management Committee:

#	Officer	Position
1.	Sub Divisional Officer (Civil)	Chairman
2.	Tehsildar / Naib Tehsildar	Member
3.	SDPO / DSP	Member
4.	Executive Engineer , I & PH	Member
5.	Executive Engineer, HPPWD	Member
6.	Executive Engineer, (HPSEB)	Member
7.	Inspector, food Supplies & Consumers affairs	Member

8.	CDPO	Member
9.	Block Development Officers	Member
10.	Divisional Forest officer	Member
11.	Sub Divisional Officer (Telecommunication)	Member
12.	Block Medical Officer (Health)	Member

Non Official Members:

- Pradhan Gram Panchayats / Pradhan Municipal Council / Nagar Panchayat.
- Representatives of NGO sat Sub Division Level
- Elected representatives of the area
- Few prominent citizens.

3.3.3 TEHSIL LEVEL DISASTER MANAGEMENT COMMITTEE

Tehsil / Sub Tehsil level Disaster Management Committee headed by Tehsildar / Naib Tehsildar of the respective Tehsil / Sub Tehsil have been established in all Tehsils and Sub Tehsils of the District. The constitution of Tehsil / Sub Tehsil Level Committees is as under:-

Table 3.3: Members of Tehsil / Sub-Tehsil Level - Disaster Management Committee:

#	Officer	Position
1.	Tehsildar/Naib Tehsildar	Chairman
2.	Medical Officer (Health)	Member
3.	SHO	Member
4.	Assistant Engineer , I & PH	Member
5.	Assistant Engineer, HPPWD	Member
6.	Assistant Engineer, (HPSEB)	Member
7.	Inspector, food Supply & Consumers Affairs	Member
8.	CDPO	Member
9.	Block Development Officer	Member
10.	Range Forest officer	Member
11.	Sub Divisional Officer (Telecommunication)	Member
12.	Office Kanungo	Member

Non Official Members:

- Pradhans Gram Panchayats
- Representatives of NGOs at Tehsil/Block Level
- Elected representatives of the area
- Few prominent citizens

Measures to be taken before Disaster:

The following measures would help in dealing with disasters in the district:-

1. Preparation of Disaster Management Plans at District and local Level
2. Implementing of Disaster Management Plans
3. Holding regular meetings at District and Sub-Division level to reviewing the readiness of the administrative machinery to deal with disasters.
4. Constitution of Relief Committees at all levels.
5. Regular training programs of Government functionaries, PRIs, ULBs and other stakeholders in various facets of disaster management.
6. Public awareness and education in disaster management.
7. Community training and empowerment
8. Taking preventive and mitigation measures for the identified hazards
9. Integration of Disaster Risk Reduction (DRR) into on-going development programs of all departments.
10. Establishing effective early warning system for the vulnerable areas and communities.
11. Improving the response capacities of the search and rescue teams.
12. Conducting regular mock drills

Actions to be taken during Disasters:

The following would be the broad guidelines for actions during disasters:-

1. Assess the full extent of the disaster/calamity and the damages/losses incurred
2. Plan and supervise search and rescue operations
3. Allocate clear responsibilities to the officers and provide them necessary resources along with necessary delegations
4. Mobilize resources from outside the district if the situation so warrants
5. Finalize the relief to be provided to the affected persons and ensure its timely distribution
6. Collect and maintain full information of the disaster and steps taken to tackle it
7. Document the disaster including the lessons learnt
8. Last but not least, keeping informing the higher authorities about the whole incident

3.3.4 LOCAL AUTHORITIES

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

3.3.5 OTHER INSTITUTIONAL ARRANGEMENTS

3.3.5.1 ARMED FORCES

Conceptually, the Armed Forces are called upon to assist the civil administration only when the situation is beyond their coping capability. In practice, however, the Armed Forces form an important part of the Government's response capacity and are immediate responders in all serious disaster situations. On account of their vast potential to meet any adverse challenge, speed of operational response and the resources and capabilities at their disposal. These include communication, search and rescue operations, health and medical facilities, and transportation, especially in the immediate aftermath of a disaster. Airlift, heli-lift and movement of assistance to neighboring countries primarily fall within the expertise and domain of the Armed Forces. The Armed Forces will participate in imparting training to trainers and DM managers, especially in CBRN aspects, heli-insertion, high-altitude rescue, waterman ship and training of paramedics. At the State and District levels, the local representatives of the Armed Forces will be included in their executive committees to ensure closer coordination and cohesion.

3.3.5.2 CENTRAL PARAMILITARY FORCES

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

State Police Forces and India Reserve Battalions

The State Police Forces and the India Reserve Battalions are crucial for immediate responders to disasters. The existing Police Forces located in the district will be trained in advanced Search and Rescue and Medical First Aid techniques so that their services can be utilized in disaster situations/ events.

3.3.5.3 FIRE SERVICES AND HOME GUARDS

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

3.3.5.4 ROLE OF SUPPORTING AGENCIES

National Cadet Corps (NCC), National Service Scheme (NSS), Nehru Yuva Kendra Sangathan (NYKS), Scouts and Guides, Youth and Women organizations. NCC, NSS, NYKS, Scouts and Guides, Mahilla and Yuvak Mandals as organisations would be roped in DM. They will be trained in search and rescue (SAR) and medical first aid (MFA) and other aspects of DM as per the need. The potential of these organisation would be also be used for education and awareness generation in DM. And a database of trained personnel would be created and uploaded regularly in the DDMA website.

3.3.6 DISTRICT CRISIS MANAGEMENT GROUP

The crisis management group at districts level has been constituted. The DCMG is headed by the District Magistrate / Deputy Commissioner and is responsible for on-scene management in emergency.

A District officer whose inclusion is considered necessary in the light of the emerging situation may be co-opted as a member. Where the NSG have been requisitioned for assistance, the NSG Task Force Commander may be co-opted as a Member.

This Group will be responsible for on-scene management of the incident/emergency. All agencies will provide resources to this Group as required. Where a specialist team is deputed by the State/Central Group, this Group will normally abide by the advice of the said specialist team; but the ultimate decision will be that of the District/State Crisis Management Group.

3.3.7 DISTRICT DISASTER MANAGEMENT COMMITTEE (DDMC)

The Deputy Commissioner will be responsible for coordination of all disaster management activities at the district level. There shall be a district disaster management authority head by Deputy Commissioner. The district authority shall approve the disaster management plans and review all the measures related to pre and post phases to the hazards. The district disaster management committee comprises member from Zilla Parishad / panchyat, different line department, NGOs and other to be notified by the department of disaster management from time to time. Specific Committees may be formed by chairman of district authority such as DM Relief Committee, DM Rehabilitation Committee etc.

Table 3.4

#	Designation	Position in DDMC
1	Deputy Commissioner / District Magistrate	Chairmen
2	Commissioner of Municipal Corporation, Dharamshala	Member
3	Superintending Engineer, BBMB, Talwara	Member
4	Superintending Engineer / Executive Er., I&PH	Member
5	Superintending Engineer/ Executive Er., HPSEB	Member
6	Superintending Engineer/ Executive Er., HPPWD	Member
7	Superintending Engineer, NH Shahpur	Member
8	Additional District Magistrate, CEO, DDMA Kangra	Member
9	All Sub Divisional Magistrates	Member
10	Conservator of Forest, Kangra	Member
11	DIG. CTC. SSB Sapari (Jawalamukhi)	Member
12	District Controller, Food, Civil Supplies & Consumer Affairs	Member
13	General Manager, BSNL	Member
14	District Informatics Officer	Member
15	District Tourism Development Officer	Member
16	District Superintendent of Police	Member

17	Senior Medical Superintend Zonal Hospital	Member
18	Medical Superintend RPGMC, Tanda	Member
19	Regional Transport Officer	Member
20	Divisional Manager – HRTC	Member
21	Commandant, Home Guards / Civil Defense	Member
22	Assistant Town and Country Planner	Member
23	District Public Relation Officer (Media)	Member
24	Deputy Director, Horticulture	Member
25	Deputy Director, Agriculture	Member
26	Dy. Director Elementary Education	Member
27	Dy. Director Higher Education	Member
28	Dy. Director Animal Husbandry	Member
29	General Manager (District Industry Center)	Member
30	District Revenue Officer	Member
31	District Panchayat Officer	Member
32	Red Cross / NGO Representative	Member

3.3.7.1 SUB DIVISIONAL DISASTER MANAGEMENT COMMITTEE

In each Sub Division, there shall be a Disaster Management Committee which will oversee all activities in disaster management. It will also constitute a Disaster Management Team consisting of officials and non – officials and organize training for them to be able to discharge their duties properly.

Table 3.5

#	Department	Position
1	Sub Divisional Magistrate	Chairman
2	Block Development Officers	Member
3	Fire Manager	Member
4	Tehsildar / Naib Tehsildar	Member
5	Town planning Officer	Member
6	Assistant Engineer I&PH	Member
7	Assistant Engineer, HPSEB	Member
8	Assistant Engineer, HPPWD	Member
9	Junior engineer Telecom	Member
10	Medical officer- Health Center	Member
11	Head Transport Committee	Member

12	Home guard (Official)	Member
13	Education Officer	Member
14	ASP / DSP (Police)	Member
15	Range Forest officer	Member
Non-Governmental Members		
16	President Municipal council	Member
17	Member of Parliament / Member of Legislative Assembly	Member
18	Chairman - Standing Committee	Member
19	Chairman - Water supply committee	Member
20	Chairman - city planning committee	Member
21	Chairman - construction committee	Member
22	President Mahila Mandal	Member
23	Local N.G.O.	Member
24	Other- Decided By SDM	Member

3.3.7.2 BLOCK / TEHSIL LEVEL DISASTER MANAGEMENT COMMITTEE

Block / Tehsil level Disaster Management Committees will be constituted and will be headed by Block Development Officer / Tehsildar as the case may be Officers from different departments and representatives of Panchayati Raj will be members of this Committee. The Committee will look into all the aspects of disaster management including mitigation preparedness, response and relief.

Following members are clubbed in Block / Tehsil level Disaster Management Committee:

Table 3.6

#	Department	Position
1	Sub Divisional Magistrate / Tehsildar / Block Development Officer	Chairman
2	Naib Tehsildar	Member
3	Executive / Junior Engineer I&PH	Member
4	Executive / Junior Engineer, HPSEB	Member
5	Executive / Junior Engineer, HPPWD	Member
6	Junior Engineer- Telecom	Member
7	Medical officer (PHC)	Member
8	Police Inspector/ Police Sub Inspector	Member
9	Godown manager - DFSC	Member
10	Depot manager – State Transport	Member
11	Forest officer	Member

Non - Government Member		
12	M.P	Member
13	M.L.A	Member
14	Chairman - social justice committee	Member
15	Mahila Mandal	Member
16	NGO Representatives	Member

3.3.7.3 VILLAGE DISASTER MANAGEMENT COMMITTEE

Each village shall have a Disaster Management Committee consisting of officials and non-officials. The Committee will be constituted to be overseen by the Gram Sabha. The Committee will broadly be responsible for awareness generation; Warning dissemination; Community preparedness plan. Adopting safe housing practices, organizing and cooperating relief in post disaster situations. The members are:

Table – 3.7

#	Detail
1	Pradhan – Chair person
2	Panchayat Secretary – Member
3	Principal (Education) – Member
4	Health Worker – Member
5	Anganwadi Worker – Member
6	President Union / Association – Member
7	Community Representative – Member
8	Community Representative – Member
9	Community Representative – Member
10	Fair Price Shop Holder – Member

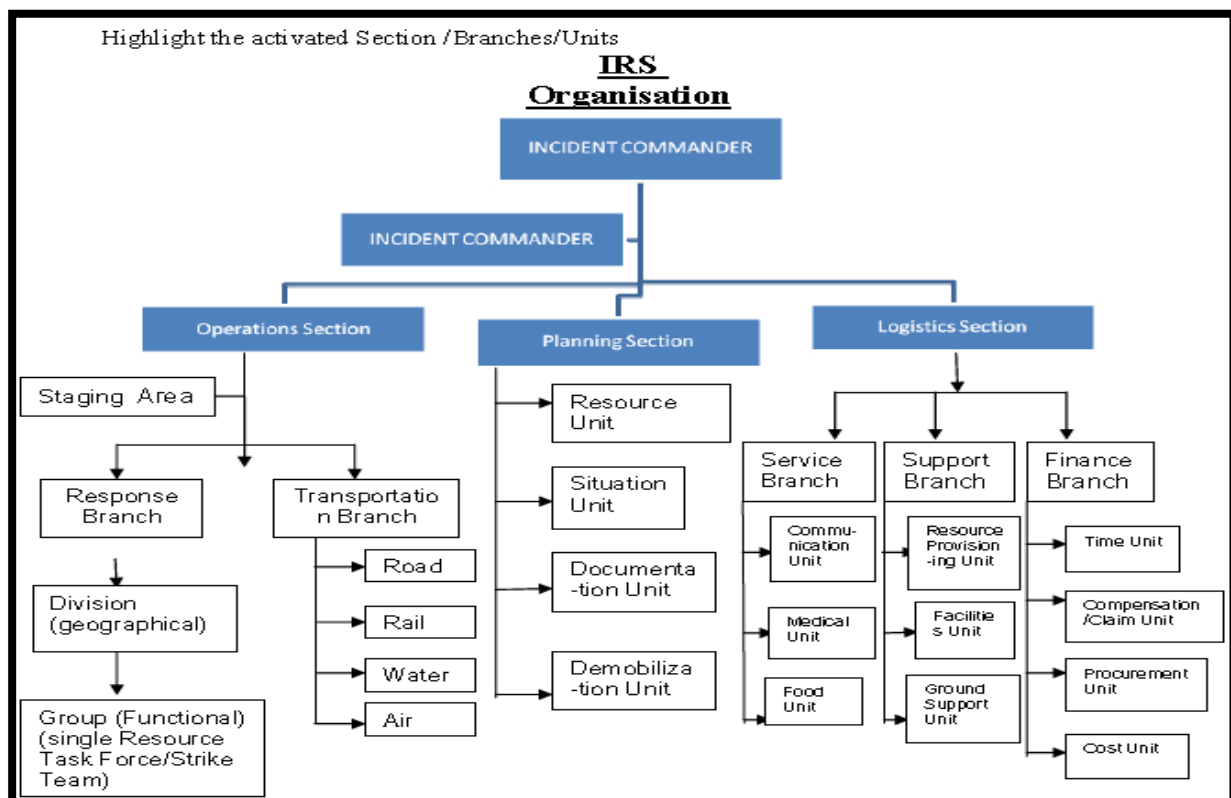
3.4 IRS: ON SITE ACTION DURING DISASTERS

The following would be the broad guidelines for actions during disasters: -

- Assess the full extent of the disaster/calamity and the damages/losses incurred
- Plan and supervise search and rescue operations
- Allocate clear responsibilities to the officers and provide them necessary resources along with necessary delegations and Mobilize resources from outside the district if the situation so warrants.
- Finalize the relief to be provided to the affected persons and ensure its timely distribution
- Document the disaster including the lessons learnt Last but not least, keeping informing the higher authorities about the whole incident.

And all of the above objectives can be achieved by Incident Response System (IRS) which is still in its infancy stag of implementation and training programs are conducted to have it streamlined in the existing administrative structure of the district. The Incident Commander would be assisted by various service divisions of the District Disaster Management Authority and Sub-Divisional Authorities. These sections would work to the requirement of the emergency. Incident Commander would be assisted by the Incident Response Teams (IRTs) consisting of functionaries from various department depending upon ESF Plan and roles of various departments.

The DDMA would notify in-charge for all positions as per the IRS system for the district, Sub-division and block level. A sample IRT framework is given in the figure below.



The DDMA would also form IRTs for all divisions and notify them. All the functionaries of IRT and IRS would be trained to understand the IRS system.

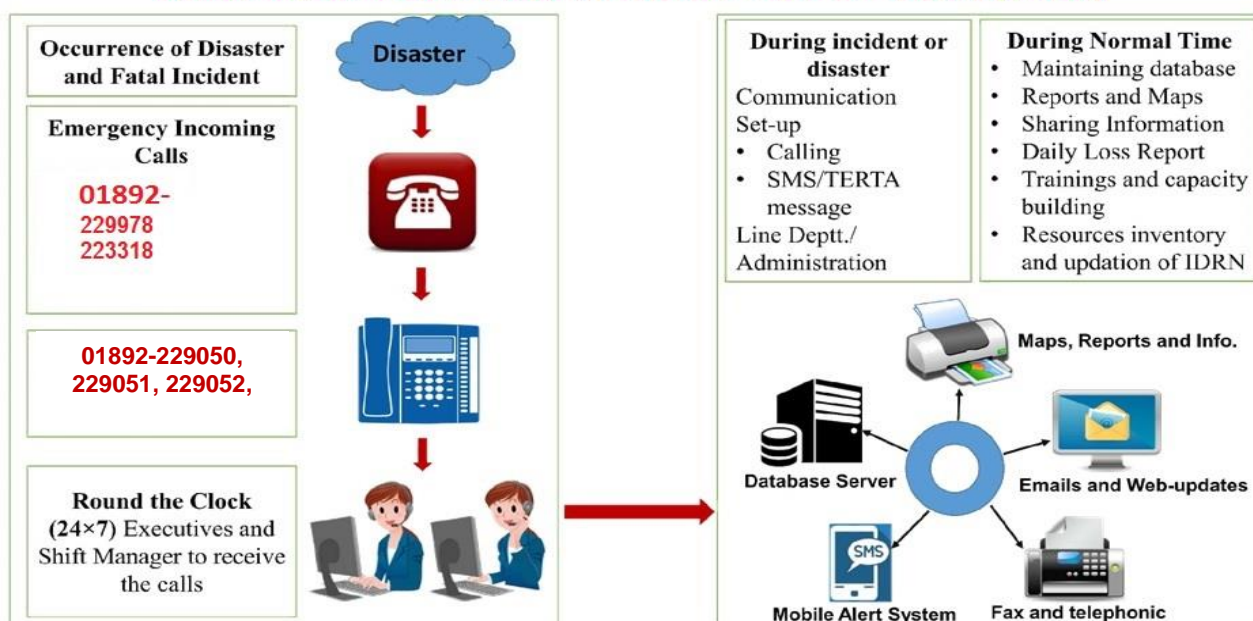
Proposed Incident Response Team District Kangra

#	IRS Designated/ Post	Suggested Position / Rank District
1	Responsible officer	Deputy Commissioner
2	Incident Commander	ADM - Kangra
3	Deputy IC	SDM - Dharamshala
4	Liaison Officer	AC to DC
5	Information & Media Officer	DPRO
6	Safety Officer	Commandant Home Guard
7	Operation Section Chief	Superintendent of Police
8	Staging Area Manager	PO DRDA
9	Response Branch Director	ASP
10	Transportation Branch Director	RM HRTC
11	Planning Section Chief	ADC
12	Situation Unit Leader	ARO Planning
13	Resource Unit Leader	Executive Engineer PWD
14	Documentation Unit Leader	Superintendent Grade I (DC office)
15	Demobilization Unit Leader	District Nazir
16	Logistic Section Chief	DRO Kangra
17	Service Branch Director	Superintendent Revenue
18	Support Branch Director	SDK
19	Communication Unit Leader	JTO (Local)
20	Food Unit Leader	DFSC
21	Facilities Unit Leader	ADIO
22	Ground Support Unit Leader	Exe Er. PWD (Meth)/ Works Manager HRTC
23	Medical Unit Leader	CMO
24	Finance Branch Director	District Treasury Officer
25	Cost Unit Leader	Accounts Officer (AO)

3.4.1 DISTRICT EMERGENCY OPERATION CENTRE (DEOC – KANGRA)

DEOC, Kangra is located in the Deputy Commissioner Office Complex, Kangra of District Kangra (H.P). The office of DEOC, Kangra is sited near SP office. It is placed in the third floor of the building with having single entry and exiting to the room with alternate entry/ exiting facility for the building. It is accessible through Stairs.

Functioning of District Emergency operation Centre DOEC, Kangra (HP)



The DEOC Kangra would perform the following functions:-

- i. District control room would be the nerve center for the disaster management;
- ii. To monitor, coordinate and implement the actions for disaster management;
- iii. Activate the Emergency Support Functionaries (ESF) in the event of a disaster and coordinate the actions of various departments/agencies;
- iv. Ensure that all warning, communication systems and instruments are in working conditions;
- v. Receive information on a routine basis from the district departments on the vulnerability of the various places up to village level (parts of the districts);
- vi. Receive reports on the preparedness of the district level departments and the resources at their disposal to arrange and meet their requirements;
- vii. Maintain a web-based inventory of all resources through the India Disaster Resource Network (IDRN);
- viii. Provide information to the Relief Commissioner' Office of the disaster /emergencies/ accidents taking place in the district regularly and maintain a database of disasters and losses caused by them;
- ix. Monitor preparedness measures and training activities;
- x. Providing information at district level, local level and disaster prone areas through appropriate media;
- xi. Brief the media of the situations and prepare day to day reports during the disasters;
- xii. To report the actual scenario and the action taken by the District Administration;
- xiii. Maintain a database of trained personnel and volunteers who could be contacted at any time;
- xiv. Liaise with on-site operation center, State EOC and other emergency services.

The Additional District Magistrate shall be the Nodal Officer for Disaster Management would be in-charge of the DEOC. The design, layout, equipment and operation of the DEOC would be as per the EOC Manual prepared at the State level.

3.4.2 ALTERNATE EMERGENCY CENTRE - KANGRA

- Emergency Response centers at Sub Division level of district Kangra.
- Disaster Response task force at SP office for Emergency Communication and Response.

Messengers

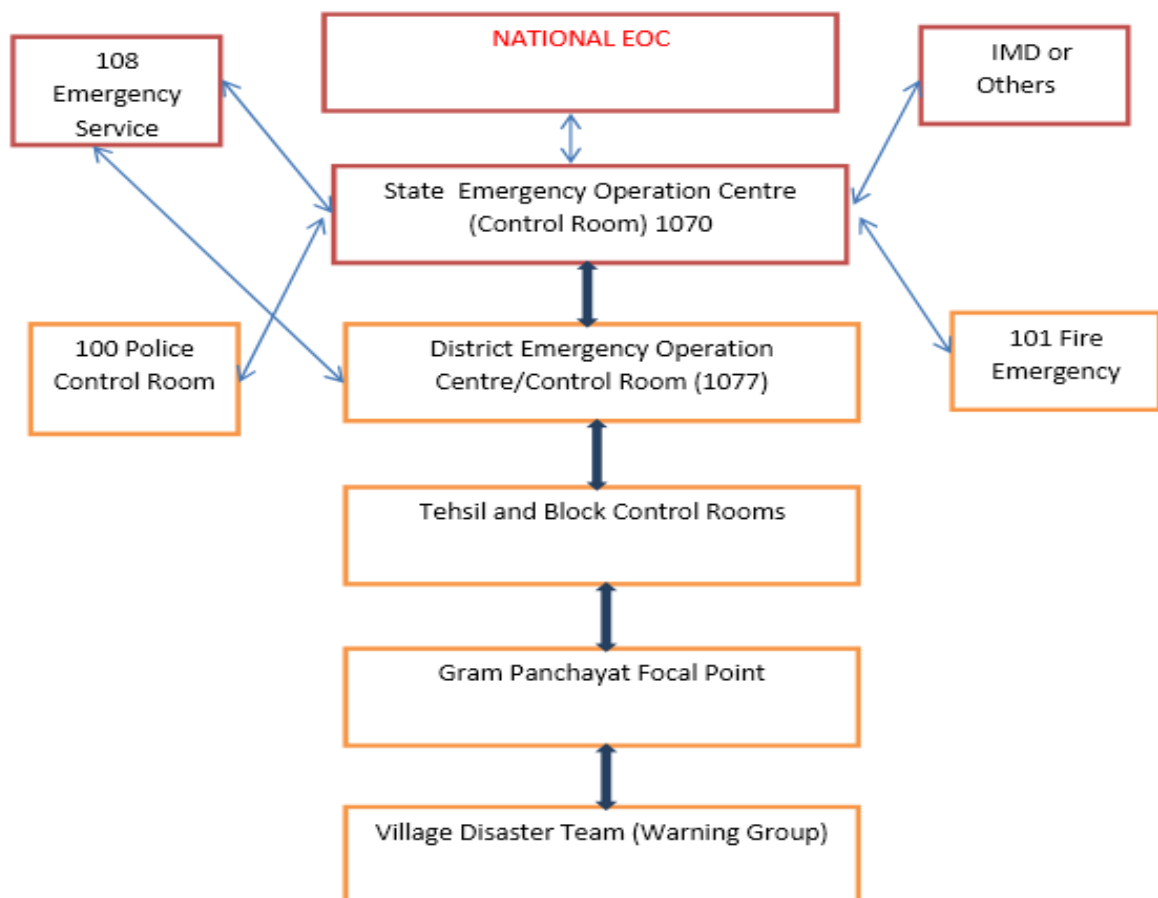
- Use of messengers as a last resort to carry the hand written messages to persons concerned in dealing with the disaster.
- A dedicated vehicle shall be made available by the Transport Task Force Leader upon request.

3.5 EMERGENCY SERVICE FACILITIES BASED ON PUBLIC PRIVATE PARTNERSHIP

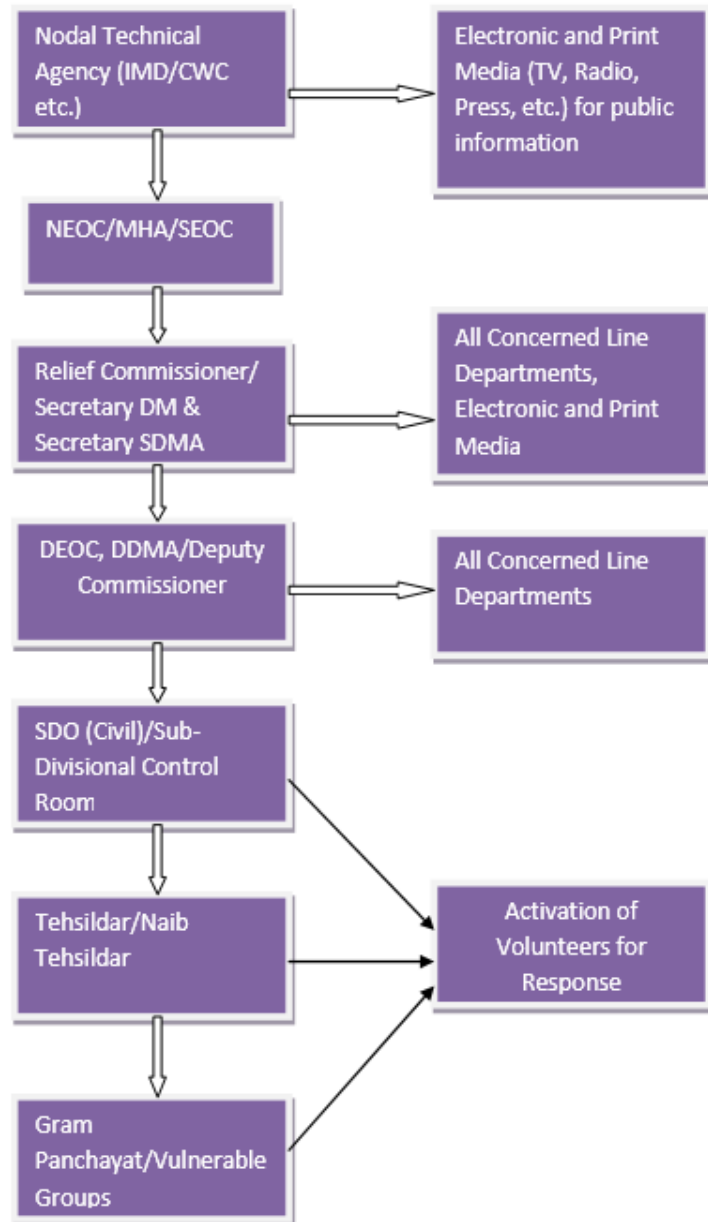
Table 3.8

#	Facilities	Emergency Services	Nodal officer	Contact
1.	108 GVK EMRI	Medical Services	Project Manager, Kangra	78071-08518
2.	Red Cross Society	Medical Services	Secretary	94188-32244
3.	Community Hall	Shelter service		
4.	Ex–Army Taxi union	Transportation Services	-	01892-223004
5.	Gurudwara and Ashrams	Shelter / Relief Services	-	01892-222105
6.	Tibetan Monasteries	Relief and		
7.	Registered Self Help Groups	Financial Support		
8.	Mountaineering or Water Sports Academy	Search and Rescue Services		

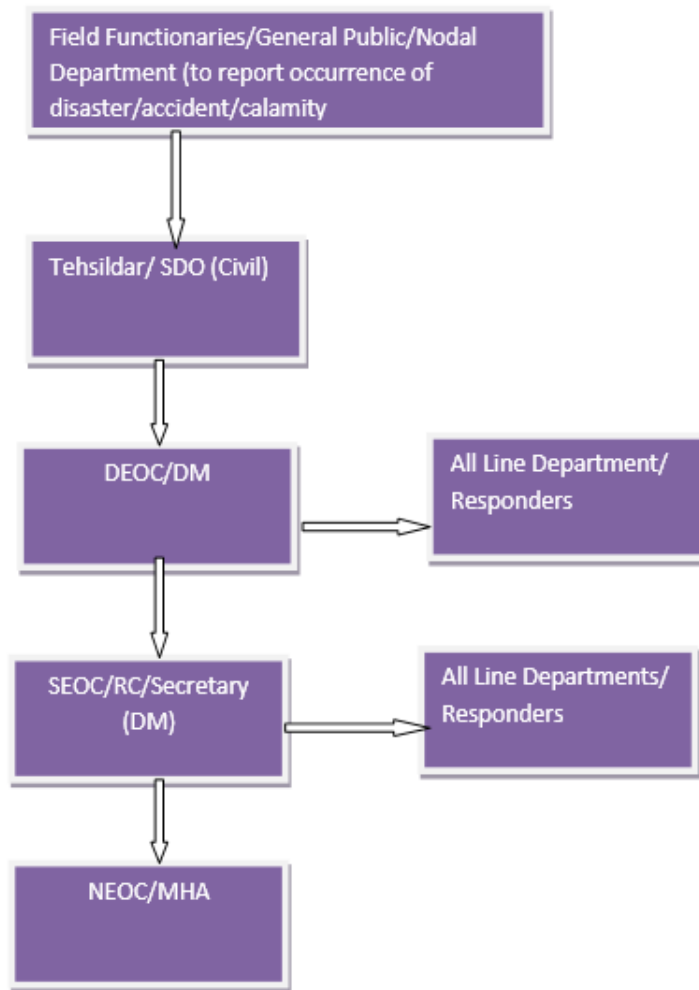
Flow of Early Warning system



Information flow chart in Case I: where early warning signals are Available



Information Flow Chart in Case II: Where Incident happens without any early warning signals



Annexure

**Government of Himachal Pradesh
Home Department.**

No. Home(A)F(10)-5/2005

Dated Shimla-171002, the: 3-06-09

Notification

The Governor , Himachal Pradesh is pleased to constitute a District Crisis Management Group (DCMG) for dealing with different crisis/ emergencies within the overall framework provided by the Crisis Management Plan in pursuance of Ministry of Home Affairs, Government of India's letter No. 32-35/2003 NDM-II, dated 21/22 April, 2009 as under :-

	Members	Composition
1	District Magistrate	Chairman
2	Superintendent of Police of the	Convener-Member
3	Additional District Magistrate	Member-Convener
4	Representative of IB Located in the Distt	Member
5	Representative of Central Para Military Forces Located in the District if any:	Member
6	Commandant Home Guards:	Member

Annexure

3.5.1.1 TASK FORCE AT BLOCK / VILLAGE LEVEL

From Block Level onwards groups may be formed of volunteer basis at respective levels and for following tasks necessary trainings and resources shall be arranged with the support of district authority for carrying out the following task:

Block level Task Force	<u>Warning Group</u> - Warn the community of the impending danger. <u>Rescue & Evacuation Group</u> - To be put into task immediately after abatement of calamity.
G.P. Level Task Force	<u>Water & Sanitation Group</u> - Ensured safe drinking water in the shelter camps, MCS <u>Shelter management Group</u> -Shall remain overall charge of managing the evacuees in shelter camps. <u>First AID & Medical Group</u> - Shall take care of the minor elements in the rescue camp.
Village Level Task Force	<u>Patrolling and Liaison Group</u> - Shall watch & Word belongings of the inmates in the shelter camps & keep liaison with Govt.

3.5.1.2 TASK FORCE AT DISTRICT LEVEL

District Level Task Force comprise of skilled personnel as below:

Skilled Task Force:-

1. First AID & Medical Team (Annexure)
2. Search and Rescue Team (Annexure)
3. Fire Fighting Team (Annexure)

Specialized Task Force:-

1. Warning Task Force (Annexure)
2. Water Supply Task Force (Annexure)
3. Shelter Task Force (Annexure)
4. Public Works Task Force (Annexure)
5. Public Health and Sanitation Task Force (Annexure)
6. Telecommunication Task Force (Annexure)
7. Animal Health and welfare Task Force (Annexure)
8. Search and Rescue Task Force (Annexure)
9. Food and Relief Supplies Task Force (Annexure)
10. Electric Power Task Force (Annexure)

As per the outcome of HVCRA conducted in Chapter 02 of this DDMP the major Hazards Identified with High Risk are taken into consideration for identification of mitigation measures to reduce the risk of Disaster in District Kangra.

4. PREVENTION AND MITIGATION

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”.

Preventive actions have to be taken before a disaster to reduce the likelihood of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible hazard. Vulnerability reduction is given priority over a risk reduction. The district can avail itself of four mechanisms (singularly or together) to reduce risk and vulnerability;

4.1 MITIGATION MEASURES

Mitigation measures are two types - . Structural measure and non-structural measures.

- **Structural mitigation** refers to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure like building codes, retrofitting of buildings, lifelines and infrastructure to withstand any hazard, relocation etc.
- **Non-structural mitigation** refers to measures that emphasis on policies, regulatory measures, knowledge development, land-use planning programs for sustaining awareness, dissemination of information material on do’s and don’ts, behavioral modification etc.

Mitigation efforts are also undertaken at the personal levels by involving assessment of possible risks to personal / family health and property. Thus, adverse effects of disasters can be minimized if mitigation policies, plans, and projects undertaken are implemented with risk perception and strong political will.

Following are some of the measures with regards to some major Hazards as per Chapter 2.

4.1.1 HAZARD-SPECIFIC STRUCTURAL MIGRATION MEASURES

Structural Mitigation

Hazards	Measures	Responsible Department	Remarks
Earthquake	Rapid visual screening to be done at Sub Divisions levels for identification of Vulnerable Public Infrastructure Specially, Schools, Hospitals, Administrative buildings.	HPPWD Kangra, T&CP, Revenue Department.	In Case of Roads & Bridges fall in jurisdiction of National Highways Responsibility will go to NH – Shahpur for District Kangra

	Retrofitting of Public Infrastructure	HPPWD Kangra, T&CP, Revenue Department. Municipal Corporation	
	Enforcement of NBC / earthquake-resistant building Byelaws	Municipal Corporation, Revenue, HPPWD	
Landslide	Enforcement of NBC / building Byelaws for construction in landslide prone area.	HPPWD, Municipal Corporation, Revenue	
	Rock fall control measures comprising of grass plantation, vegetated dry masonry wall,	Forest Department, HPPWD, Revenue	
	Drainage measures, which include surface drainage, sub-surface drainage	HPPWD, Municipal Corporation.	
	Afforestation	Forest Department, PRI	
	Construction of Retaining walls	HPPWD, Municipal Corporation.	
	Installation of Early warning devices	HPPWD, DDMA	
Flood	Erosion control measures consisting of Bamboo check dams, terracing, Jute and coir netting	I&PH and PWD	
	Strengthening/ construction of embankments, flood walls and flood levees	I&PH, PWD, Revenue	
	Proper desilting / dredging of rivers in order to keep the rise of the river beds minimum	I&PH,	
	Installation of Flood warning dissemination system	I&PH	
	Diversion of flood water in order to lower water levels in the rivers	I&PH	
	Catchment area treatment / afforestation, building up of check dams / detention basins in order to reduce the flood peaks and control the suddenness of the runoff	Forest department, I&PH	
Road Accidents	Construction of all-weather roads	PWD, MC, NH	
	Clearing of Debris and projected mountain sides along roads and National Highways,	PWD, MC, NH	
	Construction of Parapets and crash barriers along the roads	PWD, MC, NH	

	Inspection and Maintenance of Road Tunnels	PWD, MC, NH	
Fire & Forest Fire	Building fire lines for forest fire	Fire Department, Home Guards, Forest Department	
	Building Water hydrant tanks/ Water bodies in villages prone for Forest fire	I&PH, Forest Depart	
	Enforcement of Fires Safety rules and regulations	Fire Department, and Electrical department	
	Establishment of fire stations for improving outreach of fire services	Fire Department, PRI's	
	Enforcement of fire approvals as per the provisions contained in National Building Code (NBC), 2005 (Part IV- Life & Fire Safety) for new constructions	Fire Department, DRDA, Municipal Corporation	
Drought	Make use of the frontier techniques like remote sensing and GIS.	Horticulture & Agriculture Department & I&PH, DRDA	
	Creating Seed Banks for the Farmers		
Stampede	Installation of Video surveillance systems at places of Mass gathering.	DDMA, Revenue	
	Barricades for crowd control	Police	
	Use of modern technology to disseminate the alerts/ warnings	Fire Home guards, DIO	
	Planning and Enforcement of site plan and Evacuation plan of the Mela / Temple areas	Police, Fire, Home Guards	
Chemical & Industrial Accidents	Enforcement of NBC and Industry based rules and regulations for plants and preparation of Off-site and On-site plans.	GDIC	
	Enforcement of applicable licensing and certification rules and regulations for companies	GDIC	

4.1.2 HAZARD-SPECIFIC NON-STRUCTURAL MITIGATION MEASURES

Hazards	Measures	Responsible Department	Remarks
Earthquake	Masonry and Engineers certification / Technical Training	NIIT Hamirpur, IIT Mandi, DDMA	
	Public Awareness for Earthquake resistant Construction by IEC material	DDMA	
	Preliminary Vulnerability Assessment of Public Infrastructure.	Concerned Department, HPPWD	
	Regular conduction of Fire Safety Audits and Electrical Safety Audits	Fire services, Electricity board,	
	Training of trainers in professional and technical institutions	NIIT Hamirpur, IIT Mandi, DDMA	
	Risk transfer instruments by collaborating with insurance companies and financial institutions	Revenue Department	
Landslide	Zoning of landslide areas for regulating land use.	Forest department, Revenue	
	Public Awareness Campaigns	DDMA	
	Training of community members in landslide early warning	DDMA, PWD,	
	Cleaning and Maintenance of rain water drains	HPPWD, Forest, Municipal Corporation , PRI	
Flood	Proper regulation of lakes, dams and other water storage reservoirs	&PH, Hydro Power Projects,	
	Generating awareness to the type of water borne diseases that can result in the aftermath of floods	I&PH, DDMA, DRDA	
	Water resources planning, implementation of action plans, day-today water resources management	I&PH, Hydro Power Projects, MC, DRDA	
	Developing evacuation plans & implementation	DDMA,	
Road Accidents	Awareness with regards to road safety	DDMA & RTO	
	Installing Signage and Illuminators and other road Safety Measure such as Speed Breakers, Crash Barriers	RTO, PWD, MC	
	Regulation and regular check on driving licenses	Traffic Police, RTO	
	Checking of alcohol level of drivers including tourist and private vehicles.	Traffic Police, RTO	

Fire & Forest Fire	Regular fire hazard evaluation / audit and Electrical Safety Audit of all types of public and private buildings	Fire Department, and Electrical department	
	Annual Cleaning for forest floor.	PRI's, Forest Department	
	Training and awareness through distribution of IEC materials / evacuation drills/ mock drills in industrial plants/ government buildings / schools and critical infrastructure like hospitals, etc.	DDMA, Home Guards/ Fire Services	
	Preparation of Drought management plans	Horticulture & Agriculture Department & I&PH, DRDA	
	Weekly monitoring of the ground water levels	Forest Department.	
	Creating Awareness on resistant crop varieties	Horticulture & Agriculture Department	
	Generating awareness on crops insurance among farmers.	Horticulture & Agriculture Department	
Stampede	Putting of banners/ posters for the public awareness	DDMA, DPRO	
	Arrangement for cordoning out important personalities and VIP's	Police, Fire, Home Guards	
Chemical & Industrial Accidents	Audits of On-site & Off-site Emergency plans at regular intervals	GDIC, Director of Health and Safety	
	Awareness generation among community regarding HAZMAT	GDIC/ DDMA	
	Training on specialized Medical First Aid Response.	NDRF/ GDIC/ Health	

4.2 MAINSTREAMING DRR IN DEVELOPMENT PLANS

The Disaster Management Act mandated us to take measures for prevention/mitigation of disasters and to ensure that appropriate preparedness measures for integration of disaster management into development plans and projects are taken and further allocation of funds for prevention, mitigation, preparedness for disaster and capacity building are also made available. Since disaster management is not a function of DM department alone but of all departments hence mitigation concern must be addressed by the respective departments in all aspects of development.

Mainstreaming has three purposes:-

- 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.
- To make certain that all the development programmes and projects that originate from or are funded by Government do not in advertently increase vulnerability to disaster in all sectors: social, physical, economic and environment.
- 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.

Table: Mainstreaming DRR in Development Plans

#	Name of The Programme	Central /State Share	Purpose / Objective	Proposed Strategies for DRR Integration into the Flagship Programme	Budget (In Rs.)	Time Frame
1	Mahatma Gandhi National Rural Employment Guarantee Scheme	Central	To provide 100 days employment for rural and development activity as per self-approver by the Gram Sabha under MGNREGA Act, 2005	<ul style="list-style-type: none"> • Utilization 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. • Building and cleaning of Storm Drains and maintenance at landslide prone area • Cleaning of Forest floor to mitigate the risk of forest fire. • Land development for agriculture and horticulture produce. • Construction of Pits. Artificial water storage bodies to mitigate the risk of forest fire. • It offer continuous employment opportunities in the event of disasters to ensure livelihood security in the event of disasters. • Building of Roads for places which are not connected to other parts of the district. 		

				<ul style="list-style-type: none"> • Construction of check dams and embankments and drainage systems to prevent flooding of those areas. • Water conservation and water harvesting; • Afforestation and special plantation to control Soil Erosion. 		
2	Indira Awaas Yojna (IAY) now entitled as Pradhan Mantri Gramin Awaas Yojana (PMGAY)	Central	For the construction of houses under BPL category family	<ul style="list-style-type: none"> • Inclusion of such measures like application of Hazard resistant design in construction of new houses • Upgrading fair weather roads on a priority basis. • Provision for cross drainage, slope stabilization, protection works to be included, in multi-hazard and especially flood and landslide prone areas. • Training of engineers, masons and construction workers in multi- hazard-resistant construction particularly addressing risk of earthquake and Landslide and fire. • Capacity Building Programmes for DRDA officials on Disaster Risk Reduction issues for implementation awareness 		
3	Swacch Bharat Mission (SBM)	State	For creating awareness regarding health and hygiene in the society and also to provide the sanitation facility like toilets etc.	<ul style="list-style-type: none"> • Design and promoting mass toilet models and sanitation infrastructure in Identified Shelters suited to local geo-climatic conditions • Provide proper maintenance in schools and community centres identified as Shelter. • Develop community-managed solid and liquid waste management for overall cleanliness in villages. • Involve community-level staff such as teachers, ASHA and Anganwadi workers to motivate the community to adopt sanitation facilities • Develop appropriate sanitation strategies for disaster situations and include this in the Village/Gram Panchayat Disaster Management Plan. 		
4	Sarva Siksha Abhiyaan	Central	It seeks to attain Universal Elementary Education (UEE) by ensuring that all children complete five	<ul style="list-style-type: none"> • Development of a Policy and Plan for school safety. • Developing model structurally safe designs for schools. 		

			years of primary schooling and eight years of elementary schooling of satisfactory quality	<ul style="list-style-type: none"> • Introducing School Safety in the Teacher's Training Curriculum. • Training of Rural Engineers appointed under SSA Scheme as well as the SSA State Coordinators. • Training of masons in rural areas. • Construction of Technology Demonstration Units. • Community Awareness. • Use of low cost and environment friendly construction material that is locally available • Undertake annual mock drill on fire, flood, and earthquake safety. 		
5	Jawahar Lal Nehru Urban Renewal Mission	State		<ul style="list-style-type: none"> • Strengthening of the compliance in case of infrastructure projects as well housing scheme to ensure structural safety. • Emphasis on disaster risk audit at the stage of preparation • 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). • Inclusion of disaster management as a function of the Urban Local Bodies and allocate resources. • Inclusion of strategies for disaster management in the City Development Plans. • Training and Capacity Building Programmes for municipal officers on disaster risk reduction. 		
7	National Rural Health Mission	Central		<ul style="list-style-type: none"> • Ensure that the village Health Plan and the District health plan explicitly addresses 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. • Provide training and allocation of resources to the ASHA workers on disaster health preparedness and response. 		

				<ul style="list-style-type: none"> • Ensuring structural safety of the CHC/PHC and other health care service delivery centres in rural areas. • Training of doctors and hospital staff on mass casualty management and emergency medicine. • Community awareness on disaster management. 		
8	Himachal Pradesh State Rural Livelihood Mission	state	To create efficient and effective institution platform of the rural poor, enabling than the increasing household income through sustainable livelihood enhancements and improved access to financial service	<ul style="list-style-type: none"> • Promotion and planning of Regional Self - Employment options. • Trainings and Certification program on skill development. • The scheme help in building the coping capacity of the people which will further help the community in the situation of disaster. • The targeted SHG's can be used to disseminate information about disaster management to the marginalized community. 		
11	Integrated Watershed Management programme (IWMP)	Central	The main objective of IWMP are to restore the ecological balance harassing, conserving and developing degraded nature resources such as soil, vegetative cover and water	<ul style="list-style-type: none"> • The program works to improve the condition of the places where drought exists. • The scheme could also include risk assessment of certain areas which are more prone to disaster and then the implementation of the schemes can be done at those places. 		
12	Pradhan Mantri Fasal Bima Yojna	Central	The scheme already has a component of DRR, as it works in providing support to the farmers for their losses due to a disaster situation	<ul style="list-style-type: none"> • The scheme provides comprehensive risks insurance against yield losses viz. drought, hailstorm, floods and pests disease etc. • Prevented Sowing /Planting Risk: Insured area prevented from sowing / planting due to deficit rainfall or adverse seasonal condition. • Standing Crop Sowing to Harvesting: Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks viz. Drought, Dry Spell, Flood, Inundation, Pests and Diseases, Land Slides, Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane and Tornado etc. • Post- Harvest Losses: Coverage is available only upto a maximum period of two weeks from Harvesting for 		

				<p>those crops which are allowed to dry in cut and spread condition in the field after harvesting against specific perils of cyclone and cyclonic rains and unseasonal rains.</p> <ul style="list-style-type: none"> • Localized Calamities: Loss/ damage resulting from occurrence of isolated farms in the notified area. 		
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Table 4.3: Brief summarization of above mentioned above important mitigation measures

#	Strategies	Actions involved	Suggested Institutions involved
1.	Retrofitting of buildings	<p>Prioritization of buildings according to their importance during emergency. First priority buildings are:</p> <p>District administration office building, all police and fire stations</p> <ul style="list-style-type: none"> • Nodal • All Schools (Government, SDMC and Public) • Residences of District Magistrate (Revenue), District Magistrate of Police <p>Second priority buildings are:</p> <ul style="list-style-type: none"> • Hospitals and clinics • Community centres • Residences of other key officials • Office buildings of SDMC, PWD, CD & HG and DDA <p>Third Priority buildings are Remaining Government Buildings and colonies</p>	Municipal Corporation / PWD / TCP
2.	Enforcement of Building codes	Review and updation of building codes	BIS
		Implementation of codes in new engineered and non-engineered constructions	DDMC
3.	Community Awareness	Large-scale information dissemination about basics of new constructions and retrofitting of existing buildings and encouraging fire-fighting arrangements in the building	DDMC, PWD, District Administration
		Information dissemination about dos ^o and don'ts at the time of earthquake event and fire-outbreak	District administration, Fire and police department, NGO's
4.	Capacity Building	Priority-wise training to the engineers, architects, and masons for disaster resistance. These people may further utilized for providing assistance in retrofitting and reconstruction exercises.	District administration, DDMC, PWD and DDA
5.	Insurance	Identification of hazardous areas in the district	DC Office, DDMC
		Provisions of insurance according to building bye laws, codes and hazard proneness	Insurance companies, DDMC

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-byelaws and standard codes.
- Retrofitting techniques are very much important to re-strengthen old and weak constructions which needs to be taken up by DDMA, DDMC 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, District Magistrate Office, residences of key officials, schools, community spaces, police and fire stations etc. shall be retrofit on priority basis.

5. PREPAREDNESS MEASURES

The goal of disaster preparedness is to know what to do in a disaster aftermath, how to do it, which right tools to be equipped with to do it effectively. Preparedness helps to minimize hazard's adverse effects through effective precautionary measures that ensure a timely, appropriate, effective organization and delivery of response and relief actions. Section 30 (2) (xii) of DM Act 2005, states that the "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".

5.1 IDENTIFICATION OF STAKEHOLDERS INVOLVED IN DISASTER RESPONSE

Preparation for the disasters is a joint venture of various departments and agencies within the district. The major stakeholders for the pre and post disaster management are as below:

Table: List of Stakeholders and their responsibilities

#	Stakeholders	Task and responsibilities
1	DDMA	<ul style="list-style-type: none"> • Prepare, Coordinate and monitor overall district response • Review the state of capabilities for responding to any disaster or threatening disastrous situation • Advise, assist and coordinate the activities of the other Departments • Establish stockpiles of relief and rescue materials • Ensure communication systems are in order • Mock drills are carried out periodically; • Ensuring of preparing response plans by Departments of the Government
2	DEOC	<ul style="list-style-type: none"> • Proper functioning of the DEOC including hunting line 1077 • Availability of resource inventory for disastrous situation (IDRN) • Functioning of Satellite phones • Stock piling of multi-hazard emergency equipment and maintenance
3	HPSDMA	<ul style="list-style-type: none"> • Facilitating resources on demands raised by administration
4	Police Department (Law and order)	<ul style="list-style-type: none"> • Assess preparedness level and maintaining law and order; • To take measure against looting and rioting; • To ensure the safety and security of relief workers and material; • To take specific measure for the protection of weaker and vulnerable sections of the Society. • To provide safety and security at relief camps and temporary shelters
5	Department Of Health and Family Welfare	<ul style="list-style-type: none"> • Prepare and implement hospital preparedness plan. • Mobilization of health service providers for emergency response for medical care, evaluation and treatment. • To coordinate, direct and Integrate State level response;

		<ul style="list-style-type: none"> • Direct activation of medical personnel, supplies and equipment; • Coordinate the evacuation of patients; • Provide human services under the Dept. of health; • Prepare , Keep and check ready Mobile Hospitals and stock; • To network with private health service providers; • To provide for mass decontamination; • Check stocks of equipment and drugs.
6	Fire and Emergency Services and Home Guards (Search and Rescue)	<ul style="list-style-type: none"> • Establish, maintain and manage district search and rescue response system; • Coordinate search and rescue logistics during field operations; • Provide status reports of SAR updates throughout the affected areas • Discharge all ambulatory patients for the first aid which has the least danger to health and others transported to safer areas. • To make arrangements for the transportation and Post mortem of the dead
7	SDRF, Armed and Para military forces	<ul style="list-style-type: none"> • Armed and Para military forces to provide assistance to civil authorities on demand • Coordinate with administration in response as well as capacity building. • Facilitate administration with the key resources in disaster.
8	Public Works Department / National Highways Authority / BRO	<ul style="list-style-type: none"> • Establish a priority list of roads which will be opened first; • Constructing major temporary shelters; • Connecting locations of transit / relief camps; • Adequate road signs should be installed to guide and assist relief work; • Clearing the roads connecting helipads and airports and restoring the helipads and making them functional; • Rope in the services of private service providers and secondary services if the department is unable to bear the load of work. • Depending on the nature of disaster, essential equipment such as Towing vehicles, Earth moving equipment's, Cranes etc. to be provided to work team carrying emergency • Construct temporary roads; Keep national and other main highways clear from disaster effects such as debris etc.; • Networking with private services providers for supply of earth moving equipment's etc.
9	Irrigation and Public Health department (Water / Sanitation / Sewerage Disposal)	<ul style="list-style-type: none"> • Preparedness and implementation of preparedness plan of the department • Make arrangement for proper disposal of waste in their respective areas; • Arrange adequate material and manpower to maintain cleanliness and hygiene • For making available mobile toilets; • To dispose of the carcass. • Providing support to local Administration; • Water purification installation with halogen tablets. • Procurement of clean drinking water; • Transportation of water with minimum wastage; • Special care for women with infants and pregnant women;

		<ul style="list-style-type: none"> • Ensure that sewer pipes and drainage are kept separate from drinking water facilities
10	Electricity Department (Power)	<ul style="list-style-type: none"> • Making arrangement for and to provide the alternative sources of power supply for emergency purposes to the affected populations and relief camps. • Identify requirements of external equipment required such as DG sets etc. • Prepare emergency repair teams equipped with tools, tents and food; • Listing of hired labour for the clearing of damaged poles etc.
11	Transport Department	<ul style="list-style-type: none"> • Pre coordination of required transport and its implementation during emergency related response and recovery functions, search and rescue and damage assessment • Arrangement for Coordinating Vehicles for transportation of relief supplies from helipads/airports to the designated places • Preparedness regarding availability of fleet for the purpose of SAR, transportation of supplies, victims etc; • Provide arrangement for stocking of fuel for emergency operations
12	Department of Food and Civil Supplies	<ul style="list-style-type: none"> • Designating temporary shelters for Emergency mass feeding; • Arrangement for providing logistical and resource support to local entities • Designate team to coordinate damage assessment and post disaster needs assessment • Making arrangements for emergency food and clothing supplies available for population • Control the quality and quantity of food, clothing and basic medicines; • Ensure the timely distribution of food and clothing to the people
13	Forest Department	<ul style="list-style-type: none"> • Making Arrangements for timely removal of trees obstructing the movement of traffic and which have become dangerous; • Make arrangement for fuel wood for the relief camps and for general public; • Providing fuel wood for mass cremation etc.
14	Animal Husbandry Department	<ul style="list-style-type: none"> • Making arrangement for timely care and Treatment of animals in distress; • Provision of vaccination; • Provision for disposal of dead animals
15	Communication / Information Department	<ul style="list-style-type: none"> • Coordination of telecommunication with other networks and available police wireless network, satellite phones, Ham Radio units of armed forces in the area affected • For rendering necessary assistance in terms of resources, expertise to the primary agency in performing the assigned task. • Operate a Disaster Welfare Information (DWI) System to collect, receive, and report the status of victims and assist family reunification; • Apply GIS to speed other facilities of relief and search and rescue; • Enable local authorities to establish contact with the state authorities; • Coordinate planning procedures between district, the state and the centre; • Provide ready formats for all reporting procedures as a standby.

16	Panchayati Raj Institution and Urban Development	<ul style="list-style-type: none"> ● Preparing the Community as first responder and local authorities as per Village Disaster Management Plan. ● Identification of public buildings as possible shelters; ● Department of Panchayati Raj through local Panchayats would assist the primary agency in establishing shelters of smaller dimensions. ● Locate adequate relief camps based on survey of damaged houses; ● Develop alternative arrangements for population living in structures that might be affected even after the disaster. ● Quick assessment and identifying the area for the establishment of the relief camp ● Solid / liquid waste treatment and management s;
17	Department of Public Relations	<ul style="list-style-type: none"> ● Preparedness for providing and collecting reliable information on the status of the disaster and disaster victims for effective coordination of relief work at state level ● Procedure for coordinating with all TV and radio networks to send news flashes for specific needs of Donation; ● Using of place geographical Information to guide people towards relief operation; ● Use appropriate means of disseminating information to victims of affected area; ● Curb the spread of rumours; Disseminate instructions to all Stakeholders.

Hence, at a glance following preparedness measures would help in preparing for the disasters within the district:-

- i. Preparation of Disaster Management Plans at District and local level
- ii. Implementing of Disaster Management Plans
- iii. Holding regular meetings at District and Sub-Division level to reviewing the readiness of the administrative machinery to deal with disasters.
- iv. Constitution of Relief Committees at all levels.
- v. Regular training programmes of Government functionaries, PRIs, ULBs and other stakeholders in various facets of disaster management.
- vi. Public awareness and education in disaster management.
- vii. Community training and empowerment.
- viii. Taking preventive and mitigation measures for the identified hazards.
- ix. Integration of Disaster Risk Reduction (DRR) into on-going development programmes of all departments.
- x. Establishing effective early warning system for the vulnerable areas and communities.
- xi. Improving the response capacities of the search and rescue teams.
- xii. Conducting regular mock drills

Preparedness for response after a disaster by the District Administration should take into consideration some guidelines and appropriate action.

Preparedness Measures to be undertaken in the District

5.1.1 EARLY WARNING

Nodal Agencies for Early Warning have been identified by the District for the multi-hazard preparedness as follows:

#	Hazards	Warning Agency	Contact Details
1	Earthquake	N- (IMD) Indian Meteorological Department S- SDMA/SEOC D- DDMA/ DEOC	011-24619943 / 24624588 / Dehradhun 0135-2525458, 0177-2626211 / 0177-2629724 / 0177-2624976; 9816127668 mm_sandhu@yahoo.co.in 1077, 01902-225630 to 32
2	Landslide	N- (GSI) Geological Survey of India /DDMA/ D- DEOC	0172-2622529 Fax; 0172-2621945; Mob: 094173-71954. joginder.singh@gsi.gov.in gsichd@sancharnet.in 1077, 01902-225630 to 32
3	Heavy Rain / Snowfall	N- (IMD) Indian Meteorological Department S- SEOC D- DEOC	0177-2626211 1070 1077, 01892-229050
4	Flood / Flash Flood	N- (CWC) Central Water Commission S-(CWC) Central Water Commission D -Irrigation and Public Health Dept./ DEOC	0183-236105 0177-2624036, 0177-2624224 , dirmashimlacwc@nic.in
5	Domestic / Forest Fire	D- Department of Fire Services D- Department of Forest	
6	Epidemics	D- Health and Family Welfare Department D- Horticulture D- Veterinary	
7	Human Induced Hazards	D- Himachal Pradesh Police	
8.	Road Accidents	D- EMRI-GVK D- Police	108 100
9.	Stampede	D- District Administration/DEOC	1077, 01892222103
10	Dam / Reservoir Burst	D- Hydo power project, I&PH, District Administration	

Control Room: DEOC at Kullu is fortified with all the basic and advanced communication and IT infrastructure like EPBAX, Computers, LED sets, Telephone sets, Generator, and Voice logger that records all the incoming and outgoing calls from the DEOC. The Disaster Emergency number or the hunting line operational within district is 1077, which is a toll free number for disaster and is operational from all telecommunication networks.

Training of Personnel of EOCs: For the smooth running and functioning of EOC at district Kullu round the clock (24x7) six professionals have been deployed of the level of computer operators and data entry operators who should be provided with training for receiving early warning for various hazards, interpretation of warnings and dissemination of the warnings. There is a need to increase the capacity of the professionals with regards to use of various emergency equipment like wireless phones, etc.

Drills: For the efficiency and coordination of the various departments there is a need for the mock exercises on various hazard. This will provide the stakeholder of the departments to check their preparedness level and identify their gaps for further improvement.

Gaps: Functioning of Satellite Phones and development of Ham Radio network in the district needs to be courage for utilised during emergency along with provision of mobile emergency operation vehicles

5.1.2 EVACUATION

The Prime Nodal Agency for Evacuation within District Kangra is DDMA with supporting agency consisting of Revenue and Police department. Evacuation is a risk management strategy which involves the movement of people to a safer location. However, to be effective, it must be correctly planned and executed for the return of the affected community. The following factors need consideration for evacuation preparedness:

- 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 counseling

Evacuation Warning must be structured to provide timely and effective information. The warning should be clear and target specific. The warning statement issued to the community should be conveyed in a simple language and the statement should mention about:

- The issuing authority, date and time of issue
- An accurate description of likely hazard and what is expected
- Possible impact on population, area to be in undated or affected due to earthquake
- Need to activate evacuation plan
- Do's and Don'ts to ensure appropriate response
- Advise to the people about further warnings to be issued, if any

Gaps: There is a need to earmark each and every evacuation routes and shelters within district for quick and efficient evacuation process.

5.1.3 SEARCH & RESCUE

The Prime Nodal Agency for Search and Rescue within District is Police along with Home Guards. In case the incident is beyond the capacity of the district and state NDRF, Bathinda and its supporting unit at Nurpur sub Division, Kangra will be reckoned for.

In the event of any disaster the two departments form teams to locate injured and dead along with rescuing the ones in need. The secondary departments supporting SAR work, are PWD, Health department, Fire department and also the people that voluntarily form teams to help the ones in need. Proper training for search and rescue process needs to be undertaken so as to minimize the time taken in rescuing someone. The Task team for Search & Rescue is formed as and when required. The members & equipment's depend on the nature of the disaster and intensity and their availability.

- Police Officers
- Fire Brigade
- Medical team
- Home guards
- Swimmers (In case of flood)
- Officials from PWD, I&PH, Electricity
- Driver (For vehicles like ambulances, fire brigade, JCB, Excavator etc.)
- Persons from Paramilitary forces (ITBP, SSB, of NDRF/ SDRF as the case may be)
- Army personnel (depending on the scale of the incidence)
- A Class IV Officer (Health Dept.)
- Worker from Municipal Council
- Volunteers trained in search and rescue

Equipment available with the various departments that can be used for S&R in District Kullu for various hazards like earthquake, landslide, flood and fire are: Safety Helmet- Ambulances, Extension ladder, Crane, JCB, Shovel, Spade, Tractor, Generator, Search Lights, Helmet, pick axe, baskets, Blankets, VHF Sets, Tents

Human Resource trained for S&R include- Home Guards, Police, ITBP, SSB, Trained Officials include - Government Officials, PTI's, Teachers, NCC, NYKS, Pradhans, MC officials, NGO's,

Gaps: There is a need to provide training to the relevant departments concerned for S&R within the district as identified above. The other major gap in preparedness is non- availability of the essential number of items as per the IDRN List of equipment besides the mentioned above.

5.1.4 DAMAGE & LOSS ASSESSMENT

The Nodal Officer for assessment of the damages and loss will be with the Revenue department with key departments

Damage assessment is carried out with regards to building stock, standing crops, agricultural area, livestock lost, forest cover decimated, vital installations etc. for better rescue and relief. Damage assessment is conducted in 2 phases:

- Rapid Damage Assessment, and
- Detailed Damage Assessment

The field staff and agencies of various departments would communicate the damage/loss to the DEOC at the earliest. Initially first information report would be sent which would be followed by the detailed damage assessment reports. The formats for damage assessment are given in the annexures.

Indicative departments of Damage assessment are- revenue, PWD, I&PH, Electricity Board, Health Department, Agriculture and Horticulture Department, Animal Husbandry, and others suitable departments.

Gap: Training of the officers / officials of the key departments. Equipment required for the assessment of Damage and loss.

5.1.5 MEDICAL FIRST AID

The Nodal Officer is CMO and MS of the district with support of Red Cross and other suitable agencies

Equipmental and Human Resource preparedness within District comprises of General Surgons, Medical Specialist, Gynecologist, Radiologist, Orthopedic Surgeon, Nurses, ASHA ANM, Senior students of medical institutions, Veterinary Surgon & Gynecologist, ENT, Bed Strength. First Aid Kits

Gap: Training of Home Guards / Police / Nurses, ASHA ANM / Volunteers. Facilitation of First Aid Kits to the stakeholders for medical services till village / community levels.

5.1.6 MASS CASUALTY MANAGEMENT

Nodal Officer is CMO and MS of the district with support 108 / Red Cross / Police / Home Guards and other suitable agencies

The identified regional hospitals of the district along with the other private hospitals and CHC, PHC's will get operational. Human Resource preparedness within District comprises of General Surgons, Medical Specialist, Gynecologist, Radiologist, Orthopedic Surgeon, Nurses, ASHA ANM, Senior students of medical institutions, Veterinary Surgon & Gynecologist, ENT, Bed Strength. Regional Hospitals are supported by the Blood Banks and list of donors.

Equipment available with the medical departments or other agencies consists of stretchers, ambulances, various other emergency machinery like X-Ray machines, Ultra Sound and other machines.

Gap: Training of medical staff in management of mass causality along with strengthening of necessary equipment. Another identified gap is not having sufficient medicinal stock for the same.

5.1.7 RELIEF: FOOD & WATER

Nodal Officer is the District Food and Civil Supply Department with support of Revenue/ Health and Family Welfare.

Gap: Non- Availability of Warehouses / storage areas along with Fair Price Shops, availability of Cylinders, wood, utensils, clothing's at the community / village level.

5.1.8 SHELTER / MEDICAL / RELIEF CAMP

Nodal Officer for the Shelter / Medical / Relief Camp is DDMA with the Key stakeholders such as Revenue, DRDA, Education departments

The possible sites for the establishment of the above Camps are the schools, community shelters, parking areas, temple areas and open grounds within the district.

Gap: Non Availability of basic utilities for functioning of camps.

5.1.9 PREPAREDNESS FOR EVACUATION FOR DISABLED

Persons with disabilities are often overlooked throughout the disaster management. Keeping this in view some potential problems encountered by people with various types of disabilities and their possible measures are mentioned below for preparedness during response and evacuation:

- Training of the support staff of the disabled people with regards to response and evacuation
- Training of PWD having visual impairment to shout for help or to have whistle as part of emergency preparedness kit, use of cloth or gestures pictures, etc. by hearing impaired people
- Clear markings for the evacuation routes of the PWD
- Procurement of equipment for physical impaired people like mobility aids
- Use of picture cards to communicate immediate needs of food, water, toilet, medication, etc.
- Training of SAR teams for dealing with people with intellectual and mental impairment
- Preparation of shelters through use of universal designs like handrail, ramps visual signage, adapt water and sanitation sources and making people with disability familiar with shelter environment
- Fencing the shelter grounds or areas that are unsafe
- Information dissemination to PWD through Braille and auditory manner
- Awareness of the staff in charge of Shelter management including volunteers
- Preparing female volunteers/ task force members to assist females with disabilities
- Provision for mechanisms to check on security of people with disabilities

5.2 PREPAREDNESS FORECASTING AND EARLY WARNING AGENCIES

Early Warning System is the crux of disaster preparedness and response hence, its objective is risk reduction by taking necessary precaution and action. Earlier the warning is received, the better it is. For EWS to be efficient and timely, it requires equally efficient backward linkages with instruments that become the basis for providing early warning. Apart from technological systems used for receiving early warning signal, community knowledge can also be utilized. The use of animal, birds and insects behaviors for hazard early warning is being researched even in developed countries where their particular behavior is associated to possibility of occurrence of disasters. Such community knowledge may be used for issuing warning message too. EWS are composed of four elements mentioned below:-

- Knowledge of the risk.
- Technical monitoring and warning service.
- Dissemination of meaningful warnings.
- Public awareness and preparedness to act



The EOC would utilize the ICT tools and various other modes available for early transmission of early warning to the vulnerable groups and also activate the responders. The bulk group messaging services would also be utilized to alert the vulnerable groups and activate the SAR parties and all the responders. A model of early warning dissemination is given in figure above. The timely flow of early warning system from the source to the targeted stakeholder is very important. The dissemination of early warning should be institutionalized so that it reaches the stakeholders in minimum possible time by recognized means of communication.

5.2.1 ACTIVATION OF INCIDENT RESPONSE SYSTEM IN THE DISTRICT

Command

This function under IRS establishes the framework within which a single leader or committee can manage the overall disaster response effort. The Incident Commander is responsible for the successful management of the response during operational period in an area. If the incident grows in size and extends beyond jurisdictions, multiple incident commanders can be useful with an area command authority established to coordinate among the incidents. Incident Commander requires the following Command Staff to support him, as follows:

- Information & media officer - the single media point of contact
- Safety Officer - Responsible for assuring personal safety and to assess hazardous and unsafe situations, he has the authority to directly stop an operation if personal are in imminent life threatening danger.
- Liaison Officer - assigned for assisting or cooperating assignments or those involved in a unified command.

Operations

This section is responsible for managing all tactical operations at an incident as in the Incident Action Plan (IAP) for coordinating and managing the activities taken by responding agencies and officials. This section is dictated by the number of tactical resources involved and span of control considerations. Operation section consists of components of Staging area, Response Branch, with Ground or surface based tactical resources and Transportation, Branch for road and air resources.

Planning

This section is responsible for managing all information relevant to an incident. It supports the disaster management effort by collecting, evaluating, disseminating information about the development of the emergency and status of all available resources. Dissemination is based on the form of Incident Action Plan (IAP), formal briefings, maps and status board displays that will guide emergency operations/ response by personals. Followings are the six primary activities performed by the planning section:

- Maintaining status keeping of current location and status of all resources
- Prepare future projections of the incident growth, maps and intelligence information
- Maintaining of accurate, up-to-date incident files and stored for legal, analytical, and historical
- Conducting long-range and contingency planning
- Developing plans for demobilization

Logistics

This section of response is responsible for facilities, transportation, Communication, Supplies, Equipment maintenance and fuelling, food services, medical services, ordering resources and finance and administration. This section is responsible for determining the need to activate or deactivate a unit

Finance and Administration

This section is responsible for tracking all costs associated with the response and beginning the process for reimbursement. The finance and administration section becomes very important when the national government provides emergency funds that guarantee local and regional response agencies for their activities, supply use, and expenditures to be covered. It will provide for specialised incident management teams with an incident commander and officers trained in different aspects of incident management, such as logistics, operations, planning, safety, media management, etc. IRS aims to put in place, such teams within district by imparting training in different facets of incident management to district level functionaries. The emphasis will be on the use of technologies and contemporary systems of planning and execution with connectivity to the joint operations room at all levels. The Finance Branch consists of time unit, procurement unit, compensation / claims unit and cost unit to manage the financial aspects of an incident.

The local authorities do not have the capacity to play an efficient role at local level to support the DEOC's requirements for field information and coordination. The DEOC will therefore need to send its own field teams and through them establish an Incident Command System. The system will comprise:

- Field command,
- Field information collection
- Inter-agency coordination at field level of Management of field operations, planning, logistics, finance and administration

5.2.2 PROTOCOL FOR SEEKING HELP FROM OTHER AGENCIES

Procedure for Provision of Aid

The Armed Forces are conscious of their constitutional responsibility in-aid to civil authority, as well as, more importantly, the aspirations and the hopes of the people. Although such assistance is part of their secondary role, once the Army steps in, personnel in uniform whole heartedly immerse themselves in the tasks in accordance with the Army's credo-"SERVICE BEFORE SELF".

Assistance during a disaster situation is to be provided by the Defence Services with the approval and on orders of the central government. In case, the request for aid is of an emergency nature, where government sanctions for assistance is not practicable, local military authorities when approached for assistance should provide the same. This will be reported immediately to respective Services Headquarters (Operations Directorate) and normal channels taken recourse to, as early as possible.

Requisition Procedure

Any state unable to cope with a major disaster situation on its own and having deployed all its resources will request Government of India for additional assistance. Ministry of Defence will direct respective service headquarters to take executive action on approved requests. The chief secretary of state may initiate a direct request for emergency assistance, for example, helicopter for aerial reconnaissance, or formation of local headquarter (Command/Area Headquarters) or naval base or air force station.

Coordination

1. Inter-service Coordination at Central Level: Cabinet secretariat (Military Wing). A case force-opting a Tri Service RRF to cater for emergency situations within India and in the region is under consideration of COSC. This JCC would be responsible for coordination and direct in gall rescue / relief operations to ensure synergy of efforts of all three services in management of disasters.
2. Service Headquarters
 - a. Military Operations Directorate (MI-6) at Army Headquarters
 - b. Director of Naval operations at naval head quarters
 - c. Directorate of Operations (Transport and Maritime) at Air Head quarters
3. Command and Lower Formation Headquarters: Senior General Staff Officers (Operations)
4. State Level: Service liaison officer deputed to form a part of Joint Control Centre.
5. Local Level: Nominated Commander of troops and seni or civil administrator in-charge of relief.

The Armed Forces may be called upon to provide the following types of assistance:

- Infrastructure for command and control for providing relief. This would entail provision of communication sand technical man power.
- Search rescue and relief operations at disaster sites.
- Provision of medical care at the incident site and evacuation of casualties.
- Logistics support for transportation of relief materials
- Setting up and running of relief camps
- Construction and repair of roads and bridges to enable relief teams/material to reach affected areas.
- Repair, maintenance and running of essential services especially in the initial stages of disaster relief.
- Assist in evacuation of people to safer places before and after the disaster
- Coordinate provisioning of escorts for men, material and security of installations,
- Stage management and handling of International relief, if requested by the civil ministration.

Disaster Relief Operation

Important aspects of policy for providing disaster relief are as under:

- a. Disaster relief act can be undertaken by local commanders. However, HQ Sub Area is to be informed at the first opportunity and then flow of information to be maintained till completion of the task.
- b. Effective and efficient disaster relief by the army while at task.
- c. Disaster relief tasks will be controlled and coordinated through Commanders of Static headquarters while field units Commanders may move to disaster site for gaining first-hand knowledge and ensuring effective assistance.
- d. Once situation is under control of the civil administration, army aid should be promptly de-requisitioned.
- e. Adequate communication, both line and radio, will be ensured from Field Force to Command Headquarters.

5.2.3 PROCEDURE TO REQUISITION ARMY, AND AIR FORCE

It will be ensured by the local administration that all local resources including Home Guards, Police and others are fully utilised before assistance is sought from outside. The District Collector will assess the situation and project his requirements to the State Government. District Control Room will ensure that updated information is regularly communicated to the State Control Room, Defence Service establishments and other concerned agencies.

District Collector will apprise the State Government of additional requirements through State Control Room and Relief Commissioner of the State.

Additional assistance required for relief operations will be released to the District Collector from the state resources. If it is felt that the situation is beyond the control of state administration, the Relief commissioner will approach the Chief Secretary to get the aid from the Defence Services. Based on the final assessment, the Chief Secretary will project the requirement as under while approaching the Ministry of Defence, Government of India simultaneously for clearance of the aid:

Aid from Army: Headquarters Sub Area Commander, and Headquarters of Western Command Chandimandir.

Aid from Air Force: Sector Commander Sarsawa, Saharanpur (Contact Person: Wg. Cdr. Vineet Sharma - 07599342240; Fax No.01331-244822), and Western Air Command Headquarters, Delhi.

Army authorities to be contacted for disaster relief are as under:

- **Co-Ordination between Civil and Army:** For deployment of the Army along with civil agencies on disaster relief, co-ordination should be carried out by the district civil authorities and not by the departmental heads of the line departments like Police, Health & Family Welfare, PWD and PHED etc.
- **Overall Responsibility when Navy and Air Force are also being employed:** When Navy and Air Force are also involved in disaster relief along with the Army, the Army will remain over all responsible for the tasks unless specified otherwise.

Principles of Deployment of Armed Forces

- a. **Judicious Use of Armed Forces:** Assistance by Armed Forces should be requisitioned only when it becomes absolutely necessary and when the situation cannot be handled by the civil administration from within its resources. However, this does not imply that the response must be graduated. If the scale of disaster so dictates, all available resources must be requisitioned simultaneously.
- b. **Immediate Response:** When natural and other calamities occur, the speed for rendering aid is of paramount importance. It is clear that, under such circumstances, prior sanction for assistance may not always be forth coming. In such cases, when approached for assistance, the Army should provide the same without delay. No separate Government approval for aid rendered in connection with assistance during natural disaster sand other calamities is necessary.
- c. **Command of Troops:** Army units while operating under these circumstances continue to be under command of their own commanders, and assistance rendered is based on task basis.
- d. **No Menial Tasks:** While assigning tasks to troops, it must be rendered that they are not employed for menial tasks e.g. troops must not be utilised for disposal of dead bodies.

- e. Requisition of Aid on Task Basis: While requisitioning the Army, the assistance should not be asked for in terms of number of columns, engineers and medical teams. Instead, the-civil administration should spell out tasks, and leave it to Army authorities to decide on the force level, equipment and methodologies to tackle the situation.
- f. Regular Liaison and Co-ordination: In order to ensure that optimum benefits derived out of Armed Forces employment, regular liaison and coordination needs to be done at all levels and contingency plans made and disseminated to the lowest level of civil administration and the Army.
- g. Advance Planning and Training: Army formations located in areas prone to disaster must have detailed plans worked out to cater for all possible contingencies. Troops should be well briefed and kept ready to meet any contingency. Use of the Vulnerability Atlas where available must be made.
- h. Integration of all Available Resources: All available resources, equipment, accommodation and medical resources with civil administration, civil firms and NGOs need to be taken into account while evolving disaster relief plans. All the resources should be integrated to achieve optimum results. Assistance from outside agencies can be super imposed on the available resources.
- i. Early De-requisitioning: Soon after the situation in a disaster-affected area has been brought under control of the civil administration, Armed Forces should be de-requisitioned.

The format for the *Requisition for Army Aid by Civil Authorities* is in annexure.....

5.2.4 MECHANISM FOR CHECKING AND CERTIFICATION OF LOGISTICS, EQUIPMENT AND STORES

- District administration should designate officials for checking logistics and equipment required for disasters on a periodical bases of the stakeholder departments and which should be certified by the concerned officer and the report of the same be deposited with the disaster management cell Kullu.
- Departments like PWD, I&PH, Electricity, MC, Forest,etc to also monitor their logistics, equipment's and stores annually and send a certificate of the list to DDMA for updation the same on the website.

(Detail information of Equipment is given in Annexure)

Operational check-up of Warning System

In the wake of natural disasters, a Control Room is set up in the district for day-today monitoring of the rescue and relief operations on a continuing basis, operationalizing the contingency plan and keep close liaison with the State Headquarters, NGOs and other agencies dealing with disaster management and relief. Checking periodically the equipment for EWS, Satellite phone, Hot Line, Telephone lines available with the authorities etc.

Operational check- up for Emergency Operation Centre

Operational check-up of Emergency Operation Centre are carry out month wise and check out all facility and equipment in DEOC

Seasonal Inspection of Facilities and critical infrastructure

The various departments / organizations to carry out inspection of the resources and equipment annually and especially before the onset of the seasons of major incidents like rainfall and snowfall. The lifeline infrastructures need to be monitored and repaired, if required, before the seasons of rainfall and snowfall in district Kullu. Also all departments to maintain register for seasonal inspection of facilities and critical infrastructure for purpose of audit of disasters.

Command and Coordination - Identification of Quick Response Team

The police department and the medical units having Quick Response Teams need to be properly coordinated and commanded under the planning section. More Quick Response Teams need to be formed within District Kullu up till the Panchayat level for better and time saving response system.

NGOs and other stakeholders coordination - identify 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)

5.2.5 COMMUNITY PREPAREDNESS

Community warning system

It is necessary to have robust and effective early warning systems, which can play crucial role in saving lives and limiting the extent of damage to assets and services. Outreach and reliability of warnings are key factors for planning and implementing response measures. Post disaster advisories like information on rescue, relief and other services are important to ensure law, order, and safety of citizens.

In addition, the Disaster Risk Management Program (DRM) being implemented by Himachal Pradesh State Disaster Management Authority (HPSDMA) aims to strengthen the response, preparedness and mitigation measures of the community, local self- governments, the District administration and the State in Himachal Pradesh under the DRM Programme . The preparedness level specific process will be followed at **District Level, Taluka level, City-ULB level and Village Level Process**. District Kullu has taken up the preparedness measures from village level to District level. At the villages village Task forces was formed and trained about First aid and Health, Search and Rescue and Disaster Management. Some volunteers have also been trained in Disaster Management and plans like VDMP preparation and updating.

Type of Action	Flood	Drought	Forest Fire	High Winds/ Hailstorms	Chemical and industrial accidents
Existing EWS	IMD/CWC/Irrigation department/Dam authority/	IMD/IIRS/ISRO	FSI/IMD/ISRO	IMD/ISRO	Industrial Association/industries
	Collector	Collector	Collector	Collector	DCG
	SDM/BDO	SDM/BDO	SDM/BDO	SDM/BDO	LCG
	Tehsildar	Tehsildar	Tehsildar	Tehsildar	Tehsildar
	Villages	Villages	Villages	Villages	Villages
Responsible Agency for warning dissemination	DDMC, Concerned SDO, Superintending Engineering (Flood), IPH, VDMC	DDMC, Concerned SDO, IPH, PWD and Agriculture, VCMC	DDMC, Concerned SDO, Forest Department, VDMC	DDMC, Concerned SDO, IPH, PWD and Agriculture, VCMC	DDMC, Concerned SDO, VDMC
Trained personnel and operators available (Y/N)	Yes	Yes	Yes	Yes	No (Team to be formed and trained)
Area covered	All Prone Areas and villages	All Prone Areas and villages	All Prone Areas and villages	All Prone Areas and villages	All Prone Areas and villages

Community awareness, education

Community based disaster preparedness (CBDP) is a process to capacitate communities to prevent, mitigate and cope with disasters effectively. As part of CBDP there is community participation 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: Awareness activity and responsible department

Task	Activity	Responsibility
Information, education communication	Advertisement, hording, 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	<ul style="list-style-type: none"> Information Dept Education Dept All line dept Dist. Collectors Chief officer Other Dist. Authorities

Sensitization of community about needs of persons with disabilities

Under the GoI –UNDP Project, a Two Day Capacity Building Program for Disabled Persons / People with special needs was held in District Kullu in December 2015 under UNDP India and Handicap International, a specialized agency working in the sector of disability. The organisations who were imparted training on disability attached in the annexure...

Standard Operating Procedure (SOP's) in Annexure

Protocol and arrangements for VIP visits

The visit of the VIP's to the disaster site is likely to adversely affect the rescue operations, particularly if casualties are still trapped. It should be ensured that their visits do not interrupt rescue and lifesaving work and the police, as co-ordinator of the disaster response, should explain the ground situation to them and try to avoid their visit, if possible. However, in case the visit becomes impossible to avoid, it needs to fix up the timings of their visits. The additional need of their security also causes a problem. The police and the local services are trained to handle VIP visits and many of the usual considerations will apply to their visit to a disaster site. It is desirable to restrict media coverage of such visits, in such case the police should liaise with the government press officer to keep their number to minimum. It is also necessary for the police to brief the VVIP/VIP beforehand about the details of casualties, damage and the nature of the disaster. It should, therefore, prepare a brief note for such briefings.

Knowledge Management, networking and sharing

With the need to create a network of knowledge institutions in the field of DM, to share their experiences and knowledge the DDMA would forge ties with knowledge institutions such as NITs, IITs, CBRI, SASE, ICIMOD, GSI, CWC, IMD, Wadia Institute of Himalayan Geology Dehradun, etc., and UN Agencies and other national and international agencies dealing with emergency response will be done to utilise their experience and knowledge for DM in the district.

In acknowledgment of the need for a knowledge sharing platform on DM, and to facilitate interaction and dialogue with related areas of expertise, the DDMA website within the district website would be created. It will connect all Government Departments, statutory agencies, research organisations/ institutions and humanitarian organisations to share collectively and individually their knowledge and technical expertise. ICT would be utilised to disseminate knowledge to the stakeholder so that they can benefit from it.

Uploading of information on resources on India Disaster Resource Network (IDRN)/ State Disaster Resource Network/ District Disaster Resource Network

IDRN, a web based nationwide information system for district level resource, is a platform for managing the inventory of equipment, skilled human resources and critical supplies for emergency response. This database will enable decision makers to assess the level of preparedness for specific vulnerabilities. IDRN is an inventory of all specialist equipment required for emergency/disaster response which will give at the touch of a button the location of specific equipment/specialist resources as well as the controlling authority for that resource so that it can be mobilized for response in the shortest possible time. (Annexure....)

State disaster Resource network and India Disaster Resource Network is a crucial databases for response any disaster. SDRN, a decision support tool, is layered using the existing IT Wide Area Network (WAN) of the State. SDRN uses the map-based Geospatial Information Systems developed by the Himachal Pradesh based organization Aryabhata Institute for Space Applications and Geo-Informatics (AISAG). Currently, the SDRN network is being integrated with the GIS based Decision Support System using Java, MS-Access, Visual Studio 2005 with Database SQL Server 2005. The GIS Visualize does not require any GIS software. The GIS visualize contains multi layered options depicting roads-highways, taluka, district boundaries, rivers, ports, airways, etc. SDRN and IDRN updation are regularly base work and it is updation

Documentation of Lessons Learnt and Best Practices

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

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

Historically, the corporate sector has been supporting disaster relief and rehabilitation activities. However, the involvement of corporate entities in disaster risk reduction activities is not significant. PPP between the Government and private sector would also be encouraged to leverage the strengths of the latter in disaster management. The DDMA would need to network with the corporate entities to strengthen and formalize their role in the DM process for ensuring safety of the communities. The corporate sector also needs to be roped up for on-site and off-site emergency plans for hydro-power projects. The role of corporate sector for awareness generation and local capacity building is also important and efforts would be made to involve corporate sector in this effort.

Community Registries to collate basic contact information for Persons with Disabilities

In District Kullu the Community Registries for Persons with Disabilities has been conducted by District Welfare Office based on pension and other social benefits provided to them as per government norms. There are 2,632 persons with Disability within district Kullu as per 2016.

Media management / information dissemination

Media plays a critical role in the information and knowledge dissemination in all phases of Disaster Management including IRS structure. The versatile potential of both electronic and print media needs to be fully utilised. Effective partnership with the media will be worked out in the field of community awareness, early warning and dissemination, and education regarding various disasters. The use of vernacular media would be harnessed for community education, awareness and preparedness at the local level and the DPRO in consultation with DDMA would take appropriate steps in this direction. Both print and electronic media are regularly briefed at predetermined time intervals about the events that occur and the prevailing situation on ground.

With regards to media training and capacity building the District Administration Kullu and DPRO need to monitor and facilitate trainings of the personals of media for Disaster Management and presentation keeping the sensitivity of the issue during an incident, especially of the Official Spokesperson. The Spokesperson should be the one who will coordinate with the RO and the IC in IRS structure under the Information and Media unit to disseminate the information of the incident.

Medical Preparedness and Mass Casualty Management

In order to avoid confusion, improve efficiency in cost and time medical unit must clearly define disaster response procedures. Orientation and training for disaster response plan and procedures, accompanied by simulated exercises, will keep the department prepared for such eventualities. Some of the require preparedness as per SOP s of Health Department are as follows:

1. Special skills required during disaster situations need to be imparted to the officials and the staff.
2. Surgical packs should be purchased, assembled and sterilized to last four to five days.
3. All valuable instruments, such as surgical tools, ophthalmoscopes, portable sterilizers, CGS, dental equipment, etc., should be stocked in protective coverings
4. Protection of all immovable equipment, such as x-ray machines, by covering them with tarpaulins or polythene.
5. If surgery is to be performed following the disaster, arrangement for emergency supplies of anesthetic gases required.
6. Organise in-house emergency medical teams to ensure adequate staff availability to handle emergency casualties by setting up teams of doctors, nurses and dressers for visiting disaster sites.
7. Plan for emergency accommodations for auxiliary staff from outside the area.
8. Information formats and monitoring checklists should be used for programme monitoring and development and for reporting to Emergency Operations Center.

Community Based Preparedness Efforts

A massive awareness campaign is necessary to motivate the community in preparation of DM. The strategy for awareness may include the following:

1. Meetings with key persons and their training programmes
2. Rallies
3. Street Plays
4. Competitions in Schools/ collages
5. Distribution of IEC material
6. Wall paintings related to slogans and Do's and Dont's for various Hazards
7. Training and workshops for PwD and vulnerable groups of the society
8. Electronic medium using documentaries and print media through slogans etc.
9. Use of T.V and radio for dissemination of information related to Disasters and situations during an incidence.
10. Use of social media like facebook and twitter for awareness and dissemination of pre and post Disaster information.

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 (Annexure) has information regarding the different kind of resources available for multi-hazard, with the various departments along with their location across district Kullu. It can lead to quick and immediate procurement of the required resources from the nearest available site and department for response to any disaster, VDMP's should also be updated with resource inventory to keep a record of available resources with the communities at the village level.

Early Warning Mechanism including last mile connectivity

With regards to Community based preparedness for early warning following needs to developed:

- Formation of Community Emergency Committee and plan
- To develop traditional EWS like metallic bell, drums and 'Dholak' etc. to inform the community
- of likelihood of occurrence of the disaster, warning signal should be disaster specific

- Familiarity of the community with the early warning signs to be developed prior to the disaster
- during the mock drills and meetings
- Early warning signals to be disseminated to community only through responsible person
- Develop radio based EWS
- Use of SMS system to inform DM team members.

Kits - Family Relief Kits / First Aid Kits

While the ‘Home Kit’ is designated to maintain a family for up to three days the ‘GO’ kit would include a scaled down list of items that would fit into backpack and would be ready if the family had to leave home in a hurry. It should be essential and practical in goal.

The following list includes suggested items for disaster kits:

- Family prescription medications (be sure to check expiry date)
- List of family Physician, important medical information and the style and serial number of medical devices such as pacemakers
- An extra pair of glasses or contact lenses and solution
- A battery powered radio, flash light and plenty of extra batteries (e.g. NOAA emergency radio)
- Identification, credit cards, cash, photocopies of important family documents including home insurance
- An extra set of car and home keys
- Special items for infants, the elderly or family members with disabilities
- At least 3 days’ supply of water (one gallon per person per day). Store water in sealed, unbreakable containers. Replace every six months
- 3-5 days’ supply of non-perishable packaged or canned food and a non- electric can opener
- A change of clothing, rain gear, and sturdy shoes, inexpensive plastic ponchos for “go” kits
- Blankets, bedding or sleeping bags
- Tools such as screwdrivers, cutters, scissors, match box, needle thread, pen and paper, garbage bags, a whistle, a compass
- Personal hygiene products

ESF Name	Responsible Officer	Function Lead and Department	Scope/ Emergency Preparedness
Search & Rescue	Commandant Home Guard	Home guard, S.P., Fire Officer Note: Home Guards will lead SAR. Fire Services will be primary in case of Fire Hazard.	<ul style="list-style-type: none"> • Ensure proper functioning of all firefighting equipment, appliances and respiratory equipment. • Ensure important buildings should have sketched maps and marked evacuation routes with glowing sign. • Ensure regular evacuation drills as per evacuation plans in all important buildings, hospitals, etc. • Make a database of existing firefighting services and facilities provided with private agencies.

			<ul style="list-style-type: none"> • Ensure, at disposal, the list of adverse effects of chemicals and antidotes/ methods to deal with emergency involving each chemical • 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. • Identify roads and routes of access and escape to and from MAH and other potential hazardous units.
Law and Order	Superintendent of Police	Police Dept. Home Guards Commandant Para-military (CRPF, SSB), Armed Forces	<ul style="list-style-type: none"> • Ensure proper functioning of all equipment. • Ensure proper mechanism in place for early warning of different hazards through police stations and police posts. • Arrange for public address system and siren. • Prepare for temporary installation of wireless systems between district and subdivisions in case of any damage to existing wireless system with the department. • Ensuring a dedicated disaster management channel in the existing wireless system of the police • Train the communication wing of police in setting up control room at short notice at a required site. • Prepare Contingency Plan for response to bomb blast, riots, terrorist attack and other law and order emergencies. • Prepare deployment plan of home guards and other volunteers for protection of property of affected community. • Prepare for proper arrangement for custody of recovered belongings and property from dead bodies and affected sites. • Police personal and staff of PCR vans should keep basic first aid box and ensure proper functioning of equipment. • Train police personnel and staff of PCR vans in first aid and basic life saving techniques.
Health and Sanitation	Chief Medical Officers,	Health Department	<ul style="list-style-type: none"> • Prepare trained team of paramedics. • Develop dos and don'ts and IEC materials regarding health and hygiene. • Organise awareness camps with help of CHC/ PHCs and Development and Panchayat Department for hygiene promotion and public health issues.

			<ul style="list-style-type: none"> • Ensure availability of trained mobile medical teams at disposal. • Prepare psychosocial care teams with existing staff nurses and medical support staff • Ensure availability of generator sets and buffer stock of fuel at disposal. • Ensure availability of adequate supply of life saving equipment and stock of medicines, portable supplies including portable oxygen cylinders, portable X-ray machine, portable ultrasound machines, triage tags, etc. • Ensure availability of adequate space with suitable facilities for storage of medicines. • Prepare a database of private hospitals and nursing homes with services and facilities available. • 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. • Ensure, at disposal, list of MAH units and hazardous chemicals stored in them. • Ensure, at disposal, the list of antidotes for various hazardous chemicals. This list is prepared by Department of Industrial safety and Health. • Ensure availability of adequate supply of blood units. • Prepare database of blood donors in the district and update the same in DDMRI. • Prepare a database of providers of refrigerated vehicles for transportation of vaccines, blood, blood products, etc. • Train drivers and attendants of ambulance and mobile medical units in first aid and basic life saving techniques. • Prepare a decontamination ward in view of any possible chemical or industrial hazard. • Prepare for prompt establishment of temporary hospital, mobile surgical unit, etc at short notice, near the affected area. • Ensure proper and safe mechanism for medical waste disposal. • Prepare for proper disease surveillance system. • Make proper arrangement and mechanism for mass casualty management.
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Public Works	Nodal officer/ Executive Engineer,	Executive Engineer, Rural Works Dept. Executive Officer, Municipal Council	<ul style="list-style-type: none"> • Ensure availability and functioning of all equipment like cranes, JCB, etc. with proper resource mapping of these equipment • Prepare a data base of availability of heavy equipment like cranes, JCB with private agencies also. • Ensure, at disposal, the list of MAH units and other vulnerable buildings. • Prepare for prompt clearance of debris. • Prepare the demolishing squad for prompt demolition of unsafe buildings. • Prepare for prompt clearing and repairing of damaged roads, culverts, bridges and flyovers. • Prepare for construction of new temporary roads at short notice for diverting traffic from the affected area. • Prepare for construction of temporary facilities like that of medical post, temporary shelters, etc. at short notice with basic amenities and proper sanitation • Prepare or prompt establishment of helipad near the affected site for VVIP visits • Prepare for restoration of government buildings damaged during disaster.
Food & Supplies	district food & civil supplies	Food & Supplies Department	<ul style="list-style-type: none"> • Prepare a database of godowns and cold storage facilities in the district. • Prepare a database of catering services providers. • Prepare for safety of stored food grains in godowns against inundation and water logging, fire and other possible hazards. • Prepare for out-movement of food grains to a pre-decided safer location, if required. • Ensure availability of adequate food grains storage in godowns in view of the scarcity or emergency period. • Prepare a database of kerosene depots, petrol pumps, gas agencies, etc. and update the same in DDMRI. • Ensure availability of adequate stock of gas cylinders, kerosene, etc. • Prepare database of private retailers and wholesalers of edible food items. • Prepare a database of providers of refrigerated vehicles for transportation of perishable food items.

			<ul style="list-style-type: none"> • Prepare for large scale movement of food grains, their transportation, expeditious unloading, proper storage and prompt distribution through fair price shops, if required. • 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.
Agriculture	Dy. Directed	Agriculture Department	<ul style="list-style-type: none"> • Prepare Agriculture Contingency Plan. • 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. • Identify vulnerable areas prone to pest infestation, drought, flood and other hazards. • 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. • Provide training to farmers in alternate cropping techniques, mixed cropping and other agricultural practices which minimize crop losses during future disasters. • Ensure surveillance for pest infestation and crop diseases. • Ensure availability of stock for immediate replacement of broken/non-functioning gadgets / equipment. • Ensure availability of adequate stock of seeds and other agro inputs particularly for areas vulnerable to hazards. • 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. • Prepare for establishment of public information booths, with appropriate and modern means of communication, to assist farmers in providing information regarding

			<p>insurance, compensation, repair of agro equipment and restoring of agricultural activities at the earliest.</p> <ul style="list-style-type: none"> • Identify sources of feed and fodder.
Livestock Shelter and Fodder	Dy Director Animal Husbandry	Dept. of Animal Husbandry	<ul style="list-style-type: none"> • Ensure isolation / separation of sick and healthy animals and prepare for arrangements for keeping, feeding and watering of animals suffering from contagious diseases. • Sensitize farmers / owners for above problems. • Ensure separate transportation of animals suffering from contagious diseases. • Ensure proper disinfection of space, vehicle and manpower involved in transportation of sick/ infected and dead animal from contagious diseases. • Ensure fully functional mobile veterinary unit at disposal. • Prepare a database of veterinary hospitals/ clinics and agencies working for animal care. • Ensure availability of stocks of mineral and feed supplements, lifesaving drugs, electrolytes, vaccines, etc. • Ensure sensitization of farmers about protection of their feed and fodder prior to the onset of monsoon. • Ensure filling feed banks before the scarcity period. • Prepare for the feed of the poultry birds for drought situation. • Locate feed and fodder banks in view of submergence situation during the monsoon. • Identify source for procurement of fodder. • Identify safe locations for fodder depot and cattle camps within the district. • Ensure assured source of water or canals for drinking and growing fodder along with the above locations. • Prepare for necessary arrangements of tatties, gunny bags and tarpaulin sheets to cover the sheds during heat and cold waves. • Ensure availability of sprinklers/ foggers in shed/camp during heat waves period. •
Drinking Water and Supplies	Nodal officer /	Irrigation and Public Health Department	<ul style="list-style-type: none"> • Ensure availability and well-functioning of all equipment and vehicles.

	Executive Engineer,		<ul style="list-style-type: none"> • Prepare for distribution of water purifying tablets, bleaching powder and chlorination of public water resources, if required. • 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. • Prepare a database of suppliers and distributors of packaged drinking water. • Prepare for prompt repair of pipelines supplying potable water. • Prepare for prompt repair of sewerage systems and water works. • Make standby arrangements of generators for running the water pumps. • 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. • Ensure availability of water supply/ filling points for fire tenders, water cannons, hospitals and other necessary lifesaving infrastructure. • Prepare for prompt provision of temporary toilets in the affected area and relief camps. • 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.
Power	Nodal officer / Executive Engineer,	Electricity Department	<ul style="list-style-type: none"> • Ensure transmission map at disposal. • Prepare a database of critical and lifesaving infrastructure in the district and prepare for providing uninterrupted power supply to them. • Prepare for providing continuous power supply to the affected area. • Prepare to provide electrical connections and system at short notice in affected areas for purpose of pumping flood water and illumination of the area. • Prepare for prompt replacement of affected power supply system. • Ensure availability of adequate stock of important equipment like transformers, poles, conductors, cables, insulators, etc. for prompt action whenever required. • Ensure trained construction and maintenance staff at disposal.

			<ul style="list-style-type: none"> • Backup support till the supply is restored to normalcy
Transport	DTO / Regional Manager	Transport / Himachal Roadways	<ul style="list-style-type: none"> • Ensure proper functioning of filling station, vehicles and equipment including fire extinguishers, first aid kits, etc. • Prepare for prompt deployment of vehicles at short notice for various purposes like mass evacuation, transportation of response teams, relief items, victims, etc. • Prepare mechanical team for prompt repair of equipment and vehicles. • Train drivers and conductors in first aid and basic life saving techniques. • Identify the vehicle for rescue operations. • Be well familiar with routes of potential hazardous installations and follow incident traffic plan.
Removal and Clearances	Nodal officer / Executive Engineer,	Executive Engineer, Rural Works Dept. / Executive Officer, Municipal Council	<ul style="list-style-type: none"> • Keeping equipment like gas cutters, cranes etc. in order. • Enlisting truck owners. • Enlisting workers in municipalities and grooming them to work as a team • To keep regular interaction with them to get response at the time of emergencies
Communication	communication in charge general manager	police wireless BSNL ,Other Wireless networks	<ul style="list-style-type: none"> • Procure recovery plans from private communication service providers for their recovery time objectives. • Prepare for alternate communication System
Forest	DFO	Forest Department	<ul style="list-style-type: none"> • Ensure proper functioning of all equipment and vehicles. • Prepare a database of Ara machine holders, carpenters. • Prepare team for catching wild animals to prevent infiltration in habituated areas, relief camps, etc. • Prepare for supply of wood for cremation.
Information Dissemination and Helpline	DPRO,	Information and Public Relations Dept.	<ul style="list-style-type: none"> • Prepare for proper public address system ensuring rumour control. • Prepare for media management. • Ensure database of dos and don'ts of all possible hazards in the district.

			<ul style="list-style-type: none"> • Ensure distribution of IEC material to community for awareness generation about the same. • 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.
Revenue and Disaster Management Department	ADM (In-charge of Disaster Management)	Revenue and Disaster Management Department	<ul style="list-style-type: none"> • Ensure regular monitoring of rain gauge and regular updation of database for distribution and variation in rainfall. • Ensure proper mechanism in place for early warning of different hazards to village level through tehsildars, Patwaris, DDPO. • Ensure proper functioning of district Flood Control Room during monsoon period and otherwise, if required. • Identify villages vulnerable to flood and drought. • Prepare a database of critical and lifesaving infrastructure in the district • Prepare a database of safe locations for evacuation. • Identify possible safe sites for temporary shelters, relief camps and staging area. • Ensure availability of fully functional boats, life jackets and oars in view of flood condition of the district. • Prepare a database of voluntary organizations and service they offer. Ensure the authenticity of the same. • Identify competent persons/ experts from various required fields for carrying out damage and need assessment post disaster. • Prepare proper mechanism for disbursement of compensation to victims or families of deceased. • Prepare a database of safe locations for relief distribution site for mass care and housing. • Identify site(s) for temporary burial.

6. CAPACITY BUILDING AND TRAINING MEASURES

6.1 APPROACH

As per the Disaster Management Act (2005), capacity-building includes:

- i. Identification of existing resources and resources to be acquired or created;
- ii. Acquiring or creating resources identified under sub-clause (i);
- iii. Organisation and training of personnel and coordination of such trainings for effective management of disasters.

The primary purpose of capacity-building in disaster management is to reduce risk and thus make communities safer. This can be done by increasing resilience and enhancing coping capacities. Effective capacity-building at the district level requires the active participation of all those who are tasked with it. It must, therefore, include maintaining a comprehensive and up-to-date District Disaster Management Resource Inventory, awareness generation, education, Research and Development (R&D) and systematic and systematized training. The Deputy Commissioner should ensure the following capacity-building activities of the entire district, and the various Heads of Departments should ensure capacity-building of their respective departments. Furthermore, the Nodal Officers should, in coordination with the HODs, procure relevant equipment for disaster management activities.

6.2 CAPACITY BUILDING 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. When undertaking disaster management planning assessments, it is important that the indigenous traditions, methods and materials being used for disaster management locally are considered and incorporated appropriately.

Table: Training and Capacity Building Plan

#	Nature of training	Demand	Target Departments	Potential training institutes	Frequency	Timeline and approach
1	Training of Doctors on Mass casualty Management	Batch of 30 to 40 Participants	CMO, MS ZH Dharamshala & MS RGPMC, Tanda	HIPA, Medical, IGMC, RGPMC	Quarterly	Medium Term Upto Year 2020
3	Training of Asha Workers Mass casualty Management		Health and Family Welfare	HIPA, Medical, IGMC, RGPMC		Medium Term Upto Year 2020
4	Training of Medical students in Mass casualty Management		Medical Colleges, MS RGPMC, Tanda,	HIPA, Medical, IGMC, RGPMC		Medium Term Upto Year 2020

5	Training of ASHA, ANM for medical first response / psychosocial care	Batch of 20 to 25 Participants	Health and Family Welfare	HIPA, SDMA, Red Cross	Quarterly	Short Term 2018
6	Teacher Sensitization	Batch of 20 to 30 Participants	Education Departments	DIET, SCERT	Bimonthly	Long Term upto year 2030
7	Training to teacher of Special Needs Children (Old Age, Orphan,) for evacuation and rescue	Batch of 25 to 30 Participants	Education Departments	NDRF / Home guards / Education Departments	Quarterly	Medium Term Upto Year 2020
8	Training to Engineers, Architects, Builders and Masons	Batch of 20 to 25 Participants	PWD, Architecture, Masons	NIIT Hamirpur, IIT Mandi, HIPA,	Half Yearly	Medium Term Year 2020
9	Training to Police for Crowd Management and emergency Response	Batch of 30 to 40 Participants	Himachal Police Service, Kangra	Police Academy, NDRF, Home guards, HIPA	Quarterly	Long Term upto year 2030
10	Advanced search & Rescue training for Home Guards and Fire fighter	Batch of 25 to 30 Participants	Home Guards, Fire Services, Local Volunteers	NDRF, Atal Bihari Mountaineering and sports allied institute, Manali Water Sports Academy	Quarterly	Medium Term Year 2020
11	Emergency Operation Center staff training	8+2 Participants	DDMA	Home Guards NDRF HIPA	Quarterly	Short Term 2018
12	Training on Applicable Wireless Communication (Walkie Talkie / Wireless / HF / UHF / VHF / Ham Radio)	Batch of 10 Participants	Police and Home Guards	HIPA, SDMA, Police	Quarterly	Short Term 2018
13	NCC / NSS / NYKS / Volunteers etc	Batch of 25 to 30 Participants	Education Department,	GVK 108 / Home Guards	Bimonthly	Long Term upto year 2030
14	Training to NGO / CBO / civil society / SHG / Clubs etc.	Batch of 25 to 30 Participants	DDMA	HIPA, Home Guards, GVK EMRI.	Quarterly	Medium Term Year 2020

6.3 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, Self Help Groups etc. to involve them into community planning. The hazards of the district indicates 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 should address - *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.*

Not all organizations can focus on disability issues to the same extent; every organization has to choose its level of involvement and accordingly obtains the appropriate education/training/ skilled personnel. Options for different organizations are outlined below:

- Mainstreaming disability within the organization ensure that disability is included as in all activities / projects.
- Sensitizing staff, volunteers, and managers towards disability through exposure is the first step in understanding difficulties encountered by PWDs (e.g. contact disabled peoples' organizations, visit organizations already involved in disability)
- Training and sensitization campaign for community level disaster management committees and community volutes on disability issues.

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 Person With Disabilities:
Preparedness	Medical treatment / therapy / medications
Immediate Response / Recovery	Assistive / Mobility aids
Mitigation / Rehabilitation	Infrastructure / relief accessibility
Development	Community attitudes towards PWDs

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 Defense 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.

6.4 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.

Dissemination of Other IEC Materials MODE	Agency Responsible
Wall Painting, Street Play, Village Task Force / Volunteers Training	CDMO – Through field agencies BDOs - Through CBOs / Village volunteers NGOs – through Block level NGO network
Slide in Cinema Hall	OIC Judicial, Deputy commissioner
Hand Bills, Paper advertisement	DPRO & BDO
Media & Press release	Information Officer
Posters, Cartoons, Charts, Photographs, Folk song	CBOs / NGOs /schools
Training Camps, Group discussion and special lectures by Community Leaders	DPRO, BDO, DCR

6.5 INVENTORY OF SKILLED / TRAINED PROFESSIONALS

Inventory of all skilled and trained professionals such as engineers, architects and masons, medical Professionals, rescue specialists etc. Details to be maintained as per Annexure.

6.6 SIMULATION EXERCISES

As per Section 30 (2) (x) of DM Act 2005, the 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.

As per Section 30 (2) (xi) of DM Act 2005, the 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.

Awareness Generation, prevention and mitigation measures, training and Capacity Development, Conduction of Mock Drills are vital activities to be covered under Pre Disaster Phase of the Disaster Management Cycle. Mock-drills help in evaluating response and improving coordination within various government departments, non-government agencies and communities. They help in identifying the extent to which the SOPs and Plans are effective and also aid in revising these if required. These drills enhance the ability to respond faster, better and in an organized manner during the response and recovery phase.

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 Deptt.	Post-Disaster	Responsible Deptt.
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 Inform line departments / agencies to mobilise resources / teams for quick deployment)	DEOC will communicate the warning to all potential affected areas with support of DPRO, DRDA, Police, Home Guard, Fire and Local Administration.	Activate Line Departments / Agencies to Quick restoration of basic utilities and critical infrastructure e.g. Roads, Life Line Buildings i.e. Hospital, Blood Bank, Schools and Banks, Admin Building, Electricity, Water / Sanitation,	DDMA will coordinate with all line departments for quick restoration
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 Department 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 Deptt., NKYS, NCC, NSS and Paramilitary Forces i.e. IRB Battalion in Una	Provide temporary shelter and basic necessitate facilities to people	Revenue Department 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 Deptt.
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 Deptt 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

Early Warning Phase:

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

Immediate Post Disaster Phase:

1. **Search & Rescue:** Home Guard / Civil Defence / Fire will carry out the search and rescue with coordination with Police and NDRF and the existed Paramilitary Forces within or nearby the district.
2. **Quick Damage Assessments:** DDMA will constitute a multi-sectoral damage and need assessment team which will carry out the process of damage and need assessment and report to the DDMA for further action. The multi-sectoral teams will be constituted and its members having local knowledge and will come 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 department 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 Department

#	Identified Need	Action	Nature of resources	Responsibility
1.	Temporary Shelter	DDMA / Revenue Department 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 Deptt / DDMA / Health
2.	Food and Civil Supplies	Food and Civil Supplies Deptt. will Provide food, Fuel, and Drugs	Essential food items and fuel	Food and Civil Supplies Deptt.
3.	Medical	Medical Deptt will arrange the lifesaving medicines, blood, Doctors, Paramedical staff	Medicines, doctors, ANM, nurses, Asha Workers	Health and Family Welfare Deptt./ 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 Deptt./ Red Cross will take care the reported Physco 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

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 department 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:

- a. Assimilation and dissemination of information.
- b. Liaise between Disaster site and State Head Quarter.
- c. Monitoring, coordinate and implement the DDMP.
- d. Coordinate actions and response of different departments and agencies.
- e. Coordinate relief and rehabilitations operations
- f. Hold press briefings.

7.6.2 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.

7.6.3 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 department 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.

7.6.4 INFORMATION MANAGEMENT AND MEDIA MANAGEMENT

Media has to play a major role 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 rumors, 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 establish 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 briefed 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.

7.6.5 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.

7.6.6 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 affected 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 in monitoring and feedback at grassroots level by agreeable community participation.

7.6.7 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 department 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. Department of animal husbandry in association with the local administration shall be responsible for the deposal of the animal carcass in case of mass destruction.

8. RECONSTRUCTION, REHABILITATION AND RECOVERY

Reconstruction, Rehabilitation and Recovery process demands co-ordinated 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
Public assets: Roads and bridges Culverts Public buildings like hospitals and schools	<ul style="list-style-type: none"> • Multi hazard resistant construction to be followed while reconstruction of public assets. For example • Hazard resistant buildings to be made with the help of certified engineers. • Use of non-shrinking mortar • Evacuation plans to be made for the public buildings • Non-structural mitigation measures to be taken into consideration • Risk sensitive development will be ensured in each of the reconstruction Programme. For example: 	<ul style="list-style-type: none"> • Detailed damages and needs assessment: Multi sectoral/ multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area. • Develop a detailed recovery plan through multi departmental participation. Specific recovery plan through consultative process of different line department are to be made. • Arrange for funds from Central government, state government, multi-lateral agencies (World Bank or ADB) • Multi sectoral Project Management Unit to be made. • The process of monitoring and manipulation is to be done by SDMA.

	<ul style="list-style-type: none"> • landslide and flood zone mapping to be implemented • Detailed geological survey of the land to be used for reconstruction. • Recommendations from PDNA report to be considered. 	
<p>Utilities Water supply electricity communication</p>	<ul style="list-style-type: none"> • Multi hazard resistant construction to be followed. For example: • Water pipelines, communication equipment used can be of such material which can resist impact of certain hazards • Risk sensitive development will be ensured • Electric and communication junctions to be installed after considering landslide and flood zonation. • Recommendations from PDNA report to be considered. 	<ul style="list-style-type: none"> • Detailed damages and needs assessment: Multi sectoral/multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the utilities of the entire area. • Develop a detailed recovery plan through multi departmental participation including specific line departments and other stake holders. • Arrange for funds from Central government, state government, multi-lateral (World Bank or ADB)” • Multi sectoral Project Management Unit to be made. • Monitoring and evaluation: The process of monitoring and manipulation is to be done by SDMA.
Housing	<ul style="list-style-type: none"> • Multi hazard resistant construction to be followed. • Risk sensitive development will be ensured • Owner driven approach will be preferred. For example: • National and State schemes like Pradhan Mantri Awas Yojna (rural / urban) and Mukya Mantri Awas Yojna can be included in construction of the individual houses. • Non-structural mitigation measures to be taken into consideration • Use of non-shrinking mortar • Further loans can be sourced through banks and other financial institutions. 	<ul style="list-style-type: none"> • Detailed damages and needs assessment: Multi sectoral/ multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area. • Develop a detailed recovery plan through multi departmental participation: Specific recovery plan through consultative process of different line department are to be made. • Arrange for funds from Central government, state government and multi-lateral (World Bank or ADB)” • Multi sectoral Project Management Unit to be made. • Monitoring and evaluation: The process of monitoring and manipulation is to be done by SDMA.
<p>Economic restoration Agriculture Horticulture</p>	<ul style="list-style-type: none"> • Multi sectoral assessment • Assess direct and indirect losses. 	<ul style="list-style-type: none"> • Detailed damages and needs assessment: Multi sectoral/ multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area.

<p>Industry Allied sectors Tourism etc.</p>	<ul style="list-style-type: none"> • Develop sectoral strategies the sectors that affected the most poor. • the sectors which are most critical for district's economy • Risk sensitive development will be ensured • Owner driven approach will be preferred • Provision of single window insurance claim system • Promote insurance facility for all sectors through government and private institutions 	<ul style="list-style-type: none"> • Develop a detailed recovery plan through multi departmental participation: Specific recovery plan through consultative process of different line department are to be made. • Arrange for funds from Central government, state government, multi-lateral (World Bank or ADB)” • Multi sectoral Project Management Unit to be made. • Monitoring and evaluation: The process of monitoring and manipulation is to be done by SDMA.
<p>Livelihood restoration</p>	<ul style="list-style-type: none"> • Nature, number and types of livelihoods affected • Interim and long term strategies • Focus on livelihood diversification • Issues related to most poor, women, and marginalized sections • Livelihoods of people without assets (labor) • Role of NGOs 	<ul style="list-style-type: none"> • Detailed damages and needs assessment: Multi sectoral/ multi-disciplinary teams are to be made which can do a detailed damage and need assessment of the entire area. • Develop a detailed recovery plan through multi departmental participation: Specific recovery plan through consultative process of different line department are to be made. • Arrange for funds from Central government, state government, multi-lateral (World Bank or ADB)” • Multi sectoral Project Management Unit to be made. • Monitoring and evaluation: The process of monitoring and manipulation is to be done by SDMA.
<p>Psychosocial restoration</p>	<ul style="list-style-type: none"> • Provisions like trainings from institute like NIMHANS, Mental hospitals and other specialized institutes • Spiritual leaders can help the community to cope up from the trauma 	<ul style="list-style-type: none"> • Arrange for funds from Central government, state government, multi-lateral (World Bank or ADB)

9. FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP

9.1 EXISTING SOURCES OF FUNDS FOR DISASTER MANAGEMENT IN THE DISTRICT

- **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.
- **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 (hereinafter 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.
- **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. PROCEDURE AND METHODOLOGY FOR MONITORING, EVALUATION, UPDATION AND MAINTENANCE OF DDMP

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 Kullu 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), Kullu will update the DDMP annually and circulate approved copies to all the stakeholder in Kullu District. DDMA, Kullu 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, Kullu 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, Kullu.

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.

10.6.1 THE RESPONSIBLE PARTIES FOR ORGANIZING DISTRICT DRILLS

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

Level 1: District Level

Conducting of District level Mock drills will be the responsibility of the Deputy Commissioner Kullu, along with Additional Deputy Commissioner Kullu, in association with **Key Participants Involved in Conducting a Mock drill** as the incident of disaster may be :-

- DDMA Kullu comprising of DC; Kullu; ADC Kullu; SP Kullu; SE(HPPWD, I&PH, Electricity); CMO Kullu, President Zila Parishad.
- Revenue Department
- SDM (C), Tehsildar, Block Officer
- Municipal Council/ Naggar 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 Kullu.

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.

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. First Mock drill will be held before the beginning of the tourist season in the Month of March or April as the case may. Second drill will be held before the onset of the International Dusheera at Kullu for checking the efficiency of the departments for any unforeseen incidence from taking place.

All the above mentioned levels will conduct mock drills at least **once in every six months** to evaluate their disaster management plans.

10.7 MONITORING & GAP EVALUATION:

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 Kullu. 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

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

All industrial units and power projects within Kullu 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 comprises of several key management and coordination structures. The principal structures that make up the Arrangements are:

- a. Disaster management committees are operational at tehsil, Sub-Division and district level. The above committees are responsible for planning, organising, coordinating and implementing all measures required to mitigate, prevent, prepare, respond and recover from disasters the affected area under their jurisdiction.
- b. Emergency Operation Centers at tehsil, Sub-Division and district level supports disaster management groups while coordinating information, resources, and services necessary for disaster operations.
- c. 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 require

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 gazetted officer pertaining to that department. The committees will organise 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.

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.

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.

11.1 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.

11.1.1 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

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

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.

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.

11.1.2 COORDINATION MECHANISM WITH COMMUNITY

The community will be coordinated through the village disaster management committees. The mentioned committees generally comprises of:

Pardhan of the Gram Panchayats / Nagar Panchyat.	PRI's and Other Locally established Departments
	Youth Leader or Members of CBO/ SHG
	Prominent citizens, Ex-army, Para-Military or Police personnel
	Representatives of NGOs

11.2 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;

- f. To manage disaster operations in the area under policies and procedures decided by the district Authority;
- g. To provide reports and make recommendations to the relevant District Authority about matters relating to disaster operations;
- h. To identify, and coordinate the use of resources that may be used for disaster operations in the area;
- i. 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.
- j. To ensure that information about a disaster in the area is promptly given to the relevant District Authority, and
- k. 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

11.2.1 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.

11.2.2 COORDINATION WITH OTHER DISTRICTS AND STATE

The DDMA will call annual meeting with neighbouring 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 Standing Operating procedures (SOPs) for ESFs explain about the operations and responsibilities of the leading and supporting agencies that are to be involved in the ESF system.

12.1 EVACUATION

Background: The ESF on evacuation is primarily responsible for establishing evacuation plans, identification of fastest evacuation routes, establishing alternate routes and coordinating evacuation logistics during field operations.

Situation assumptions:

1. Most of the buildings would be damaged and would not remain serviceable.
2. Many structures would be damaged and there would be an urgent need to evacuate.

Nodal agency: Department of Revenue team leader: Additional Deputy Commissioner.

Supporting Agencies: Police, Home Guards, 1st IRB Bangarh, Nehru Yuva Kendra

SOPs for nodal agency:

1. Team leader (TL) of Evacuation ESF would activate the ESF on receiving the warning of the disaster from District. Control Room.
2. TL would inform Nodal Officers (NOs) of supporting agencies about the event and ESF activation.
3. TL will direct the QRT to be deployed at the affected site.
4. TL will gather information on availability of pre-defined evacuation routes.
5. Where the predefined evacuation routes are not available, the nodal officer would coordinate through District Control Room with other identifying alternate routes.

SOPS for quick response team on evacuation:

1. The QRT members will reach the nodal office as soon as they get instructions to do so from the TL
2. After receiving the order from the nodal officer, The QRT will rush to the site
3. On reaching the site, the QRT members will take stock of the situation from the Incident Management Team at the site and their counterparts.
4. The Quick Response Team with the help of local task forces will start evacuating people towards the safe shelters or open areas.
5. The QRT members should concentrate more on evacuation in areas that have been worst affected by the disasters.
6. QRT will Report all activities to the TL / control rooms.

12.2 SEARCH AND RESCUE

Background: Search and Rescue operations are one of the primary activities taken up in a post disaster situation. The promptness in these operations can make a remarkable difference in the quantum of losses to the life and property.

Situation assumptions:

1. Local Community task forces will initiate search and rescue at residential level.
2. Coordination of the Spontaneous volunteers will be required
3. Access to affected areas will be limited.
4. Some sites may be accessible only through air routes.

Nodal agency: District Police.

Support Agency: Civil Defence, NCC, Army and Health Representatives, District Fire Services

SOPs for nodal agency

1. IC (Incident Commander / DC / ADC) will call the TL of Primary Agency and get the ESF activated.
2. TL of primary agency will call nodal officers of supporting agencies.
3. Quick Assessment of the S & R operations through Aerial Surveys if needed.
4. Assessment of the specific skill sets and the other equipment required.

SOPs for quick response team on search & rescue:

1. Assessment of damage (Locations, number of structures damages, extent of damage)
2. The QRTs will be deployed at the affected site.
3. Enlisting the types of equipment required for conducting the S& R.
4. QRTs will report the situation and the progress in response activities to the respective control rooms.

12.3 TRANSPORT AND TRAFFIC CONTROL

Background: The ESF on transport should ensure smooth transportation links at State and Distt. level. In the disaster context, quick and safe movement of materials and humans are a priority. It should coordinate the use of transportation resources to support the needs of emergency support forces requiring transport capacity to perform their emergency response, recovery and assistance missions.

Situation Assumptions:

1. The State Civil Transportation infrastructure will sustain damage, limiting access to the disaster area.
2. Access will only improve if routes are cleared and repaired.
3. The movement of relief supplies will create congestion in the transportation/Traffic services.

Nodal Agency: Department of Transport / RTO.

Support Agencies: HRTC, PWD, MC, Private Transporters.

SOPs for Nodal Agency:

1. TL of transportation will activate the ESF on receiving the intimation of the disaster from the District Control Room.
2. TL would inform nodal officers (NOs) of support agencies about the event and ESF activation.
3. TL establishes contact with Control Room for FIR.
4. TL requests for reports from local transportation ESF contact person.
5. TL communicates situation to support agencies and requests for detailed information on the status of transportation infrastructures in the affected area(s).

SOPs for Quick Response Team on Transport:

1. The QRT members will reach to the nodal office as soon they will get instructions to do so from the TL.
2. As quick response teams will receive instructions from the nodal officer. They would reach to the site immediately.
3. QRTs would report the situation and the progress on action taken by the team to the respective control rooms.
4. QRT will send a requirement schedule for the different modes of transportations e.g. Trucks, boats, helicopters to be put on stand-by.
5. QRTs will ensure timely re-establishment of the critical transportation links.
6. Compile and itemized assessment of damage, from reports made by various electrical receiving centres and Sub-Centres.
7. Reporting about all activities to all the head office.

12.4 LAW & ORDER

Background: The ESF on Law and Order protects the property and valuable commodities. It is mainly responsible to control crowd and avoid riots/conflicts in such situations.

Situation assumptions:

1. There would be panic and people will gather at a place.
2. The crowds may go out of control.
3. Riots/Conflicts may also take place.
4. Human trafficking cases may increase.

Nodal agency: District Police.

Support agency: Home guards, Civil Defence, Army/Paramilitary

SOPs for nodal agency:

1. District Magistrate will call the TL of Primary Agency and get the ESF activated.
2. TL of Primary agency will call nodal officers of supporting agencies.
3. TL would activate the District Quick Response Team.
4. The QRTs will be deployed at the affected site.

5. Cordoning off area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
6. Any additional requirement at site to be taken care of.

SOPs for quick response team on law and order:

1. Quick assessment of law and order situation in affected areas.
2. Support and coordinate with Local Administration.
3. Prepare updates on the law and order situation every 4-6 hours and brief the concerned authorities.
4. Controlling situations like riots, loots and human trafficking and cordon off sensitive areas.
5. QRTs will guard property and valuables in affected areas,
6. Control and monitor traffic movement.
7. QRTs will provide diversion of traffic on alternate routes as and when it is necessary.
8. The QRTs will also provide information about traffic flow along various corridors, especially heavy traffic or congested roads
9. QRTs will communicate to police control rooms, details on the field activities including deployment and reinforcement of staff and resources and communicate nature of additional requirements.

12.5 DEAD BODY DISPOSAL

Nodal agency: Municipal Corporation and PRIs

Support agency: Revenue Department, PWD

SOPs for Dead Body Disposal:

1. Activate the DM Plan
2. Nodal Officer in the incident Response System will activate all other stake-holders associated with Disposal of the Dead.
3. Establish an information Centre at the site of Disaster / District HQ.
4. Inform all other Stake-holders, both in government and Non-Governmental sector, including the elected, Panchayati Raj functionaries and the community.
5. Activate search and Rescue teams of Fire & Emergency Services, Police, SDRF, Civil Defense, NDRF and NGOs for the retrieval of the injured and the dead.
6. The injured will get the priority for First Aid and evacuation to hospital.
7. Prepare a record of details of the bodies retrieved in the Dead Body Inventory Record Register, allocated individual Identification Number, photographed, and then Dead Body Identification Form initiated.
8. Associate relatives and community members for the identification of the bodies.
9. Hand over the identified bodies to the relatives or the community, and if necessary after cross-matching Dead Body Identification Form with that of the Missing Person Form, for the last rites as per local, cultural and religious denomination.
10. Unidentified or unclaimed dead bodies / body parts shall be transported to the mortuaries for proper preservation and storage at the designated sites.
11. Consult relatives, legal and forensic experts for positive identification.
12. Final disposal of unidentified bodies / body parts shall be done by District authorities after applying all the possible means of identification as per the legal provisions.

13. The bodies of foreign nationals shall be properly preserved either by embalming or chemical methods and then placed in body bags or in coffins with proper labeling.
14. Handing over and transportation of such bodies shall take place through the Ministry of External Affairs, in consultation with the Consular offices of the concerned countries and other actors such as International Committee of the Red Cross, if necessary and possible.

12.6 CARCASS REMOVAL

Nodal agency: Animal Husbandry

Support agency: Municipal Corporation

SOPs for Carcass removal:

1. Activate the DM Plan.
2. Nodal Officer in the Incident Response System will activate all other stakeholders associated with the disposal of Animal Carcasses.
3. Establish an Information Centre at the site of Disaster / District HQ.
4. Inform all other Stake-holders, both in government and Non-Governmental sector, including the elected, Panchayati Raj functionaries and the community.
5. Activate Animal Carcass Retrieval teams for the recovery and retrieval of the injured livestock and the animal carcasses.
6. Injured livestock will get the priority for First Aid and evacuation to hospital.
7. Prepare a record of details of the animal carcasses retrieved.
8. Associate owners of the livestock, or their relatives and community members for the identification of the animal carcasses.
9. Hand over the identified animal carcasses to the owners for disposal at the selected site.
10. All unidentified animal carcasses will be photographed preferably before transportation for disposal.
11. Unidentified or unclaimed animal carcasses shall be transported to the designated site for disposal by District authorities as per the Disaster Plan.

Guidelines for Burial:

1. Burial shall be performed in the most remote area possible.
2. Burial areas shall be located a minimum of 300 feet down gradient from wells, springs and other water sources.
3. 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.
4. The bottom of the pit or trench should be minimum 4 to 6 feet above the water table.
5. 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.
6. 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.
7. 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.
8. Burial areas shall be inspected regularly and any subsidence or cavities filled.

Guidelines for Composting:

1. 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.
2. 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.
3. Lay animal in the centre 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.
4. 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.
5. 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.
6. Let it sit for 4 to 6 months, then check to see if carcass is fully degraded.
7. Reuse the composted material for carcass compost pile, or remove large bones and land apply.

12.7 PROVIDING RELIEF (FOOD, CLOTHES AND DRINKING WATER)

Background: In the event of a disaster there would be a need of disbursing relief materials due to massive destruction of life and property taken place. The ESF on Relief should ensure coordination of activities involving with the emergency provisions of emergency mass feeding and bulk distribution of relief supplies i.e. basic life line amenities e.g. clothes, water etc. to the disaster victims.

Situation assumptions:

1. Probability of shortage of critical resources
2. Immediate assistance to the community at the time of resource shortage particularly, when the affected area is large.

Nodal agency: Department of food and civil supplies.

Support agency: IPH, Department of Revenue, Red Cross, NGOs.

SOPs for Nodal Agency:

1. TL will activate the ESF on receiving the information of the disaster from District EOC,
2. TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
3. TL will coordinate with all state and district level suppliers as identified under DMP.
4. TL will coordinate with other ESFs related to transportation, debris and road clearance to ensure quality supply chain management of relief materials.
5. Ensuring composite relief with availability of complimentary relief material.

SOP for Quick Response Team (QRT) on relief:

1. QRT will report to site of the relief camps.

2. QRTs will be responsible to management and distribute relief items to the affected victims.
3. QRTs will be responsible for reporting the progress on action taken by the team to the Control Room.
4. QRTs will provide information to their TL about the need of additional resources.
5. Assist local authorities to set up important telecom and other service related facilities.
6. Initiate and direct for procurement of food, clothes and drinking water available from different inventories and ensuring food supplies to the affected population.
7. Preparing take-home food and drinking water packets for the families.
8. Ensuring distribution of relief material to all the people including vulnerable groups of the target area such as women with infants, pregnant women, children, aged, handicapped and marginalized social group.

12.8 COMMUNICATION

Background: The Communication ESF is primarily responsible for restoration of communication facilities. The ESF on Communication should ensure the smooth flow of information that can cater to the outreach in a time-sensitive manner at State/ District level in response efforts.

Situation assumptions:

1. There would be a congestion in the network because of increased calls to control rooms due to panic created within the community.
2. The initial reports on damage may not give a clear picture of the extent of damage to communication network.
3. The affected site may cut off from the State Control Rooms and the officials on site may find difficulty in communicating to the District/ State control rooms.

Nodal agency: Baharat Sanchar Nigan Ltd. (BSNL) team leader: DE, telecom, Una (H.P.)

Supporting Agencies: NIC, Police, HPSEB and Private Telecom/ Mobile Operators

SOP for nodal agency:

1. Team leader (TL) of Communication ESF will activate the ESF on receiving the intimation of occurrence of the Disaster from the District Control Room.
2. TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
3. TL request for reports from local ESF contact persons to understand the current situation and action taken;

SOPS for quick reaction team on communication:

1. The QRT (Quick Response Team) members will reach the nodal office as soon as they get instructions from the TL.
2. Once the QRTs receive any intimation from the Nodal Officer to reach the site, they would rush to the site.
3. At the emergency site, QRT members will take stock of the situation and also find out about their counter parts.
4. QRTs would assess the ground situation and would send sectoral report to the District ESF agency.

12.9 HELP LINES, WARNING DISSEMINATION

Background: The ESF on help lines and warning dissemination should process and circulate information about the welfare of citizens in the affected areas and to manage the tremendous flow of information. The help lines will be responsible for providing, directing and coordinating logistical operations.

Situation Assumptions:

1. There may be a flood of information and confusion about the injured population and further spreading of rumours.
2. The communication with affected areas may be partially impaired.

Nodal Agency: Department of Revenue

Support Agencies: BSNL, Broadcasting Deptt. DPRO, NIC, / NGO Reps.

SOPs for Nodal Agencies:

1. District Magistrate will call the TL of Primary agency and get the ESF activated.
2. TL of primary agency will call nodal officers of supporting agencies.
3. TL would activate the District Quick Response Team and deployed at the affected site.
4. TL will report the situation and the progress in response activities to the Respective control rooms
5. During the news updates, the donation requirements for the disaster affected area will be telecasted over the news channels.
6. Assisting the Control Room in providing updated information to State as well as at the District Level
7. Setting up of police numbers for emergency information assistance.

SOP for Quick Response Team on Help Lines & Warning Dissemination:

1. The QRT member will reach to the nodal officer as soon as they get instructions.
2. QRT would reach the site immediately after receiving instructions from the nodal officer.
3. On the site, QRT members will take stock of the situation from the site.
4. The QRTs will coordinate, collect, process, report and display essential elements of Information and facilitate support for planning efforts in response operations.

12.10 RELIEF CAMPS SET-UPS

Background: Relief camp management is dynamic in nature and strives for promoting a holistic approach for physical, psychological, cultural, social and emotional well-being of camp inhabitants by establishing and maintaining an inclusive overview of many aspects and stakeholders involved in the life of a camp.

Situation Assumptions:

1. Assemblage of affected people and their well-being within the camp.
2. There might be conflicts/riots, space issues.
3. Non-availability of life line resources.

Nodal Agency: Department of Revenue

Support Agencies: PWD, IPH, Food and Civil Services Deptt.

Setting up of a Relief Camp:

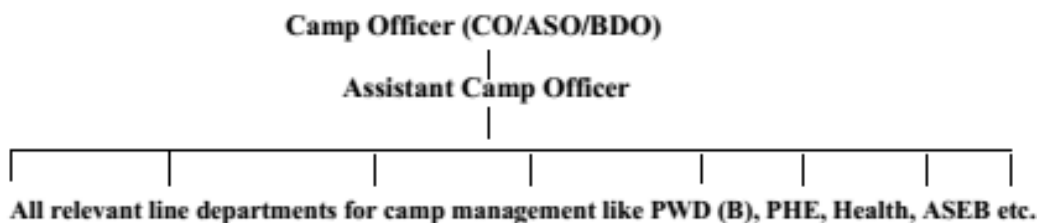
- On receipt of report from Revenue officials, the DC/SDO(C) will order to set up a relief camp at pre-decided location as per District/ Sub-divisional disaster management plan
- In case new location is to be selected for the camp due to unavoidable circumstances, following points should be considered for arriving at a decision.
 - Camp should preferably be set up in an existing 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.

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.

General Administration of the Camp

- One responsible officer preferably CO/ASO should be designated as Camp Officer by the DC/SDO(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

12.10.1 BASIC FACILITIES

Lighting Arrangement and Generator Set

- A technical person, preferably from electricity or PWD (E) department 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

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 PHE Deptt. Should be detailed for maintaining water supply in the camp.
- Separate bathing units must be constructed for male & female

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, harpic and others item should be maintained

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 to ensure that they are not expired before distribution.
- Separate queue may be allowed for women infirm & elderly people to collect relief aid.

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

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

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 gynecologists 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.

Vermin control

- Insect and rodents are the unavoidable 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

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.

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 Anganwadi 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 camp inhabitants. SSA may provide free textbook, stationary, Siksha-Mitra etc. Reputed
- NGOs may also be allowed to run temporary schools in the camp.

12.11 SOPS FOR VIP MANAGEMENT

Visits by VIP's can lift the morale of those affected by the disaster as well as those who are involved with the response. It has been seen that the Ministers, members of Parliament and State legislatures, local councillors, leaders of various political parties, etc. visit the scene of a disaster and the injured to mark

public concern and see the disaster response. It may be possible that the scale of a disaster may in addition prompt visits of the Prime Minister, Governor, Chief Minister, etc. Sometimes their visit to the disaster site is likely to adversely affect the rescue operations, particularly if casualties are still trapped. It should be ensured that their visits do not interrupt rescue and lifesaving work and the police, as co-ordinators of the disaster response, should explain the ground situation to them and try to avoid their visit, if possible. However, in case the visit becomes inevitable, it should fix up the timings of visits. The additional need for their security would also cause a problem. The police and the local services are, however, experienced at handling VIP visits and many of the usual considerations will apply to their visit to a disaster site.

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. It may also be necessary for the police to brief the VVIP / VIP beforehand about the details of casualties, damage and the nature of the disaster. It should, therefore, a brief note for such briefings be prepared.

