



DISTRICT DISASTER MANAGEMENT PLAN

Una

HIMACHAL PRADESH

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1. INTRODUCTION

1.1 RATIONALE

There is an increasing trend in the occurrence of natural disasters, and climate change only serves to aggravate the devastating impacts of these disasters. According to the *Center for Research on the Epidemiology of Disasters* (CRED), 1.35 million people killed by natural hazards over the past 20 years, more than half died in earthquakes, with the remainder due to weather- and climate related hazards across the world. The overwhelming majority of these deaths occurred in low- and middle-income countries.

India is vulnerable, in varying degrees, to a large number of disasters. More than 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12%) of its land is prone to floods and river erosion; 68% of its cultivable area is vulnerable to droughts; and, its hilly areas are at risk from landslides and avalanches. Moreover, Disaster risks in India are further compounded by increasing vulnerabilities related to changing demographics and socio-economic conditions, unplanned urbanization, development within high-risk zones, environmental degradation, climate change, geological hazards, epidemics and pandemics. Clearly, all these contribute to a situation where disasters seriously threaten India's economy, its population and sustainable development.

Given the District Una (H.P.) geographical location, population size, natural resources including forest areas, and complexity of hazard risks there can be no single approach directed towards protecting the people and elements at risk (physical, social and economic resources). A wide range of government institutions operate to govern the state and manage the assets. The district is among state second largest densely populated district and most of the settlements located the low lying with vast agriculture areas which is surrounding by Shivaliks hills and has built up infrastructure system (lifeline buildings / highways / road / rail / airport / heliport / power / communication) that serves as a critical link within the State and as a vital link to northern western part of India.

Considering the geographical location, access issues, population exposure, scale and diversity of resources, there exists an urgent need for implementing and expanding district wide comprehensive disaster management strategies encompassing Preparedness, Prevention & Mitigation, Emergency Response & Rehabilitation. Moreover, the district administration is the focal point for implementation of all government plans and activities and its major concern is to ensure public safety, the protection of the citizens and all their rights. It is considered as a place of hope and offers sense of security in pre, during and the aftermath of a disaster situation. Therefore, planning at the district level is crucial for efficient management of all disasters. It calls for the district disaster management plan which act as one of the most important steps in disaster management at district level.

1.2 LEGAL MANDATE

Section 31 of the Disaster management (DM) Act 2005 mandates that there shall be a District Disaster Management Plan (NDMP) for the each district. The proposed DDMP complies with the National Policy on Disaster Management (NPDM) of 2009 and conforms to the provisions of the DM Act making it mandatory for the Government of India and various central ministries to have adequate DM plans. While the district plan will pertain to the disaster management for the whole of the district, the hazard specific nodal ministries and departments notified by the Government of India and State Government will prepare detailed DM plans specific to the disaster assigned. As per Section 32 of the DM Act, every office of the Government of India and of the State Government at the district level and the local authorities shall prepare

comprehensive DM plans detailing how each of them will contribute to the national efforts in the domains of disaster prevention, preparedness, response, and recovery.

1.3 SCOPE

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

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

1.4 AIMS AND OBJECTIVES OF THE DDMP

The overall aim of DM plan of District Una is to ensure that all components of Disaster Management are addressed to facilitate planning, preparedness, operational, coordination and community participation. The plan is in alignment of the framework overseeing the following sections: operational, administrative, financial, legal aspects and process. Accordingly, the broad objectives of the DDMP is to enable disaster resilient development in Una district and continuity of services essential for life and dignity of citizens during disaster and non-disaster situations with following sub-objectives,

- To analyse the geography, social, political and economic context of Una district from disaster management lens.
- To identify areas vulnerable to different natural and manmade hazards and know underlying risks and develop action plans for different stakeholders for risk reduction.
- To introduce innovation and good practice in institutional mechanism at district level to make it an integrated and coordinated plan at all levels and further develop action plans for different stakeholders (Communities, Govt. Line departments and other stakeholder groups) for disaster risk reduction, emergency response and recovery actions.
- To suggest mitigation measures to be adopted by different stakeholders for the risks identified in the district and further to promote the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures to prevent and reduce hazard exposure and vulnerabilities to disaster.
- Capacity development at all levels to effectively respond to multiple hazards and for community-based disaster management.
- Facilitate the mainstreaming of disaster management concerns into the developmental planning and processes.

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

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).

As per provisions in Chapter-IV of the DM Act, each State Government shall establish a District Disaster Management Authority for every district in the State with such name as may be specified in that notification. The DDMA will be headed by the District Collector, Deputy Commissioner, or District Magistrate as the case may be, with the elected representative of the local authority as the Co-Chairperson. The DDMA will act as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will, inter alia, prepare the DM plan for the District and monitor the implementation of the all relevant national, state, and district policies and plans. The DDMA will also ensure that the guidelines for prevention, mitigation, preparedness, and response measures laid down by the NDMA and the SDMA are followed by all the district-level offices of the various departments of the State Government.

1.6 EVOLUTION OF DDMP IN BRIEF

- Preparation of the District Disaster Management Plan is the responsibility of the District Disaster Management Authority of the district, Una (H.P.). The first draft plan is to be discussed in the DDMA. The main steps involved in the development of DDMP, Una (H.P.) are:
- **Base Documents:** Updated DDMP, Una (H.P.) 2016 is started by taking the reference from pervious available DDMP and use as Base documents.
- **Consultation Meetings:** Two meetings has been organised by the UNDP, Delhi related to updation and revision of DDMP and all comments and suggestions provided by national consultant. In addition to this, there were five main line departments at district level of Una i.e. Medical Department, IPH, Police/Home-Guard, Swan Flood Irrigation Dept. and Forest Dept. has been also consulted during the preparation of DDMP, Una.
- **Data collection and Analysis:** Data has been collected from all main line departments in terms of IDRN and other facilities and equipments they have with them. Moreover, the daily loss and damage report also carefully analysed to exactly know the prominent hazards in the district Una.
- **Reference of national and international literature:** Approved disaster plan at district, state and national level has been taken as references with some more details from international peer-reviewed literature.
- Preparation of action plans for all line departments and discussion with experts.
- Wide circulation for public and departmental comments.

1.7 STAKEHOLDERS AND THEIR RESPONSIBILITIES

DDMA may consult following stakeholders for development of the District Disaster Management Plan and their responsibilities in detail are given in following chapters. Table 1.1 briefly mentioned the name of all line departments within the district Una and their role and responsibilities in context to disaster risk reduction in district Una (H.P.).

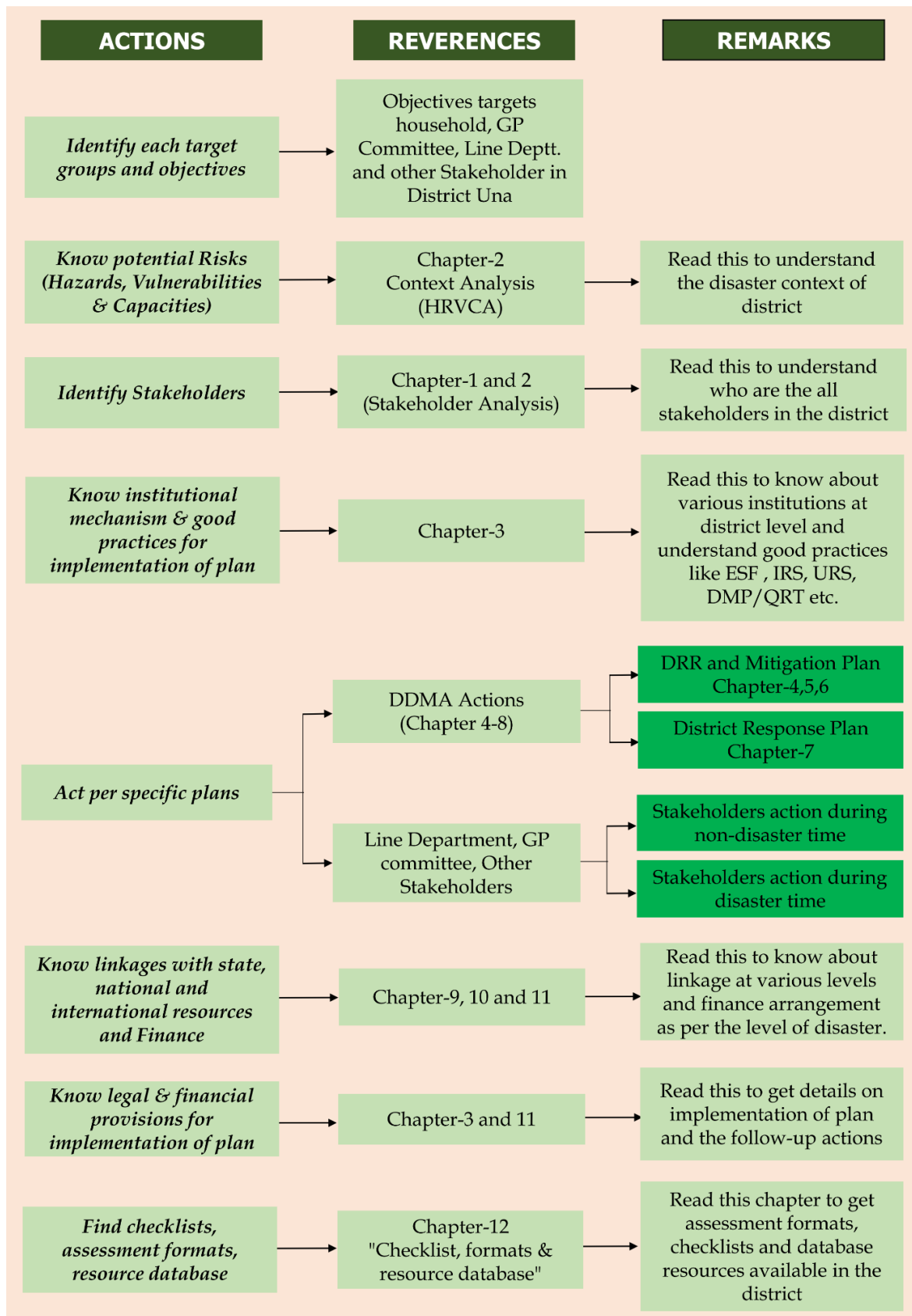
Table 1.1: Different critical stakeholders in the district Una (H.P.) and their responsibilities

#	Stakeholders	Responsibilities
1.	DDMA, Una (Overall Coordination)	<ul style="list-style-type: none"> • Overall coordination of Disaster risk management practices in the district • 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.
2.	Police (Law and Order)	<ul style="list-style-type: none"> • Having sound communication and security plan in place to coordinate law and order issues; • Training to security personnel in handling disaster situations and issues related to them.
3.	Dept. of Public Relations	<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. • Respect the socio-cultural and emotional state of the disaster victims while collecting information for dissemination.
4.	Civil Defence / Home Guards	<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.
5.	BSNL	<ul style="list-style-type: none"> • Coordination of national actions to assure the provision of telecommunication support to the state and district; • Coordinate the requirement of temporary telecommunication in the affected areas.
6.	Dept. of Health and Family Welfare	<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 Dept. of health; • To prepare, keep and check ready Mobile Hospitals, stocks of equipment and drugs; • To network with private health service providers; • To provide resources for mass level water decontamination
7.	Dept. for Public Work Department	<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.

8.	Dept. of Transport	<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;
9.	Dept. of Food and Public Distribution	<ul style="list-style-type: none"> • Identify requirement of food and clothing for affected population; • Control the quality and quantity of food, clothing and 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.
10.	Electricity Board (HPSEB)	<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
11.	Dept. of Irrigation & Public Health (IPH)	<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 and drainage are kept separate from drinking water facilities.
12.	Dept. of Forest	<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.
13.	Municipal Corporation, Una	<ul style="list-style-type: none"> • Land Usage • Solid/ liquid waste treatment and management
14.	Dept. of Animal Husbandry	<ul style="list-style-type: none"> • Treatment of animals (Domestic and Wild); • Provision of vaccination; • Disposal of dead animals;
15.	Dept. of Urban and Rural Development (DRDA)	<ul style="list-style-type: none"> • Make arrangement for proposal disposal of waste in their respective areas; • Arrange adequate material and manpower to maintain cleanliness and hygiene.

1.8 HOW TO USE DDMP UNA: BRIEF FRAMEWORK

Figure 1.1: Conceptual Flowchart shows how to use the DDMP, Una (H.P.)



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

The DM Act 2005 enjoins central and state governments to make provisions for the implementation of the disaster management plans. In this respect, the sections of the DM Act 2005 applicable for national, state, and district DM plans are 11, 23, and 31. The Chapters V and VI of the DM Act spell out the responsibilities of the central, state, and local governments with respect to disaster management. The DM Act states that every Ministry or Dept. of the Government of India shall make provisions, in its annual budget, for funds for the purposes of carrying out the activities and programmes set out in its disaster management plan. The Act mandates that every Ministry and Dept. of the Government of India and every state must prepare a DMP in accordance with the SDMP / NDMP. Annually, respective DM authorities must review and update their DM plans. Central ministries and state governments will integrate DRR into their development policy, planning and programming at all levels. They must adopt a holistic approach and build multi-stakeholder partnerships at all levels, as appropriate, for the implementation of the DM plans.

1.10 DDMP REVIEW AND UPDATION

- **Plan review and updating:** Periodicity Plan is reviewed every six months and updated every year before onset of monsoon, i.e., in the month of May. There are following activities has been involved during DDMP review and updation,
- **Training:** After developing a plan, it must be disseminated and managers must be required to train their personnel so that they have the knowledge, skills and abilities needed to perform the tasks identified in the plan. Personnel should also be trained on the organization-specific procedures necessary to support those plan tasks.
- **Exercise the Plan:** Evaluating the effectiveness of plan involves a combination of training events, exercises and real-world incidents to determine whether the goals, objectives, decisions, actions and timing outlined in the plan led to a successful response. The purpose of an exercise is to promote preparedness by testing polices plans and training personnel.
- **Revise and Maintain:** Planning teams should establish a process for reviewing and revising the plan. Reviews should be a recurring activity. Review on an annual basis is considered minimum. It should be mandatory to consider reviewing and updating the plan after the following events:
 - A major incident.
 - A change in operational resources (e.g., policy, personnel, organizational structures, Management processes, facilities, equipment).
 - A formal update of planning guidance or standards.
 - Each activation and major exercises.
 - A change in the district's demographics or hazard or threat profile.
 - The enactment of new or amended laws or ordinances.

2. HAZARD, VULNERABILITY, RISK AND CAPACITY ASSESSMENT

(HVRCA)

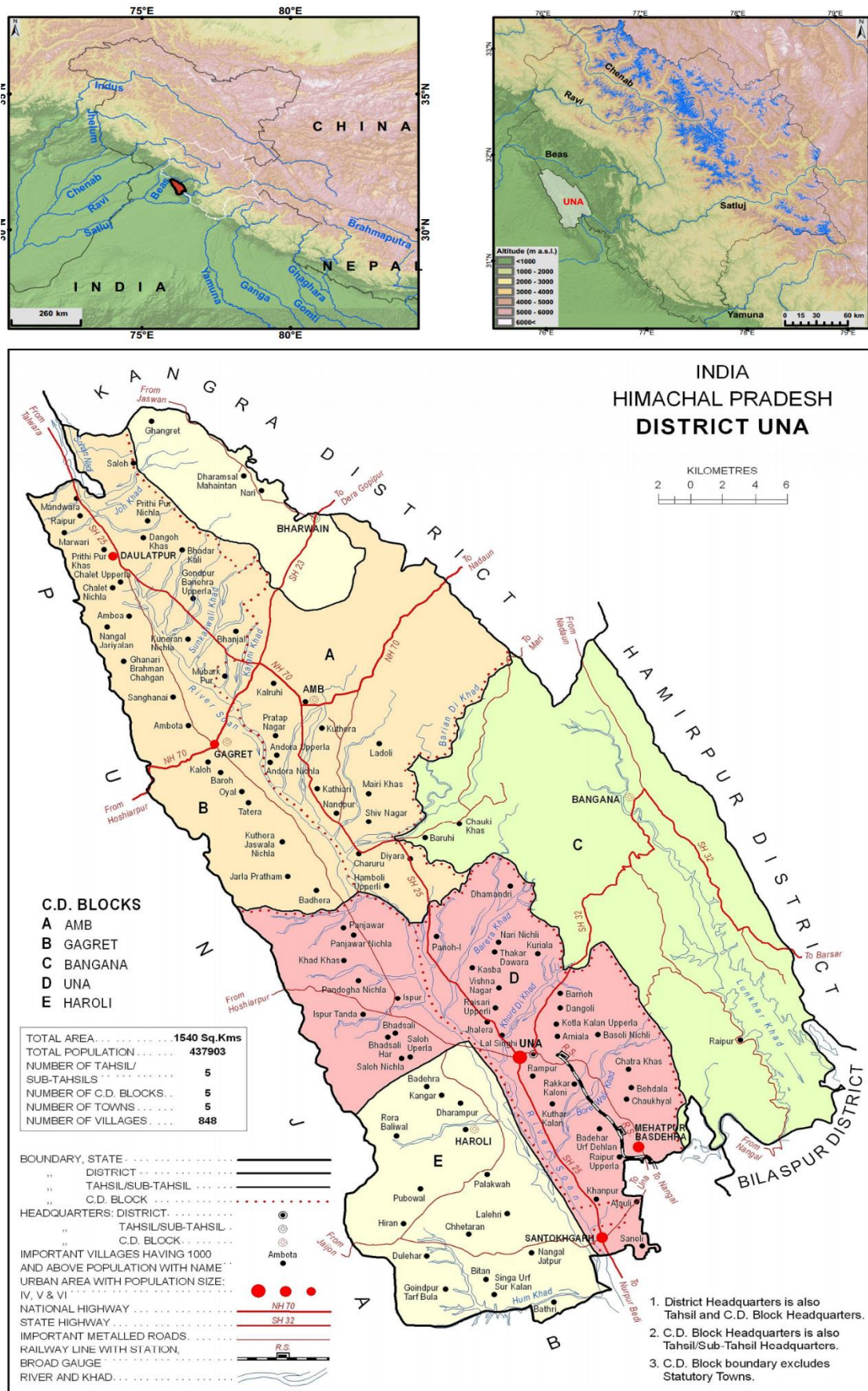
2.1 ADMINISTRATIVE / POLITICAL DIVISIONS

Una is a small foot hill district located on the south-western border of the State (*Figure 2.1*). It came into existence on 01-09-1972. District Una till 1966 was a Tehsil of Hoshiarpur District of erstwhile Punjab State. Consequent upon reorganization of Punjab State, hilly areas including part of Una tehsil was transferred to Himachal Pradesh State on 01-01-1966 and become a part of Kangra District of Himachal Pradesh. The Himachal Pradesh Government reorganized the then Kangra District into three districts namely Una, Hamirpur and Kangra. The district comprises of four tehsils and one sub-tehsil consisting of 848 villages as per 2011 Census. The district has two sub-divisions of Amb and Una. Amb sub-division is comprised of Bharwain sub-tehsil, Amb Tehsil and Nagar Panchayats of Daulatpur and Gagret. Una sub-division is constituted by tehsils of Bangana, Una, and Haroli including Una Municipal Council, Nagar Panchayats of Santokhgarh and Mehatpur Basdehra. For the development purpose, the district is divided into five community development blocks. These are Amb, Garget, Una, Dhundla and Haroli with headquarter of the same name. The district has not undergone any jurisdictional changes at district level during 2001-2011. However, Haroli sub-tehsil was up graded to the Rank of tehsil after 2001 census.

Table 2.1: General Characteristics of District Una (H.P.)

Characteristics	Number	Remarks in DRR
Geographical Area	1549 Km ²	Most of the areas are plain with having low lying Characteristics
Forest Area	185 Km ²	Mostly in Banagana and Amb Sub-Division
Cultivated Area	430 Km ²	27 % to total area
Barren & Uncultivable Lands	226.7 Km ²	14 % to total area
Land put to Non-Agri. Uses	294 Km ²	19 % to total area
Permanent Pastures & Other Grass Lands	129.4 Km ²	8.3 % to total area
Land under Misc. Tree, Crops and Groves	55.4 Km ²	3.5 % to total area
Irrigated Area	78.4 Km ²	5 % to total area
Altitude	350 mt to 1200 mt	Average 450 m asl
Major Rivers	Swan River (Seasonal River)	Around 102 seasonal tributaries with no proper drainage system
No. of Sub-Divisions	4 (Una, Amb, Haroli & Bangana)	All are vulnerable to multi-hazard
Panchayats	235	-
Villages	866	-

Figure 2.1: Location and administrative map of District Una (H.P.)



2.2 CHARACTERISTICS OF DISTRICT UNA

Table 2.2: Brief Description of District Una Physical, Economic and Social Characteristics

#	Features	Characteristics
Physical / Environmental		
1.	Geography and Physiographic Divisions	<ul style="list-style-type: none"> • Una district nestles between Siwalik ranges and forms part of the lesser Himalayas. It has a diverse landscape made of hills, valleys with piedmont zone, terraces. • The elevations of the land surface in the district, vary from 340 m in south-eastern part to 1041 m above mean sea level (amsl) in eastern part of the district. • Most of the area in the district is covered with alluvial soil and only about 25% of the area i.e. hilly area in the district is covered with non-calcic brown soil. Soils are rich in nutrients and thus are fertile.
2.	Hydrogeology	<ul style="list-style-type: none"> • In the low lying areas underlain by Siwalik rocks, dug wells and hand pumps are the main groundwater structures that range in depth from 3.00 to 25.00 m bgl, where in depth to water level ranges from 2.50 to 15.00 meter below ground level (m bgl). In upland/plateau areas, the water level is generally deep. In Beet area water level is more than 60 m below land surface has been observed.
3.	Climate settings	<ul style="list-style-type: none"> • Climate of the district is tropical to temperate in nature, as the terrain varies from plains to high hills. Temperature varies from minimum of 4°C in winter to maximum of 46°C in summer. The area receives rainfall during monsoon period, extending from June to September and also non-monsoon period (winter). The annual average rainfall in the area is about 1040 mm, with about 55 average rainy days. • The approach of the monsoon is usually marked by strong winds, overcast skies accompanied by occasional thunder showers, hailstorms and at times by cyclones between April and May.
4.	Major River Systems	<ul style="list-style-type: none"> • Una District has major seasonal river called as Soan or Swan River which usually called as "Sorrow of the District due to its vulnerability to flash floods. • Number of local streams (about 102 khads) joins the river within the district. • During monsoon Soan river gets flooded due to shallow bank heights and large area on both sides get affected.
5.	Ground Water Resources	<ul style="list-style-type: none"> • In Una valley area, the ground water occurs in porous unconsolidated / alluvial formation (valley fills) comprising sand, silt, gravel, cobbles / pebbles etc., and forms prolific aquifer. • In Una valley depth to water level shows wide variation (Refer Figure). In major parts of Una valley, depth to water level ranged between 2.00 to 10.00 m bgl. • Moreover, rainfall is the major source of recharge to the groundwater body, apart from the influent seepage from the rivers, irrigated fields and inflow from upland areas, whereas discharge from ground water mainly takes place from wells and tube wells; effluent seepages of ground water in the form of springs and base flow in streams etc.

		<ul style="list-style-type: none"> • Chemical quality data of ground water from shallow as well as deep aquifers in the district, indicates that ground water is generally alkaline in nature and suitable both for domestic and irrigation use
6.	Roads & means of transportation	<ul style="list-style-type: none"> • The District Headquarter up to Amb is also connected by broad gauge railway line. The extension of railway line up to Daulatpur Chowk is in progress. The proposed railway line, once complete would terminate at Talwara. The total length of metalled and un-metalled roads is 1,515 kms including National and State Highways. All the Tehsils and Block Headquarters are well connected by roads and State Highway 32 passes through the District
Economy		
7.	Agriculture	<p>Agriculture is the major occupation of the people of the district, with more than 70% population engaged in the agriculture and allied sector. Major crops like maize, wheat, rice, sugarcane and pulses are grown, apart from vegetables in the district. Total cultivable area is 443 sq km and net area sown area is 388 sq km. Net area irrigated in the district is about 85 sq km. The uncultivated area comprising of 1, 11,741 hectares is wasteland and is mostly covered by the river swan and other small streams (Khads). Ground water is the major source of water in the district for irrigation and domestic use. There are large number of water supply wells, tube wells, springs, kulhs (water channels) and lift irrigation schemes, implemented exclusively for irrigation purposes. The irrigated command area under the Bhabaur Sahib lift irrigation scheme, phase I and Phase II are 923 hectares and 2640 hectares respectively. There are 868 revenue estates in District Una. The soil of District is sandy and loam in texture with scattered loamy patches.</p>
8.	Industry	<p>Una district is well developed in the industrial sector due to close proximity to Punjab. Mehatpur, Gagret, Tahlival & Amb are main industrial centres of Una. The Industrial scenario of the District is mainly confined within the growth of employment oriented Small Scale Sector, which comprises of manufacturing and processing industries. The contribution of manufacturing sector to Gross State Domestic Product is estimated at around 8% during 2010-11. Una district touches its boundaries with plains of Punjab which by and large influences its economy. Among the total workers of Una district majority of its working force is engaged in the category of other workers. There is a hub of small scale Katha factories. Kamal Katha Udyog, Master Katha Udyog are prominent manufacturer of Katha. In addition to that there is cylinder factory named Him Cylinders and Steel Plant by the name of Him alloys. The International Cars and Motor has also one their plant in the City.</p>

2.3 SCALE AND DIVERSITY OF ASSETS NEEDING HRVCA AND DISASTER MANAGEMENT ARRANGEMENTS

Given the District geographical location, population size, natural resources including forest areas, and complexity of hazard risks there can be no single approach directed towards protecting the people and elements at risk (physical, social and economic resources). A wide range of government institutions operate to govern the state and manage the assets. The district is among state second largest densely populated district and most of the settlements located the low lying with vast agriculture areas which is surrounding by Shivaliks hills and has built up infrastructure system (lifeline buildings / highways / road / rail / airport / heliport / power / communication) that serves as a critical link within the State and as a vital link to northern

western part of India. Considering the geographical location, access issues, population exposure, scale and diversity of resources, there exists an urgent need for implementing and expanding district wide comprehensive disaster management strategies encompassing Preparedness, Prevention & Mitigation, Emergency Response & Rehabilitation. Initiatives on these fronts if taken by all departments of the district will result in minimizing the loss of life, reduce disruption time of basic services vital for society to function and protect assets/infrastructure which are vital for the district as well as state economy.

2.3.1 CHRONOLOGY PAST DISASTERS AND ITS INFERENCES

The District Una of Himachal Pradesh is prone to natural hazards such as floods, Forest Fire, drought, landslides, earthquake and seasonal hail storms and high speed wind. The population is vulnerable to mainly perennial floods, forest fire, drought and environmental degradations. Disasters cause sudden disruption to the normal life of a society and cause enormous damage to property to a great extent. Chronological reviews of the past major disasters in below table 2.2 (Annexure-II, Table 1 to 2) clearly show the possibilities of similar events in future Table 2.3: History and Matrix of Past disasters in the district Una (H.P.)

#	Hazard	Characteristics	Hot Spots at District and Tehsil level	Past Occurrences and brief damage details
1.	Floods	Most of the areas of this district are flood prone owing to the presence of seasonal rivers and khads and mostly area comes under low lying or plain	Una: Jhalera, Malahat, Ghaluwal, Santoshgarh, Khad, Pandoga, Basal, Raisary, Dhamandri, Jalgran, Nangran Haroli: Saloh, Palkhwah, Badehra Amb: Shivbari, Thathal, Takarla, Nandpur, Seri, Saloh, Marwari, Daulatpur Chowk, Kuthera Jaswalan, Loharli, Bhanjal, Kalruhi Khad	25 Flood Events from 1971-2009 which caused death of 82 people Highest amount of Rainfall expressed (as % of the normal with year): 237 cm in 1988 (196%) Flooded Year: 1955, 1988
2.	Drought	Drought is the major problem of the district due to its hot-humid climate	Whole over the district with main prone areas in Haroli and Banagna Tehsil	22 Major Drought Event during the 1901-2010 Annual Drought Years (Moderate and Severe*): 1902, 1905, 1915, 1918*, 1920, 1921, 1928, 1929, 1931, 1934, 1935, 1939, 1962, 1965, 1969, 1972, 1973, 1974, 1975*, 1981*, 1982, 1983
3.	Hailstorms	The hailstorm is not a regular disaster in Una District but it mostly occurs during the season of Rabi crops.	Whole over the district	During the Intense rainfall during the May to June

4.	Land Slides	Una having hills in its eastern side and Landslides generally occur during the rainy season due to lithology and geological characteristics of Shivaliks	Hills Area in Banagna and Amb Tehsils, In route to Pir-Nigha	There are around 311 Km ² area affected by the landslides in the District and mainly along the main road and in hills of Shivaliks
5.	Road Accidents	Una District like any other place in the state is vulnerable to road accidents but the vulnerability of the district Una increases manifold due to heavy as well as undisciplined traffic of pilgrims visiting religious shrines within the district	<i>Critical Routes:</i> Amb to Mata Chintpurni, Una to Pir Nigah, Una to Baba Bharbhag Singh at Mairi, Una to Bharmauti temple, Una to Jogi Panga, Una to Baba Rudranand shrine	During 2011-2012, there are 272 accident cases has been reported with in the district Una which caused 77 death and 480 people injuries
6.	Forest Fire	There are number of forest fire incidents has been identified in the forest areas of district Una	Forest Areas of Bangana and Amb Tehsil are more prone to the forest fires (For more refer Figure)	During the last 2000-2015, there were 101 forest fire incidents reported in the district Una (H.P.) with no casualties has been reported.
7.	Fire Accidents	Mostly in summers and few cases also reported in winter also	Slums / Jhungi Jhopris within the district Una setup by the migrant labour are most vulnerable to the fire hazards	Approximately 15 fire accident has been reported within the district Una since 2008 with total momentary loss of more than 20 Crores.
8.	Chemical / Industrial	District Una and its nearby district Ropar has number of industries	Chemical hazard: Ajouli, Mehatpur, Nagar Panchayat, Mehatpur Basdehra, Poona / Binewal, Sanoli, Malookpur and Majara bordering Nangal NFL/PACL Raipur, Charatgarh, Mehatpur, Basdehra, Chhatarpur Thada and Santoshgarh near LPG installation	There were approximately five major incidents of chemical / industrial disaster has been reported since 2010 with loss of 2 crore and no casualties.
9.	Stampede	District Una has number of Shrines and Ashrams and usually crowded with people	Mata Chintpurni, Pir Nigah, Baba Bharbhag, Bharmauti temple, Baba Rudranand shrine	There is few incidents has been reported with no casualties and serious injuries

2.3.2 AUTHORITY / AGENCY THAT CARRIED OUT HVCRA

Tools, Techniques and Methodology used for HVCRA

DDMA, Una carried out HRVCA using the latest techniques of geographical information system (GIS) with supplements of satellite images, published data, field validation and daily loss report. In addition to few maps and data also acquired from the TRAU HRVCA software. TARU provides the data on district level however for the micro analysis DDMA, Una carried out their on HRVCA based on GIS and other available tools at national and international level. More details related to TARU methodology can be accessible from HPSDMA website.

2.3.3 HAZARD ANALYSIS: LIST OF HAZARDS WITH PROBABILITY

(Frequency and Magnitude)

The district has been traditionally vulnerable to different disasters on account of its unique geo-climatic condition. Floods, Drought, Earthquake (Zone-IV), Fire Incidents, Heat Waves, Cold Waves and High Wind have been recurrent phenomena. The land pattern of the area is declining in nature making most of the land to below lying. During monsoon, rivers get filled with water and starts flowing through sides causing floods. To be noted, most of the rivers are seasonal and depend on monsoon water. Most of the rivers are embanked but various factors including negligence and lack of repair and maintenance of the embankments, the district often faces floods due to embankment breaches. The hazards which are generally occurred in the district and its sub-tehsils mentioned in below table 2.3.

Table 2.4: Tehsil-Wise Hazard Vulnerability

Hazard Type	Sub-Division Wise Hazard Vulnerability			
	Una	Haroli	Amb	Bangana
Earthquakes	Moderate	Moderate	High	High
Floods	High	High	High	High
Landslides	Low	Low	High	High
Forest Fires	Low	Low	High	High
Domestic Fires	Moderate	Moderate	Moderate	Moderate
Road Accidents	High	High	High	High
Chemical	Moderate	Low	Moderate	Moderate
Hailstorm	Moderate	Moderate	Moderate	Moderate
Drought	High	High	High	High

Source: Based on the historical database, daily loss and damage report and GIS analysis

Table 2.5: Hazard Seasonality Mapping of the District Una (H.P.)

Hazard	Probable Months											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flood												
Forest Fire												
Drought												
Earthquake												
Cold Event												
Heat wave												
Hail storm												
High Winds												

2.4 VULNERABILITY ANALYSIS

The vulnerability of the district is defined by the ability to anticipate, cope with, resist and capacity to recover from any probable disaster. Brief analysis of vulnerable group identified in the table 2.7 with associated hazards in the district. The factors like limited livelihood opportunities, highly dense populated district, under-developed infrastructure, unplanned development, rapid urbanization, prevalent social structures, demographic expansion and environmental degradation make Una District vulnerable to multi disasters. List of vulnerable Talukas and villages (hazard-wise) be provided in the Annexure-II.

2.4.1 PHYSICAL VULNERABILITY

The low lying areas, GPs inside and near the embankments are vulnerable to water logging problems as the soil in the district retains water for longer duration. Many areas of the district face floods due to the heavy river (and tributaries) network. The Gram Panchayats of the district are classified into four categories based on their location with reference to river. They are (1) GPs within the embankments, (2) GPs next to the embankments, (3) GPs far from the embankment, (4) GPs in low lying areas. The detailed list of classified GPs is available in table no. 4 in Annexure-II. Table no. 4 also gives details of which areas are affected by which rivers during floods. A list of highly sensitive embankments and sensitive places under different flood control divisions are given in table no. 5 in Annexure-II.

2.4.2 ECONOMIC VULNERABILITY

Being an agrarian district, the economy of district is primarily dependent on agriculture and its allied sector. The average size of land holding in the district is small and fragmented and as per 2001 census, 28.1 percent of the work force in Una district comprises of marginal workers. The agriculture in Una is highly dependent on the local rainfall which makes the district highly vulnerable to drought and flood. Economic vulnerability is generally defined in terms of poverty therefore Una district being economically poor and backward is highly vulnerable to multi hazards.

2.4.3 SOCIAL VULNERABILITY

The social structure of Una is divided on Caste, religion and ethnic lines which makes the minorities and poor highly vulnerable. As per 2001 census, 13.48 percent of the population of Una comprises of Schedule Castes and 0.04 percent of Schedule Tribes. Such groups generally get excluded in various programs and become more vulnerable out of their social status. Further, a large population is exposed to risk as the district is highly populated. Understanding of hazard, risk, dos & don'ts, and preparedness & mitigation methods etc. is very limited as a large section of the community is not well aware. The vulnerable groups like children and women are at higher risk in the district as they are dependent on others.

Table 3.6: Characterises of social groups and their concerned vulnerabilities

#	Vulnerable Group	Total	Remarks
1.	Population	338 Persons/km ² 5,21,057 (Total), 2,63,541 (Male) , 2,57,516 (Female)	Second densely populated district in state and mostly reside in the low laying areas
2.	Decadal Population Growth rate (2001-2011)	16.3 per cent persons	It is comparability higher than state decadal population growth of 12.9 per cent persons
3.	Rural and Urban Population	44,913 (Urban) and 476,260 (Rural)	91.38 % population of Una districts lives in rural areas of villages
4.	Total Child Population (0-6 Age)	59,231 (Total), 31,117 (Male) and 27,083 (Female)	11.3 % to the total population
5.	Person With Disability	9388 (Total) , 5269 (Male), 4119 (Female)	2 % to the total population
6.	Social Groups	Schedule Caste: 115,491 (Total), 58,601 (M) and 56,890 (F) Schedule Tribe: 8,601 (Total), 4,445 (M) and 4,156 (F)	SC and ST population stand 22.2 % and 1.7 % to the total Population
7.	BPL Families	15,429	-
8.	Literacy	86.53 percent, 81.11 percent, 91.89 percent.	There are 901 primary schools, 382 secondary schools, 19 high secondary schools and 27 colleges in the district.

2.4.4 ENVIRONMENTAL VULNERABILITY

Due to urbanization and limited livelihood opportunities in the rural areas, people are migrating to urban areas creating additional pressure on the limited resources. These altogether form the key reasons for exploitation of the available resources, deforestation, unplanned development and various other related aftereffects including environmental degradation & risk of increasing man-made & human-induced disasters like accidents, industrial/ chemical disasters etc.

2.4.5 TECHNOLOGICAL VULNERABILITY

There is lack of proper and effective technology to forecast, monitor and disseminate early warning information of onset of any threatening event in the district. This increases the risk of people living in vulnerable areas. Besides, lack of appropriate technology and information also resists the capacity of the district to mitigate the risk.

2.4.6 VULNERABILITY DUE TO CLIMATE

The poor, marginal and farmers are vulnerable to seasonal hazards like heat waves, cold waves and seasonal flooding. The sudden onset of monsoon and heavy rainfall not only damages the standing crops but also takes lives of the people and livestock. On the other hand, some parts of the district face drought due to deficient rains.

2.4.7 STRUCTURAL VULNERABILITY

Due to rapid urbanization, the buildings, constructions, and other infrastructures have been developed rapidly without taking into consideration the disaster vulnerability of the district. Most of the constructions are not disaster resilient or earthquake safe which increases the vulnerability of the population to various hazards.

2.4.8 NON-STRUCTURAL VULNERABILITY

Una district is highly vulnerable to multi hazards and few of the disasters are annual such as flood, fire, heat & cold waves etc. The community is aware of these recurrent disasters and has some understanding & experience towards these disasters. However, the community is unaware of the risks arising out of rapid urbanization, unplanned development, deforestation, environmental degradation and other such potential disasters. This unawareness and inexperience to these situations poses added vulnerability to the community.

2.5 CAPACITY AND RESOURCES ANALYSIS

The district has got number of resources and capacities which are useful in emergency as well as normal situations. Below is a broad listing of the key resources / capacities available in the district with different departments/ agencies. A list of departmental focal points with contact details also prepared while doing this analysis and provided in Annexure-3 with List of resources, availability, and map-based location

Table 2.7: Resources / capacities available in the district with different departments / agencies.

#	Capacity / Resources	Number and Details	Remarks	Further Detail
1.	Human Resource	563 (Total human resource in district Magistrate office) 672 (Total police force) 45 (Energy Dept. Engineers) 230 (Total human resource in health sector) 42 (Total human resource in fire services) 43 (Raksha Vahini (trained in rescue and relief) 112 (NCC trained cadets in schools and colleges)	The total human resources (1707 or 0.03 % to total Pop) available district Una is comparatively very low as compare it with the total population of the district	Detail of all resources mentioned in Annexure-II
2.	Health facilities	2 (Regional Hospital, Una and ESI Hospital, Mehatpur) 3 (Community Health Centres) 19 (PHCs) 134 (Health sub-centres) 70 (Ayurveda institutions) 23 (Private Hospital)	The health facilities should be strengthen mainly in terms of emergency response	Detail of all Health capacities mentioned in Annexure-II
3.	Sources of Water & Irrigation	1131 Tubewells 185 Wells used for Irrigation 1062 Well used for Domestic Purposes 129 Kuhls in Use 29 Lift Irrigation Schemes	Irrigation facilities is organised well but their dispersion is main concern as most of them located in the low lying areas	Detail of all resources mentioned in Annexure-II
4.	Connectivity	Road Connectivity: NH 104, 105 and 5 connect to other districts Railway Connectivity: Broad gauge railway	Connectivity is well although there is single rail track and road blockages due to landslides and vehicle density	Detail given in Map format in Annexure-II

		network connects to district Una with rest of India Air Connectivity: Chandigarh (120 Km from District Headquarter)		
5.	Nearest NDRF unit	In Bathinda, Punjab Others in Ghaziabad (UP)	It will be useful capacities and same will develop within the district	-
6.	District EOC	Functional EOC in district with necessary equipment and resources	It is useful resources and same will be setup at sub-division level for more outreach in case of any emergency	More Detail given in Chapter-III and Chapter-V
7.	Flood control divisions	2 IPH Dept. Swan Flood Control Division SWAN River integrated Watershed Management by Forest Dept.	It is mainly focus on the flood control of SWAN rivers and its seasonal tributaries	More Detail given in Annexure-II
8.	HR trained in Disaster Management	NDRF officials, Home Guards, volunteers and NCC, NYK cadets are trained in different skills	Increase the strength of Trained personal in terms of multi-hazards probability in district Una (H.P.)	More Detail given in Annexure-II
9.	Helipad locations or Landing Sites	12 landing sites mapped in district Una	It helps to mobilize the resources efficiently during the emergency	More Detail given in Annexure-II
10.	Elected PRI representatives	All GPs	All elected members must be trained on DRR and same approaches apply in their concerned constituency	More Detail given in Annexure-II
11.	Relief centres in the District	Each block has number of identified relief centres (with facilities of drinking water , toilet)	Their strength must be increased by considering the population size of the district	More Detail given in Annexure-II
12.	Temporary shelters	34 (in different blocks)	Temporary Shelters mapped in the district e.g. school building etc.	More Detail given in Annexure-II
13.	Shelters constructed by NGOs	9	Mostly in the various religious shrine and place	More Detail given in Annexure-II
14.	Fire service	Fire engines – 3 Vehicle portable pump – 1 Manpower – 12	It must be strengthen by taking into the consideration of incidents of forest and domestic fires	More Detail given in Annexure-II

15.	PDS shops	1552	All these must have reserve stocks in case of any emergency	-
16.	Non Govt. organizations in Una	23 (active NGOs)		-
17.	Nearest IMD regional office	1 in near Chandigarh and Shimla and other 4 IMD station in tehsils of Una	All IMD observatory station must be monitored carefully especially during the monsoon period and that will be used as early warning system	-
18.	Communication	BSNL office	They must strengthen their communication in case of any emergency	-
19.	Canals	1 Major Canals with others number of small canals	Canals network extend for flood control and further drought mitigation	-
20.	Power-grid sub-station	5	-	-
21.	Power sub-station	6	-	-

Table 2.8: Hazard/ Risk Assessment of Una District (V= Vulnerability, P= Probability of occurrence, R=Rating, H=High, M=Medium, L=Low)

Hazard	Definition	Characteristics	Why Selected	Who / What at risk	P (R)	V (R)	Rank (PxV)
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	River Swan flow in District Una and It is known as "Sorrow of Una" due to its flooding characteristic. Moreover, seasonal rivulets and tributaries arises flood situation in case of high rainfall and cumulative effects in the low lying areas of District Una.	Extensive history of severe riverine flooding, High losses from previous floods Ongoing, Persistent closed basin flooding, Bhakra dams and its catchment in upper area of the district, Dam maintenance problems and extreme weather events could cause failures	Agriculture crops, Transport, Houses (Mostly Kacha houses in rural area), Constructions, Drinking Water, Cattle, Irrigation equipment, Educational Institutes, GPs are inside or next to the embankments	Frequently (3)	H (3)	9
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	Forest Fire incidents are common during the summer months where fire incidents in settlements are having lower frequency mainly where household use traditional cooking methods (chulhas).	History of previous occurrences, Potential for loss of life GIS analysis clearly suggest fire sites Potential for environmental impacts	Human Life, Cattle Life, Houses and Property	Frequently (3)	M (2)	6
Drought	A prolonged period with no rain, particularly during the planting and growing season in agricultural areas.	The area and GPS far away from the river are prone to drought.	History of previous occurrences Importance of large water users and agriculture to the district economy Numerous IMD disaster declarations and district / state declared disasters and emergencies	Crops, Drinking Water, Livelihood Options	Frequently (3)	M (2)	6

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	The Una district falls under Earthquake zone IV. The buildings and houses built in the district are not earthquake resilient therefore the damages will be high in case of an earthquake event.	History of previous occurrences GIS analysis and IMD data Potential for significant earthquake losses	Human Life, Cattle Life, Kutcha and Pacca Houses, Community Infrastructure	Occasional (2)	H (3)	6
Chemical, Biological, and Radiological (CBR)	Leakages of Chemical, Biological, and Radiological materials	Though the occurrence of Chemical, Biological, and Radiological disaster is very low in the district but the probability of damages is very high in case of such disasters as the district is highly populated.	History of previous occurrences Reported Chemical industries in the populated areas of the district Una	Human Life, Cattle Life, Environment & Eco-System, Economy	Rare (1)	H (3)	3
Climate Change (Cold Wave/ Heat Wave/ Storm/ Hail Storm)	Climate change, also called global warming, refers to the rise in average surface temperatures on Earth.	These are seasonal hazards largely affecting the poor. The poor and marginal people are highly vulnerable to such seasonal hazards.	Potential link to occurrences of Cold Wave/ Heat Wave/ Storm/ Hail Storm and temperature change Potential impact to health and safety	Human Life, Cattle life, Crops	Occasional (2)	L (1)	2

Landslides	<p>The downward and outward movement of slope-forming materials reacting to the force of gravity.</p> <p>The term landslide is generalized and includes rockfalls, rockslides, block glide, debris slide, earth flow, mud flow, slump, and other such terms that describe mass wasting.</p>	<p>The Una district falls under Earthquake zone IV and mainly composed with unconsolidated sediment which is prone to sudden motion or trembling of the ground produced by abrupt displacement.</p>	<p>History of previous localized occurrences</p> <p>Potential for property damage</p>	<p>Human Life, Kutchha and Pacca Houses, Community / Public Infrastructure</p>	Frequently (3)	M (2)	6
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Reference: GIS Analysis, Synthesis of Daily reports and Past History of the Hazard.

Figure 2.6: Earthquake Probability map for Himachal Pradesh with highlighting the District Una with Pink Colour, identified Fire sites in District Una (H.P.) during 2001-2012

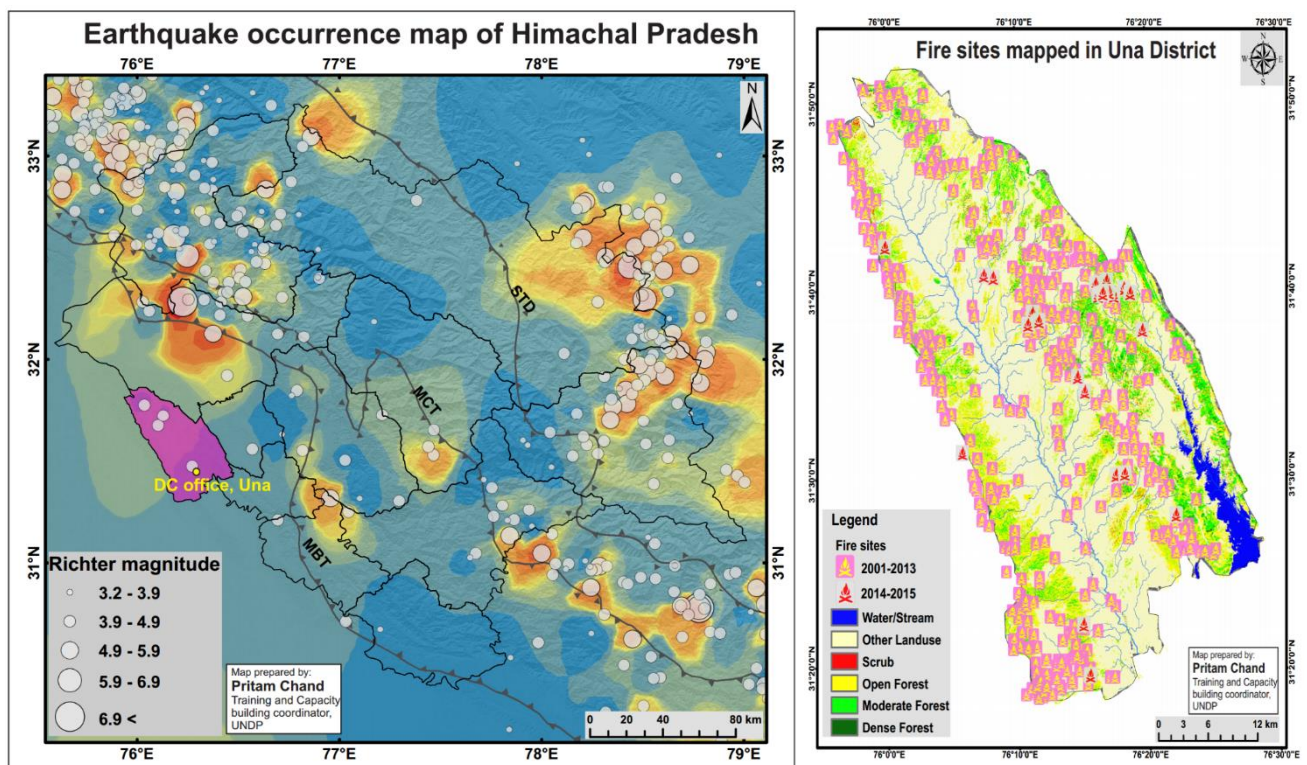


Table-1: Fire Accidents history of District Una

Fire Accidents history of District Una:				
Year / Date	Name of the Industry	Cause	Chemical/ Product	Loss of Property
21.07.08	Luminious Power Pvt. Ltd. Gagret	FIRE	Led Acid Battries	13 Crore Approx.
17.05.09	Kaushal Roller Floor Mills, Tahliwal	FIRE	Atta Mills	2,00,000 Approx.
24.06.09	MBD Pvt. Ltd. Gagret	FIRE	Paper mills	5 Crore App.
16.12.10	Preet Foot wear Pvt. Ltd. Bathri	FIRE	Lather shoes	250Lac App.
8.04.10	Ranger breweries Ltd. Mehatpur	FIRE	WINE	40Lac.App.
14.09.10	Deepak Fastner Pvt. Ltd. Tahliwal	FIRE	IRON Nut Bold	3Lac. App.
30.04.11	Cozy touch pvt. Ltd. Lалуwal	FIRE	Mattress	1,55, 00,000 /-App
23.11.11	Kanahya Indus Ltd. Basal	FIRE	Mattress	2,50,00,000/-App,
1.06.12	Silver Tone Pvt. Ltd. Mehatpur	FIRE	Sinthatic mats	40Lac. App.
2.09.12	Stain Ford Lab Pvt. Ltd. Mehatpur	FIRE	Medicines	1,50,000/-App.

Table 2: Chemical / Industrial Disaster / Accidents History of District Una

Chemical / Industrial Disaster / Accidents History of District Una					
Year	Name of the industry	Cause	Chemical / Product	Dead	Loss of Property
2005	M/s Shree Balaji, Magnese P.Ltd., VPO Gagret	Short circuit of Electricity	Ferro Alloys	No	268.43
2010	M/S Kanaiya, Inds. VPO.Basal	Short circuit of Electricity	P.U. Foam	No	200.00Lac
2012	M/s Himco, Plastic Shed No. 41A, 1A, Mehatpur,	Short circuit of Electricity	PVC Pipe & Pipe fitting	No	8.00Lacs
2012	M/s Mehak Chemical Inds.Plot No. 47, Tahliwal	Gas Leakage	Stable Bleaching Powder	No	Nil
2012	M/s Silver tones Impex P.Ltd. Plot No.15, 1.A.Mehatpur	Short circuit of Electricity	PVC shitting	No	10.00 Lacs

3. INSTITUTIONAL MECHANISM OF DISASTER MANAGEMENT

3.1 INTRODUCTION

India has an integrated administrative machinery for management of disasters at the National, State, District and Sub-District levels. The basic responsibility of undertaking rescue, relief and rehabilitation measures in the event of natural disasters, as at present, is that of the State Governments concerned. The Central Government supplements the efforts of the States by providing financial and logistic support.

The district administration is the focal point for implementation of all governmental plans and activities. The actual day-to-day function of administering relief is the responsibility of the District Magistrate who exercises coordinating and supervising powers over all departments at the district level.

The 73rd and 74th constitutional amendments recognize Panchayati Raj Institutions as 'Institutions of self-government'. The amendment has also laid down necessary guidelines for the structure of their composition, powers, functions, devolution of finances, regular holding of elections and reservation of seats for weaker sections including women. These local bodies can be effective instruments in tackling disasters through early warning system, relief distribution, providing shelter to the victims, medical assistance etc.

Other than the national, state, district and local levels, there are various institutional stakeholders who are involved in disaster management at various levels in the country. These include the police and paramilitary forces, civil defence and home-guards, fire services, ex-servicemen, nongovernment organizations (NGOs), public and private sector enterprises, media and HAM operators, all of whom have important roles to play.

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

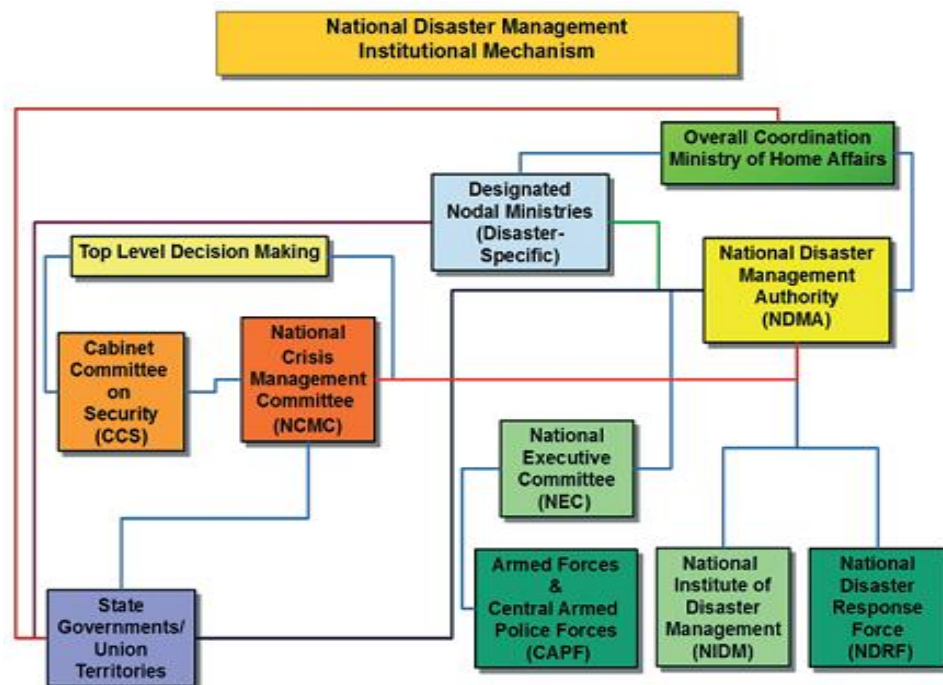
3.2 INSTITUTIONAL FRAMEWORK

3.2.1 NATIONAL LEVEL

The overall coordination of disaster management vests with the Ministry of Home Affairs (MHA). The Cabinet Committee on Security (CCS) and the National Crisis Management Committee (NCMC) are the key committees involved in the top-level decision-making with regard to disaster management. The NDMA is the lead agency responsible for the preparation DM plans and the execution of DM functions at the national level. *Figure 3.1* provides a schematic view of the basic institutional structure for DM at national level. The figure represents merely the institutional pathways for coordination, decision-making and communication for disaster management and does not imply any chain of command. In most cases, state governments will be carrying out disaster management with the central government playing a supporting role. The central agencies will participate only on the request from the state government. Within each state, there is a separate institutional framework for disaster management at the state-level. The DM Act of 2005 provides for the setting up of NDMA at national level, and, the SDMA at the state level. The role, composition and the role of the key decision making bodies for disaster management at national-level are briefly described in the Table 1-3. The extent of involvement of central agencies will depend on the type, scale, and

administrative spread of the disaster. If the situation requires the direct assistance from central government or the deployment of central agencies, the central government will provide all necessary support irrespective of the classification of the disaster (LO to L3).

Figure 3.2. National-level disaster management - basic institutional framework



Note, this represents merely the institutional pathways for coordination, decision-making and communication for disaster management and does not imply any chain of command (Source: NDMP-2009).

Agencies	Departments	Roles & Responsibilities
Cabinet Committee on Security (CCS)	<ul style="list-style-type: none"> Prime Minister, Minister of Defence, Minister of Finance, Minister of Home Affairs, 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 (NCMC)	<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	<ul style="list-style-type: none"> Prime Minister (Chairperson) 	<ul style="list-style-type: none"> Lay down policies, plans and guidelines for disaster management

Management Authority (NDMA)	<ul style="list-style-type: none"> Members (not exceeding nine, nominated by the Chairperson) 	<ul style="list-style-type: none"> 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, Shipping, Road Transport and Highways and Secretary, NDMA are special invitees to the Meetings of the NEC. 	<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 Dept. 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 GoI, 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 Forces⁶ (CAPF), the National Disaster Response Force (NDRF) and other uniformed services which comprise the GoI's Response to aid the State authorities. Coordinate with India Meteorological Dept. (IMD) and a number of other Specialised scientific institutions which constitute key early warning and monitoring agencies. 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

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 • Programmes 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.
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3.2.2 STATE LEVEL

As per the DM Act of 2005, each state in India shall have its own institutional framework for disaster management. Among other things, the DM Act, mandates that each State Government shall take necessary steps for the preparation of state DM plans, integration of measures for prevention of disasters or mitigation into state development plans, allocation of funds, and establish EWS. Depending on specific situations and needs, the State Government shall also assist the Central Government and central agencies in various aspects of DM. Each state shall prepare its own State Disaster Management Plan.

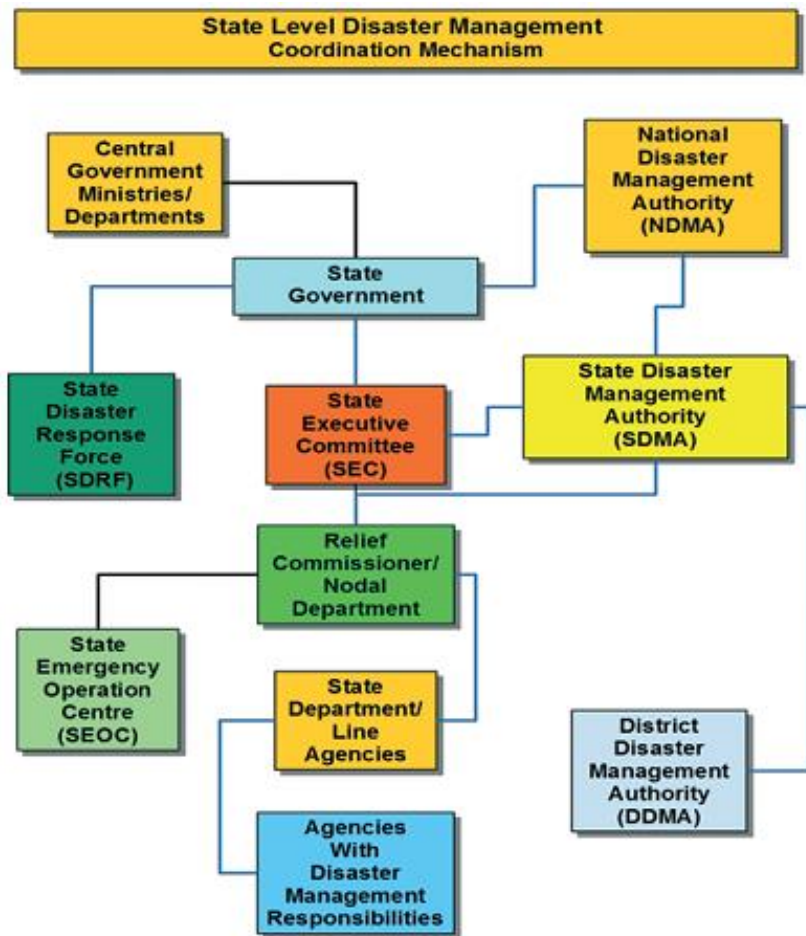


Figure 3.2. State-level disaster management - basic institutional framework

Note, the figure represents merely the institutional pathways for coordination, decision-making and communication for disaster management and does not imply any chain of command (Source: NDMP-2009).

The DM Act mandates the setting of a State Disaster Management Authority (SDMA) with the Chief Minister as the ex-officio Chairperson. Figure 3.2 provides schematic view of the typical state-level institutional framework. At the State level, the State Disaster Management Authority under the chairmanship of the Chief Minister has the responsibility of policies, plans and guidelines for DM and Coordinating their implementation for ensuring timely, effective and coordinated response to disasters. The Chief Secretary is the Chief Executive Officer of the SDMA. Besides, the SDMA has seven other members. The SDMA will, inter alia approve the State Plan in DM organizational structure at the district level accordance with the guidelines laid down by the NDMA, approve DMPs prepared by the departments of the State Government, lay down guidelines to be followed by the departments of the Government of the State for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects, coordinate the implementation of the State Plan, recommend provision of funds for mitigation, preparedness measures, review the developmental plans of the different Departments of the State to ensure the integration of prevention, preparedness and mitigation measures and review the measures being taken for mitigation, capacity building and preparedness by the departments. The State Authority shall lay down detailed guidelines for providing standards of relief to persons affected by disaster in the State. The State Government shall constitute a State Executive Committee (SEC) to assist the SDMA in the performance of its functions. The SEC is headed by the Chief Secretary to the State Government and it coordinate and monitors the implementation of the National Policy, the National Plan and the State Plan. The SEC also provides information to the NDMA relating to different aspects of DM.

Table: 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

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 DISTRICT LEVEL

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

3.3.1 DISTRICT DISASTER MANAGEMENT AUTHORITY (DDMA), UNA

In general the role of District Disaster Management Authority, Una is to plan, coordinate, implement and to carry out any other measures for disaster management in the district as per the guidelines laid down by National Disaster Management Authority (NDMA) and State Disaster Management Authority (SDMA). For Specific actions of DDMA in DRR/normal time refer to stakeholder action plan (DDMA) Green Book and for specific actions for emergency response and recovery refer to stakeholder action plan (DDMA) Red Book.

The DDMA is headed by the Deputy Commissioner with the elected representative of the local authority (Chairman Zila-Parishad) as the Co-Chairperson. DDMA acts as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It inter alia prepares the District Disaster Management Plan for the District and monitor the implementation of the National Policy, the State Policy, the National Plan, the State Plan and the District Plan. DDMA also ensures that the guidelines for prevention, mitigation, preparedness and response measures laid down by the NDMA and SDMA are followed by all Departments of the State Government at the District Level and the local authorities in the District.

The DDMA acts as District Planning, coordinating and monitoring body in accordance with the guidelines lay down by the State Authority. As per Section 25 of the DM Act 2005 DDMA has been constituted for Una District as follows:

#	Appointment /Name	Designation in DDMA
1	Deputy Commissioner	Chairman (Ex Officio)
2	Chairman ZP	Co Chairman (Ex Officio)
3	ADC cum CEO ZP	Member (Ex Officio)
4	Superintendent of Police	Member (Ex Officio)
5	Chief Medical Officer	Member (Ex Officio)
6	Superintending Engineer PWD	Member (Ex Officio)
7	Superintending Engineer I&PH	Member (Ex Officio)

The **roles and responsibilities of the DDMA, Una (H.P)** have been elaborated in Section 30 of the DM Act, 2005.

- The DDMA will act as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will, inter alia prepare the District DM plan for the District and monitor the implementation of the National Policy, the State Policy, the National Plan, the State Plan and the District Plan.
- The DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures lay down by the NDMA and the SDMA are followed by all the Departments of the State Government at the District level and the local authorities in the District.
- The DDMA will also ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are taken;
- The DDMA will also ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all departments, lay down guidelines for prevention of disaster management plans by the Dept. of the Government at the districts level and local authorities in the district.
- The DDMA will also monitor the implementation of disaster management plans prepared by the Departments of the Government at the district level;
- The DDMA will also ensure lay down guidelines to be followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and monitor the implementation of the same,
- The DDMA will review the state of capabilities and preparedness level for responding to any disaster or threatening disaster situation at the district level and take steps for their up gradation as may be necessary,
- The DDMA will organise and coordinate specialised training programmes for different levels of officers, employees and voluntary rescue workers in the district, facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organisations, set up, maintain,
- The DDMA will review and upgrade the mechanism for early warnings and dissemination of proper information to public, prepare, review and update district level response plan and guidelines.
- The DDMA will also coordinate response to any threatening disaster situation or disaster, coordinate with, and provide necessary technical assistance or give advice to the local authorities in the district for carrying out their functions,
- The DDMA will examine the construction in any area in the district and issue direction the concerned authority to take such action as may be necessary to secure compliance of such standards as may be required for the area;
- The DDMA will further identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places, establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice.
- The DDMA will encourage the involvement of non -governmental organisations and voluntary social-welfare institutions working at the grassroots level in the district for disaster management ensure communication systems are in order, and disaster management drills are carried out periodically.

3.3.2 DDMA ADVISORY COMMITTEE

As per the provisions of the National disaster management Act, the DDMA shall appoint an advisory committee of the professionals in the district for advising DDMA on various planning and executive functions from time to time. As per the NDMA guidelines on Role of NGOs in disaster management, few members from district IAG may be nominated for the advisory committee and the DDMA may choose any other professionals to be the member of advisory committee as well. DDMAC has been constituted for Una District as follows:

#	Appointment / Name	Designation in the Committee
1	Deputy Commissioner	Chairman
2	Chairman ZP	Co-Chairman
3	Superintendent of Police	Member
4	Additional DC/Additional DM	Member Secretary
5	Chief Medical Officer	Member
6	Distt. Ayurvedic Officer	Member
7	Superintending Engineer PWD	Member
8	Superintending Engineer I&PH	Member
9	Superintending Engineer HPSEB	Member
10	District Controller, Food and Supplies	Member
11	Commandant Home Gaurds	Member
12	Commandant 1st IRB Bangarh	Member
13	Fire Officer	Member
14	Dy. Director Agriculture & Horticulture	Member
15	District Public Relations Officer	Member
16	GM Telecommunications	Member
17	Divisional Forest Officer	Member
18	Dy Director Animal Health & Breeding	Member
19	Executive Officer, Municipal council Una	Member
Non Official Members		
1	All Hon'ble Minister/MLAs	Member
2	President Zila Parishad	Member
3	President MC Una	Member
4	Representatives of NGOs	Member

3.3.3 DISTRICT LEVEL CORE TEAM (CRISIS MANAGEMENT GROUP)

#	Stakeholders	Responsibility
1	Deputy Commissioner	Chairman DDMA, Responsible Officer for the Incident Response System (IRS), Coordinate the activities of various agencies / organizations and If necessary invoke, help from the local Army / CPMF unit, the State Government and the Central government
2	S P Una	Evacuation of the incident areas, provide police wireless communication, search & rescue and to maintain law & order immediate after disaster. He / she will take all steps to ensure safety of life and property of every citizen in consultation with the District Magistrate. Control entry to the emergency area by establishing various naka points
3	Div. fire officer	search & rescue, first aid , firefighting, evacuation, removal of collapsed houses, walls etc.
4	Chief Medical Officer	Medical plan for preparedness & mass casualty management, preventive & curative healthcare in the affected areas and hospitals.
5	Medical Superintendent, District Hospital	Medical plan for mass casualty management, medical aid in the hospitals.
6	Superintendent Engineer, HPPWD, and National Highway	Disaster preparedness, Provide engineering support in search and rescue, demolition of weak / damaged buildings, emergency restoration of roads and bridges, assessment of quantum & extent of loss.
7	Executive Officer, Municipal Council and Nagar Panchayat	Evacuation / warning / search and rescue, Debris clearance, demolition of damages of structures, cleaning and maintaining drainage system, Disposal of dead.
8	Superintendent Engineer, HPSECL	Restoration of electric supply, maintenance and repairing the supply
9	The CO, Home Guard (6 TH Battalion)	search & rescue, first aid , evacuation etc.
10	District Information Officer,	Awareness campaigns, Warning, control of rumours / panic, media coverage (print media and electronic media)
11	Superintendent Engineer, IPH	Supply of drinking water and other related sanitation materials in shelter houses and affected areas.
12	Dy. Director Animal,	Cattle vaccination in flood scenario, Carcass disposal, arrangement of shelter/fodder/ medicines for animals.
13	Dist. Forest Officer	Promotion of erosion preventing plantations, Clearance of broken trees and bushes to clear road transportation, co-operation in rescue works.
14	Dy. Director Food & Civil supplies	Arrangements of essentials commodities and other related matters, to continue PDS.
15	Dy. Director Agriculture,	Promote Crop Insurance/ Draught resistant crops, Restoration of normalcy in Agriculture crops.

16	Dy. Director Education (DEO)	Disaster preparedness in schools, First Aid, Search and rescue
17	SDM Sadar Una	Arrangement of shelter houses, essential commodities to the affected victims, Incident commander / overall supervision at Sub-division level, financial assistance to victims.
18	District Transport Officer,	Enlisting various classes of vehicles available, arranging vehicles for evacuation.

3.3.4 DISTRICT EMERGENCY OPERATION CENTRE (DEOC), UNA (H.P.)

It has been observed that at the time of a calamity/disaster, communication services are the first to go out of order. Emergency Operation Centre plays a vital role in Emergency Operation activation and place multi-mode and multi-channel communication system pre, during and post emergency situation. It coordinates the flow of information with respect to activities associated with relief operations. District Emergency Operation Centre (DEOC), Una established according to essence mentioned above. The design, layout, equipment and operation of the DEOC, Una as per the EOC Manual prepared at the State level by Himachal Pradesh State Disaster Management Authority (HPSDMA), Shimla or National Disaster Management Authority (NDMA), Delhi (India). DEOC, Una fortify with all basic and advance communication and IT infrastructure in constraint of limited space and resources. It has been set up with basic hazard resistant structural features and communication facilities and equipped with computers, LCD, Generator, emergency lights, open source geographical information system (GIS) and on-site basic emergency coordination kits in ready-to-use mode. The main office of DEOC, Una is sited adjoining to the main building of DET (*Figure 1*). It is placed in the first floor of the building with having single entry and existing facility. The total area of DEOC, Una is 432 square feet with having total length and width of 24 and 18 feet, respectively. It is directly access through the main state highway Una-Amb with having total distance of 50 meter from main state highway. This Control Room reachable round the clock through telephone number 01975-226049 and toll free number (1077). Additional District Magistrate is the nodal officer for the Control room and all operations of Disaster management in the District.

Role and Objectives of DEOC, Una

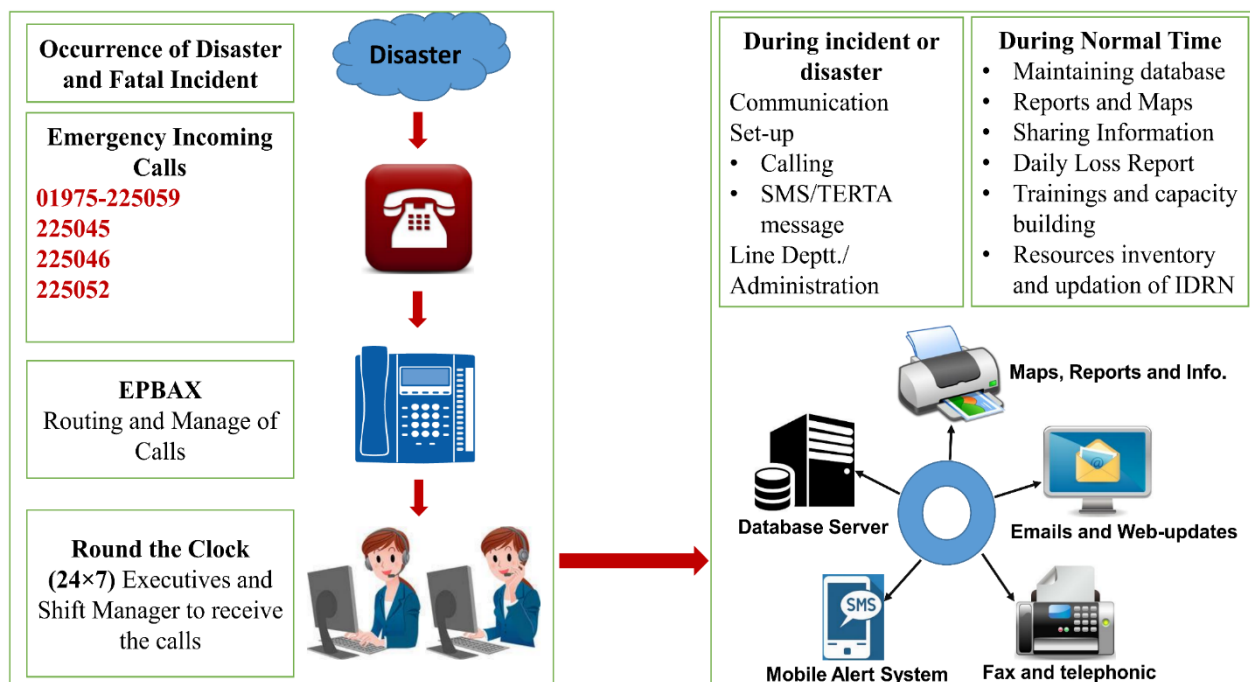
District Emergency Operation Centre plays a vital role in Emergency Operation activation in the district and have following roles and objectives during occurrence of any disaster and normal time,

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

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

Figure 3.9: Summarize the existing function of District Emergency Operation Centre (DEOC) of district Una (H.P).

Functioning of District Emergency operation centre (DEOC), Una (H.P)



3.3.4.1 INCIDENT RESPONSE SYSTEM (IRS)

Incident Response System is a combination of facilities, logistic, personnel, finance, operation and communication operating within a common organizational structure, with responsibility for the management of assigned resources to accomplish the objectives effectively pertaining to an incident. The IRS organization functions through Incident Response Team (IRT s) in the field. The District Magistrate (DM) as the chairman of the DDMA is a Responsible Person (RO) as overall in charge of the incident response management. If needed, he can delegate his functions to any other responsible officer or appoint another senior officer as an incident commander. If the disaster is in more than one district, the DM of the district that has maximum loss will act as Incident commander.

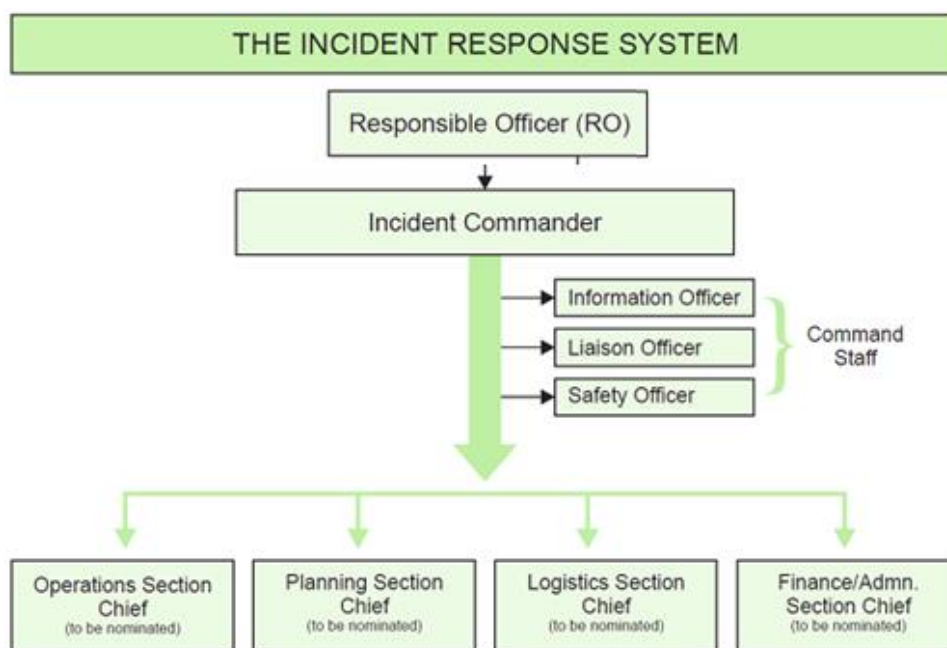
On activation of the incident response system, all line departments/ Organizations/ individuals shall follow the directions of the Incident Commander as condition demands. He can divert all mechanisms and resources in the district to fight against a scenario leading to disaster/calamity in the district.

On activation of IRS, an operation section with a chief and associates, planning section with a leader and associates, logistic section with a leader and section chief and finance section with a leader and associates shall be assume their roles. This is the sole discretion of the Incident Commander to appoint the Section chief. These section chiefs are vested with com ng authority and logistic assistance to deliver the concerned responsibility.

The chief and associates for the different sections are as nominated below:

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

Figure 3.5: Flowchart of IRS in District Una (H.P.)



Outline of Responsibility of Main Functionary of district Una for IRS

Responsible Officer	Primarily responsible for effective response
Incident commander	Overall In-charge of the Incident Response Team & its Effective Functioning.
Operations Sections	Direct & supervise all tactical actions.
Planning Sections	Collect / Analyse data, Workout need of required resources and prepare action plan for incident/Disaster of the district Una.
Logistics & Finance Section	Provide logistic support, procurement & cost accounting

3.3.4.1.1 MAJOR FUNCTIONS OF INCIDENT COMMANDER

The general functions of the Incident Commander are as follows:

- To create and integrate communication flow during emergency period
- To manage incident scene, and report through integrated and coordinated command
- To facilitate procedures and protocols according to ESF Departments within District as well as State and Central Government.
- To put the communication system in place to receive, record, acknowledge incoming and outgoing information of any form during the disaster
- To manage resources as per their availability such as - distribution of relief material with ESF agencies required during emergency etc.
- Monitoring functional areas during and post disaster phase

Besides these general functions, the Incident Commander has to perform the following specific functions:

- Size up the situation
- Determine if human life is at immediate risk
- Establish immediate objectives
- Determine if there are enough and right kind of resources on site and/or ordered.
- Develop immediate action plan
- Establish an initial organization
- Review and modify objectives and adjust the action plan as necessary.

3.3.4.1.2 MAJOR FUNCTIONS OF OPERATION SECTION CHIEF

Responsible for management of all operations directly applicable to primary mission

- Activates and supervises organization elements in accordance with the Incident Action Plan and directs its execution
- Determine need and request additional resources
- Review suggested list of resources to be rebased and initiate recommendation for release of resources
- Report Information about special activities, events or occurrences to Incident Commander
- Maintain Unit / Activity details

3.3.4.1.3 MAJOR FUNCTIONS OF PLANNING SECTION CHIEF

Collection, evaluation, dissemination and use of information about the development of incident and status of resources. Information needed to understand the current situation

- Prepare alternative strategies and control of operations,
- Supervise preparation of Immediate Action Plan (IAP)
- Provide input to IC and Operation in preparation of IAP
- Reassign of service personnel already on site to other positions as appropriate
- Determine need for any specialized resources in support of the incident

3.3.4.1.4 MAJOR FUNCTIONS OF LOGISTIC SECTION CHIEF

Establish information requirements and reporting schedules for Planning Section Unit (e.g. Resources, Situation Unit).

- Compile and display incident status information
- Oversee preparation and implementation of Incident Demobilization Plan.
- Incorporate Plans (e.g. Traffic, Medical, Site Safety, and Communication) into IAP.
- Maintain Unit / Activity details.
- Other Functions include, briefing on situation and resource status, setting objectives, establishing division boundaries, identifying group assignments, specifying tactics/safety for each division, specifying resources needed by division, specifying operations facilities and reporting locations – plot on map and placing resource and personnel order.
- Assign work locations and tasks to section personnel.
- Identify service and support requirements for planned and expected operations
- Coordinate and process requests for additional resources.
- Provide input to / review communication plan, traffic plan, medical plan etc
- Recommend release of unit resources
- Maintain Unit/ Activity details

3.3.4.1.5 MAJOR FUNCTIONS OF FINANCE SECTION CHIEF

The Finance section is basically of the administration and managing finance. The major roles of this section include managing (1) Incident Command Post, (2) Staging Areas, (3) Base, and (4) Camps. The major functions are:

- Minimize excessive communication of resources calling for assignment
- Allow IC/OPS to properly plan for resources use and allow for contingencies

3.3.5 PUBLIC-PARTNERSHIP

In District Una, there are few public private partnerships going on in context to disaster risk management and details of few mention below

Nodal Agencies for Early Warning

Following are the Nodal agencies in the Government of India and in the state mandated for early warning of different natural hazards prevailing in the state of Himachal Pradesh:

#	Hazards	Warning Agency	Contact Details
1	Earthquake	(IMD) Indian Meteorological Dept. / SDMA / SEOC / DDMA / DEOC	011-24619943 / 24624588 / Dehradun 0135-2525458
2	Landslide	(GSI) Geological Survey of India / DDMA / DEOC	0172-2622529 Fax 0172-2621945. Mob: 094173-71954. <i>joginder.singh@gsi.gov.in</i>
3	Heavy Rain / Snowfall	(IMD) Indian Meteorological Dept. / SEOC / DEOC	0177-2626211
4	Flood / Flash Flood	(BBMB) Bhakra Beas Management Board, / (CWC) Central Water Commission / Irrigation and Public Health Dept./ DEOC	0183-236105
5	Domestic / Forest Fire	Dept. of Fire Services/ Dept. of Forest	(Fire)
6	Epidemics	Health and Family Welfare Department	(Medical officer of Health (MOH))
7	Human Induced Hazards	Himachal Pradesh Police	(police Control Room)

3.4 FORECASTING AND WARNING AGENCIES

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

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 1-4: 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 and 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 and Climate Change (MoEFCC)
10	Landslides	Min. of Mines (MoM)
11	Avalanche	Min. of Defence (MoD)
12	Nuclear and Radiological Emergencies	Dept. of Atomic Energy (DAE)
13	Rail Accidents	Rail Accidents Min. of Railways (MoR)
14	Road Accidents	Min. of Road Transport and Highways (MoRTH)
15	Urban Floods	Min. of Urban Development (MoUD)

Table 3.5: Nodal Agency for the Forecasting and Early Warning System of Different Disasters

#	Hazard / Disaster	Nodal Agency with online web pages address/ Contact Info
1.	Hydro-meteorological National State District Level	India Meteorological Department, Shimla http://www.imd.gov.in/pages/allindiawxbulletin.php http://www.imd.gov.in/pages/earthquake_prelim.php http://www.imd.gov.in/pages/main.php http://bhuvan-noeda.nrsc.gov.in/disaster/disaster/disaster.php http://satellite.imd.gov.in/insat.htm
2.	Floods	Central Water Commission of the Ministry of Water Resources, Shimla Zone http://india-water.gov.in/ffs/ http://www.india-water.gov.in/eSWIS-MapView/
3.	Landslides	Geological Survey of India http://www.portal.gsi.gov.in/
4.	Droughts	India Meteorological Department, Shimla http://www.weathershimla.gov.in/

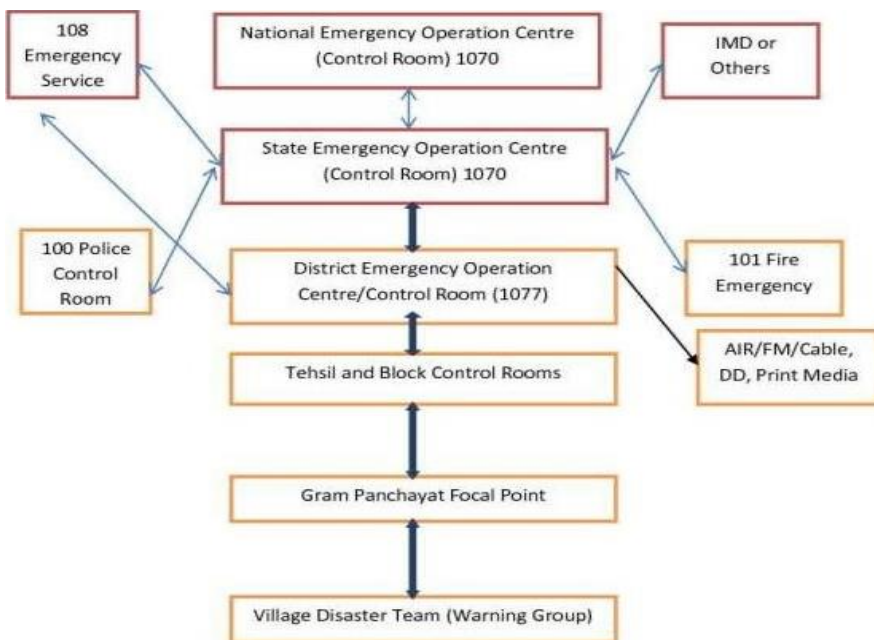
5.	High Wind, Hailstorm, Heat Wave, Cold Wave and High Rainfall	India Meteorological Department, Shimla http://dms.iirs.gov.in/
6.	Forest Fire	Forest Survey of India, Dehradun And India Meteorological Department, Shimla http://www.weathershimla.gov.in/# http://activefiremaps.fs.fed.us/gisdata.php https://earthdata.nasa.gov/earth-observation-data/near-real-time/firms/active-fire-data http://fsi.nic.in/ http://bhuvan-noeda.nrsc.gov.in/disaster/disaster/disaster.php?id=fire

3.5 FORECASTING AND EARLY WARNING AGENCIES

Early Warning System is the crux of disaster preparedness and response. Since, its objective is risk reduction by taking necessary precaution and action, earlier the warning is received, the better it is. For the 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 utilised. The use of animal, birds and insects behaviours for hazard early warning is being researched even in developed countries where their particular behaviour is associated to possibility of occurrence of disasters. Such community knowledge may be used for issuing warning message too.

Figure 3: Emergency Warning and Dissemination



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.

4. PREVENTION AND MITIGATION MEASURES

Una district is being considered prone to multi-hazard e.g. flood, drought, earthquake and forest fire related hazards etc. In chapter-2 all potential hazards in district Una has been discussed in details. Una lies in Zone IV and risk gets compounded when hazard meets with Vulnerabilities as high dense population, weak physical structures and conventional construction technologies. Similarly, district is also vulnerable to high degree of fire and chemical explosions. Although, district has not faced any high intensity earthquake but studies envisages that Una can receive an earthquake of 6 to 7.5 Richter scale band. Earthquakes can destroy buildings and infrastructure with secondary effects i.e. fires, embankments failures, release of poisonous gases etc. Unlike man-made disasters, natural hazards like flash floods, earthquakes, and cloudbursts cannot be avoided. However, with mitigation measures along with proper planning of developmental work in the risk prone area, these hazards can be prevented from turning into disasters if we take preventive and mitigation measures in advance. This requires changes in the current development model, practices and priorities. For efficient disaster mitigation, the pre-disaster phase needs to be utilized for planning and implementing preventive measures on the one hand and working on preparedness activities on the other. Disaster is caused due to failure of manmade structures, lack of preparedness and awareness. So far, disaster mitigation efforts are mostly reactive. (HPC, 2001). Since usually the disaster consider as a development problem, prevention and mitigation needs to be built in this process only. The primary objectives of prevention and mitigation efforts for the district Una would be:

- To identify and assess the existing and potential risks and to work towards reducing causalities and damage from disaster.
- To substantially increase public awareness of disaster risk to ensure safer environment for communities to live and work.
- To reduce the risk of loss of life, infrastructure, economic costs, and destruction that result from disasters.

4.1 HAZARD-SPECIFIC PREVENTION & MITIGATION MEASURES (STRUCTURAL & NON-STRUCTURAL MEASURES)

Both structural and non-structural measures shall be taken as part of mitigation plan. 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. Non-structural mitigation refers to policies, awareness, knowledge development, public commitment, information sharing which can reduce risk. As mentioned in the NDMA Guidelines, following are the measures to be taken for prevention and mitigation purposes.

Table 4.1. Hazard-specific Prevention & Mitigation Measures (Structural & Non-Structural Measures)

Hazard	Possibilities Mitigation Measures	Implementing Departments	Remarks
Flood	Structural Mitigation Measures		
	<ul style="list-style-type: none"> Desilting/dredging of water bodies and deepening of water channel (khads) Repair/Construction of embankments/ protection wall and maintenance of Flood Channels, canals, natural drainage, storm water lines Drainage improvement and Diversion of flood water in order to lower water levels in the rivers. 	<ul style="list-style-type: none"> Primary Agency: IPH Supporting Agency: PWD, Municipal Committee (MC) 	
	<ul style="list-style-type: none"> Vegetative cover against the land erosion 	<ul style="list-style-type: none"> Primary Agency: Forest Department 	
	Non-Structural Mitigation Measures		
	<ul style="list-style-type: none"> Flood Zoning mapping and demarcation using GIS Capacity building of volunteers and technicians. Awareness generation on health and safety of livestock. Promote people for the cleanliness of water channels Tie-up with IMD, CWC has been strengthened so that EWS can be effectively communicated to the vulnerable community 	<ul style="list-style-type: none"> Primary Agency: DDMA, Una Supporting Agency: DPRO, IPH, TCP, MC, DRDA 	
	<ul style="list-style-type: none"> Safety audit of existing and proposed housing stock in flood prone areas 	<ul style="list-style-type: none"> Primary Agency: Revenue Dept. Supporting Agency: PWD, TCP 	
	<ul style="list-style-type: none"> Promotion of traditional, local and innovative practices like bamboo/plastic bottle rafts etc. 	<ul style="list-style-type: none"> Primary Agency: DRDA, Una 	
	<ul style="list-style-type: none"> Creation of trained medical first responders for first aid and resuscitation measures Developing of patient evacuation plans 	<ul style="list-style-type: none"> Primary Agency: Medical and Health Dept. Supporting Agency: DDMA and SDMA 	
Fire (Forest and others)	Structural Mitigation Measures		
	<ul style="list-style-type: none"> Establishment of Fire stations as per Fire Safety Bye-laws All fire tenders should be equipped with wireless sets / mobile phones 	<ul style="list-style-type: none"> Primary Agency: Fire Department 	
	<ul style="list-style-type: none"> Zoning of forest areas 	<ul style="list-style-type: none"> Primary Agency: Dept. of Forest 	
	Non-Structural Mitigation Measures		

	<ul style="list-style-type: none"> • Implementation of Fire safety measures and enforcement • Updating basic infrastructure and adopting modern fire-resistant technologies • Improving outreach of fire services. • Making the fire services a multi-hazard response unit • Compulsory fire hazard evaluation of life line building e.g. Hospital, School, Warehouse, industries and all other Public Buildings 	<ul style="list-style-type: none"> • Primary Agency: Fire Department • Supporting Agency: IPH, PWD, MC, TCP and DRDA 	
	<ul style="list-style-type: none"> • Training of community members in fire-fighting techniques • Planning and calendar of evacuation drills/ mock drills in vital installations/ industrial plants/ government buildings / schools and critical infrastructure like hospitals, etc. 	<ul style="list-style-type: none"> • Primary Agency: DDMA • Supporting Agency: Fire Dept. 	
Earthquake	<ul style="list-style-type: none"> • Structural Mitigation Measures 		
	<ul style="list-style-type: none"> • Seismic strengthening of existing structures • Prioritization of structures especially critical/ lifeline structures • Structural safety audit of critical lifeline structures e.g. Hospital, School, Warehouse, industries all other Admin Building • Retrofitting of lifeline structures, weak or old buildings, rural unsafe house and public building and office • Earthquake-resistant construction in urban, rural and semi-urban areas 	<ul style="list-style-type: none"> • Primary Agency: PWD • Supporting Agency: TCP, DRDA, HPSEB, MC 	
	<ul style="list-style-type: none"> • Non-Structural Mitigation Measures 		
	<ul style="list-style-type: none"> • Development of Rapid Visual Screening procedures and Detailed Vulnerability Assessment • Regular conduction of Fire Safety Audits and Electrical Safety Audits • Techno-legal regime for ensuring compliance of earthquake-resistant design and construction practices in all new constructions • Licensing and certification of professionals • Strict enforcement of guideline pertaining to seismic safety for government rural housing, urban development structure 	<ul style="list-style-type: none"> • Primary Agency: PWD • Supporting Agency: TCP, DRDA, HPSEB, MC 	
	<ul style="list-style-type: none"> • Public Awareness Campaigns • Earthquake engineering education • Mock-drills for Schools, Hospitals and , Public Buildings and trainings for mason, engineers and architects • Registration of trained and certified mason 	<ul style="list-style-type: none"> • Primary Agency: DDMA • Supporting Agency: DPRO, MC, DDE, PWD 	

	<ul style="list-style-type: none"> • Medical preparedness • Developing of patient safety and evacuation plans 	<ul style="list-style-type: none"> • Primary Agency: Medical and Health Dept. • Supporting Agency: DDMA and SDMA 	
Drought	<ul style="list-style-type: none"> • Structural Mitigation Measures 		
	<ul style="list-style-type: none"> • Water management including water harvesting and conservation • Promote modern irrigation methods in drought prone areas e.g. micro-irrigation including drip and sprinkler irrigation. • Rain Water Harvesting storage tanks at household level and public buildings • Structures for water harvesting and recharging like wells, ponds, check dams, farm ponds, etc • Development of fodder plots/banks 	<ul style="list-style-type: none"> • Primary Agency: IPH • Supporting Agency: PWD, MC and DRDA 	
	<ul style="list-style-type: none"> • Afforestation with bio-diesel species through the National Afforestation Programme • Development of Pasture land in common property, seed farms and trust land 	<ul style="list-style-type: none"> • Primary Agency: Forest Department • Supporting Agency: Agriculture and Horticulture Dept. 	
	<ul style="list-style-type: none"> • Non-Structural Mitigation Measures 		
	<ul style="list-style-type: none"> • Drought-prone area delineation at block level based on rainfall, cropping pattern, available supplement irrigation, satellite derived indicators, soil map, groundwater availability map, cattle population and fodder demand and socio-economic data • Gradation of drought-prone areas based on the frequency of occurrence of droughts, sensitivity to rainfall variation and vulnerability of community • Monitoring of drought based on rainfall and other parameters, crop health, available ground water and migration and impact on community • Set up control mechanism for regulated water use (ponds, small dams, check dams) on the early onset. 	<ul style="list-style-type: none"> • Primary Agency: IPH • Supporting Agency: PWD, MC, DDMA and IMD regional office 	
	<ul style="list-style-type: none"> • Insuring of crops 	<ul style="list-style-type: none"> • Primary Agency: Banks • Supporting Agency: Revenue Dept. & Agriculture and Horticulture Dept. 	

	<ul style="list-style-type: none"> Farmer education to practice drought resistant crops and efficient water use. 	<ul style="list-style-type: none"> Primary Agency: Agriculture and Horticulture Dept. Supporting Agency: DDMA 	
Chemical & Industrial	<ul style="list-style-type: none"> Structural Mitigation Measures 		
	<ul style="list-style-type: none"> Creation of appropriate infrastructure as mentioned in Off-site and On-site plans including Public Address system 	<ul style="list-style-type: none"> Primary Agency: Dept. of Industries Supporting Agency: PWD and MC 	
	<ul style="list-style-type: none"> Non-Structural Mitigation Measures 		
	<ul style="list-style-type: none"> Enforcement of code of practices, procedures and standards Audits of On-site & Off-site Emergency plans at regular intervals Statutory inspection, safety audit and testing of emergency plans Safety Auditing 	<ul style="list-style-type: none"> Primary Agency: Dept. of Industries Supporting Agency: Dept. of labour and Employment, PWD and MC 	
	<ul style="list-style-type: none"> Hotline telephone connection with nearby emergency services 	<ul style="list-style-type: none"> Primary Agency: BSNL Supporting Agency: Dept. of Industries 	
	<ul style="list-style-type: none"> Awareness generation among community 	<ul style="list-style-type: none"> Primary Agency: DDMA Supporting Agency: Dept. of Industries 	
	<ul style="list-style-type: none"> Training of specialized Medical First Aid Responders 	<ul style="list-style-type: none"> Primary Agency: Medical and Health Dept. Supporting Agency: Dept. of Industries 	
Road Accident	<ul style="list-style-type: none"> Structural Mitigation Measures 		
	<ul style="list-style-type: none"> Provision of adequate signboards, speed breakers and guard stones near the accident prone spots. Adequate construction/ resurfacing/widening etc. at risky or prone areas Construction of pedestrians both side of the road Install reflectors on roads so that deviations and medians are clearly visible to drivers. 	<ul style="list-style-type: none"> Primary Agency: PWD Supporting Agency: RTO and Revenue Dept. 	
	<ul style="list-style-type: none"> Non-Structural Mitigation Measures 		

	<ul style="list-style-type: none"> Setting up of a Highway Safety Patrol 	<ul style="list-style-type: none"> Primary Agency: Police Dept. 	
	<ul style="list-style-type: none"> Awareness and Installation of warning hoardings 	<ul style="list-style-type: none"> Primary Agency: DDMA and Revenue 	
	<ul style="list-style-type: none"> Vehicle registration and proper investigation under road safety acts 	<ul style="list-style-type: none"> Primary Agency: RTO 	
Landslide	<ul style="list-style-type: none"> Structural Mitigation Measures 		
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Primary Agency: IPH Supporting Agency: Forest Dept. 	
	<ul style="list-style-type: none"> Stabilization of slopes in landslides prone areas. Construction of retaining walls and other structures to bring greater stability to dangerous slopes. Construction walls of piles in slope areas to prevent landslides. 	<ul style="list-style-type: none"> Primary Agency: PWD Supporting Agency: IPH, TCP 	
	<ul style="list-style-type: none"> Non-Structural Mitigation Measures 		
	<ul style="list-style-type: none"> Enforce land-use and building ordinances in areas susceptible to landslides and debris flows. Discourage construction of buildings on steep slopes or near streams and rivers. Assessment of the availability of equipment's that would be needed at the time of landslides and regular updating of them. 	<ul style="list-style-type: none"> Primary Agency: TCP Supporting Agency: PWD 	

4.2 EXISTING DEVELOPMENT SCHEMES / PROJECTS: MAINSTREAMING IN DEVELOPMENT PLANS AND PROGRAMS

Disasters are basically unresolved problem of development and its increase vulnerability. Therefore, disaster risk can best be addressed through integrating into the developmental planning, programmes and processes. Mainstreaming DRR is a prerequisite for safe and sustainable development. Following is the list of the projects and the schemes which help in the prevention and the mitigation measures going on Una district with key sectors where integration of DRR can be done in context to make disaster lessen district of the state of Himachal.

There are a number of on-going schemes and projects in the district which will help out the widowed / destitute / handicapped people in a post-disaster scenario in order to generate livelihood options for them. There are also a few schemes which are for the health protective measures. These schemes can be used even in normal times in order to generate employment as well as development of the population. The projects indicate the ongoing works which will help in the prevention and mitigation process. Following is the list of the projects and the schemes which help in the prevention and the mitigation measures going on Una district with key sectors where integration of DRR will be done in context to make disaster lessen district of the state of Himachal.

Table: Mainstreaming risk mitigation in to ongoing programs

Name of Programme	Nature of mitigation measures to be integrated	Implementing Department	DRR	Time Frame
Mahatma Gandhi National Rural Employment Guarantee Scheme MGNREGS	<ul style="list-style-type: none"> • Construction of Tube wells can be done. • Building of Roads for places which are not connected to other parts of the district. • Levelling of low lying areas during flood to a higher level to prevent those areas. • Construction of check dams and embankments and drainage systems to prevent flooding of those areas. • Water conservation and water harvesting; • Drought proofing, including forestation and tree plantation; • Irrigation canals, including micro and minor irrigation works; • Plantation and Horticulture; • Renovation of traditional water bodies, including de-silting of tanks; • Land development; • Flood control and protection works, including drainage in water logged areas; and • Construction of Tube wells can be done. • Building of Roads for places which are not connected to other parts of the district. • Levelling of low lying areas during flood to a higher level to prevent those areas. • Construction of check dams and embankments and drainage systems to prevent flooding of those areas. • Water conservation and water harvesting; • Drought proofing, including forestation and tree plantation; • Irrigation canals, including micro and minor irrigation works; • Plantation and Horticulture; • Renovation of traditional water bodies, including de-silting of tanks; • Land development; • Flood control and protection works, including drainage in water logged areas; and • Rural connectivity to provide all weather access. 			
Sarva Shiksha Abhiyan	<ul style="list-style-type: none"> • This scheme can be used for creating awareness about mitigation and preparedness about accidents that are in control of man, in collaboration with educational 			

	institutions to the people so that they can make use of it when required.			
NRHM	<ul style="list-style-type: none"> This scheme can be used to facilitate for voluntary first aid during disaster and training the local population to deal with minor injuries so that they do not have to wait for professional help to help any individual. Training of nurses can be carried out as a preparatory plan. 			
Mukhyamantri Avas Yojana	<ul style="list-style-type: none"> The scheme can facilitate the rehabilitation programs among the affected villages or the ones that are likely to be affected and lie in the vulnerable zone. They can come up with collaboration with the construction norms 			
Jal- Abhishekh Abhiyan	<ul style="list-style-type: none"> The aim of the scheme is to provide safe drinking water so it can be used to provide for clean drinking water during response and relief period .It can work in collaboration with sanitation systems during relief period and help in avoiding any kind of future epidemics in the affected region. 			
Samagra Swachta Abhiyan	<ul style="list-style-type: none"> This scheme can also be used for providing sanitation in the relief camps to the affected population. Since relief camps are the places where lot of diseases and epidemics may break out, proper defecation and sanitation should be ensured by this scheme. 			
Madhyannah Bhojan Karyakram	<ul style="list-style-type: none"> The scheme can provide for food supply during emergency situations in the affected areas or even in the relief camps. 			
Rural Infrastructure Development Fund (R.I.D.F)	<ul style="list-style-type: none"> The project components include sprinkler system, drip system, farm tank, shallow well, shallow tube well, deep tube well, small and medium lifts and pumping machinery. For sprinkler and drip systems, the farmers shall be provided 80% subsidy and 20% would be beneficiary's contribution. Besides this the farmers shall also be provided 50% assistance for creation of farm tank, shallow well, shallow tube well, deep tube well, small and medium lifts and pumping machinery. 			
Rashtriya Krishi Bima Yojna (Rkby)	<ul style="list-style-type: none"> Crops covered are Wheat, Maize, Paddy, and tomato crop in Sadar block. 50% subsidy on premium is being provided to small and marginal farmers. The scheme is compulsory for loanee farmers and optional for non loanee farmers. The scheme provides comprehensive risks insurance against yield losses viz. drought, hailstorm, Floods and pests disease etc. The Agriculture Insurance Co. of India (AICI) is implementing the scheme. 			

Rashtriya Krishi Vikas Yojna (Rkvy)	<ul style="list-style-type: none"> • The RKVY aims at achieving 4% annual growth in the agriculture sector during the XI Plan period, by ensuring a holistic development of Agriculture and allied sectors. • Crop Diversification: Under this scheme vegetable seeds have been provided to the farmers on rationalized subsidy for increasing the area under vegetable cultivation in this district. • Promotion of Organic Farming: Construction / installation of vermicompost pit / vermibed on 50% subsidy to the farmers. • Mukhayamantri Adarsh Krishi Gaon Yojna. Under this scheme, Rs. 10 lac will be provided as gap filling funds for creation & up gradation of agriculture infrastructure in one panchayat of each constituency to be developed as a Model panchayat. 			
National Food Security Mission	<ul style="list-style-type: none"> • Under this Mission to increase the production and productivity of Wheat. The Mission provides assistance for laying cluster demonstrations, distribution of Certified Seed, Micro-Nutrients, Plant and soil protection material, liming of acidic soils, improved implements and machinery, introduction of IPM, INM and capacity building of the farmers. 			
National Mission On Sustainable Agriculture	<ul style="list-style-type: none"> • This Scheme aiming enhancing agricultural productivity especially in rained areas focusing on integrated farming, water use efficiency, soil health management and synergizing resource conservation. 			
Crop Insurance Scheme	<ul style="list-style-type: none"> • The scheme provides comprehensive risks insurance against yield losses viz. drought, hail storm, floods and pests and disease etc. The Agriculture Insurance Company of India Ltd. (AIC) is implementing the scheme. The crops covered are Wheat, Barley, Maize, Paddy and Potato. 			
Weather based Crop Insurance Scheme	<ul style="list-style-type: none"> • For Mango / Kinnow 			
Indira Awaas Yojana / Rajiv Awaas Yojana	<ul style="list-style-type: none"> • Under this scheme w.e.f. 01-04-2008, the assistance has been enhanced from Rs.48500/- per beneficiary to Rs.75000/- per beneficiary, and is being given to BPL families for the construction of new houses. Gram Sabha does the selection of beneficiaries under this scheme. 			
Drought Prone Area Programme	<ul style="list-style-type: none"> • This programme is basically an area development programme and aims at integrated development of natural resources like land, water, vegetation etc. by taking up watershed development projects. 			

Mahila Mandal Protsahan Yojana	<ul style="list-style-type: none"> This Campaign envisages making the villages free from Open Defecation, ensuring School & Anganwari Sanitation, Establishing Sanitary Complexes exclusively for women and ensuring Total Environmental Sanitation in villages. 			
Kishori Shakti Yojna	<ul style="list-style-type: none"> Kishori Shakti Yojna (KSY) is a central sponsored scheme for empowerment of the Adolescent Girls (AGs) in the age group of 11-18 years. The main objectives of the scheme are to improve their nutrition and health status, spread awareness among them about health, hygiene, nutrition Adolescent Reproductive and Sexual Health (ARSH) 			

Table 4.3: Brief summarization of above mentioned above important mitigation measures in District Una (H.P.)

#	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> <ul style="list-style-type: none"> District administration office building, all police and fire stations 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 <i>Do's and Don'ts</i> 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	District administration, DDMC, PWD and DDA

		utilized for providing assistance in retrofitting and reconstruction exercises.	
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 has 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 multistoried 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

5.1 INTRODUCTION

Disaster preparedness, as already stated, is a broad concept that *describes a set of measures that minimizes the adverse effects of a hazard including loss of life and property and disruption of livelihoods*. Disaster preparedness is achieved partially through readiness measures that expedite emergency response, rehabilitation and recovery and result in rapid, timely and targeted assistance. It is also achieved through community-based approaches and activities that build the capacities of people and communities to cope with and minimize the effects of a disaster on their lives. District administration Una (H.P.), has prepared a comprehensive plan. The plan basically detailed out preparedness strategy under which communities and district authorities would be prepared so that level of destruction and unnecessarily delay in relief and response can be reduced. The preparedness measures that is going to include in this chapter include discuss and setting up disaster relief machinery, formulation of community preparedness plans, training to the specific groups and earmarking funds for relief operations.

5.2 GENERAL PREPAREDNESS CHECKLIST FOR UNA (H.P.)

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

Table 5.1: Dept. wise Preparedness Checklist and their task and responsibilities

#	Department	Preparedness Task and Responsibilities
1	District Admin / DDMA	<ul style="list-style-type: none"> • Prepare, Coordinate and monitor overall district response. • Review readiness to respond 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. • Ensure prepared and response plans are in place for all Departments of the Government. • Ensure enforcement of the codes, by laws and act such as National Building Code, Bureau of Indian Standards, etc. in the upcoming development projects, construction work, and commercial complexes.
2	DEOC	<ul style="list-style-type: none"> • Ensure proper functioning of the DEOC including hunting line 1077. • Prepare and maintain inventory of maps, information and contact details. • Prepare and maintain contract agreements for procuring different goods and services. • Identify, list and maintain vendors of critical goods and services. • Ensure functioning of Satellite phones. • Track stock piling of multi - hazard emergency equipment and maintenance.
3	HPSDMA	<ul style="list-style-type: none"> • Facilitating resources on demands raised by administration. • Maintain state level inventory of critical resources. • Constitute and train disaster management teams which could be deployed in the event of a disaster. • To check the readiness, conduct mock drills. • Track and mobilize resources during disasters. • Update IDRN. • Ensure functioning of Satellite phones.
4	Police Department	<ul style="list-style-type: none"> • Ensure proper functioning of all equipment's. • 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. • 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.

		<ul style="list-style-type: none"> • Police personal and staff of PCR vans should keep basic first aid box and ensure proper functioning of equipment's. • Train police personnel and staff of PCR vans in first aid and basic life saving techniques. • Prepare for proper protection to women, girls and children to avoid cases of human trafficking. • Prepare for protection of dead bodies to avoid their theft and false claims. • Prepare for safety and security of food and other commodities. • Prepare for protection against hoarding, black marketing of relief material. • Prepare for safety and security arrangements for evacuated area, affected area, transit camps, relief camps, hospital, medical centre, cattle camps and feeding centres. • Ensure traffic plan of Police at disposal. • Keep updated telephone Nos and databases of reserved battalions of police, BDS and Dog Squad in police control Room
5	Home Guards	<ul style="list-style-type: none"> • Ensure proper functioning of all equipment's. • Prepare teams trained in search and rescue, first aid, firefighting, etc. • Prepare a database of volunteers and equipment's and update the same in DDMRI. Emergency arrangements in industries and direct for corrective measures, if necessary, with respect to statutory provisions for safety. • Direct the management of industries and units to prepare on-site emergency plan of their units.
6	Fire Services	<ul style="list-style-type: none"> • Ensure proper functioning of all firefighting equipment's, appliances and respiratory equipment's. • 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, malls, hospitals, etc. • Make a database of existing firefighting services and facilities provided with private agencies. • Be aware of MAH units and other potential hazardous installations and level of possible emergency required. • Prepare to deal with leakage of flammable toxic substances. • Ensure, at disposal, the list of adverse effects of chemicals and antidotes / methods to deal with emergency involving each chemical. This is prepared by Dept. of Industrial Safety and Health. (See annexure VII) • Review the adequacy of existing fire prevention arrangements in each MAH and other hazardous units before and after the installations. Share the report with Dept. of Industrial Safety and Health. • Identify roads and routes of access and escape to and from MAH and other potential hazardous units.
7	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 Dept. for hygiene promotion and public health issues.

		<ul style="list-style-type: none"> • Ensure availability of trained mobile medical teams at disposal. • Prepare psychological and psychosocial care teams. • Ensure availability of generator sets and buffer stock of fuel at disposal. • Ensure availability of adequate supply of life saving equipment's and stock of medicines, portable supplies including portable oxygen cylinders, portable X - ray machine, portable ultrasound machines, triage tags, etc. • 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). • 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 Dept. 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.
8	District Red Cross Society	<ul style="list-style-type: none"> • Ensure availability of fund for relief materials / work. • Train and prepare ward and village wise first aid teams. • Prepare database of blood donors in the district and update the same in DDMRI. • Prepare database of trainers & volunteers and update the same in DDMRI. • Prepare a database of voluntary organizations and service they offer, ensure their authenticity, and update the same in DDMRI. • Ensure availability of adequate stock of food items, blankets, clothing including woollens, utensils, first aid kits, stretchers, medicines etc. in view of any emergency situation. • Ensure availability of adequate stock of aids (hearing, visual, crutches, artificial limbs, etc.) for physically challenged persons. • Ensure availability of old blankets / gunny bags for animal during cold wave period.
9	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 Dept. and concerned officers dealing with agricultural inputs, credit extension, etc. to

		<p>keep a close watch on the monsoon situation, extreme temperature, hail and wind storm.</p> <ul style="list-style-type: none"> • 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 minimise 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 insurance, compensation, repair of agro equipment's and restoring of agricultural activities at the earliest. • Identify sources of feed and fodder.
10	Animal Husbandry	<ul style="list-style-type: none"> • Ensure solution / 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.

		<ul style="list-style-type: none"> • Ensure availability of sprinklers/ foggers in shed / camp during heat waves period. • Prepare for special care for productive, lactating and pregnant animals; also supplement them with additional concentrates and fodder. • Ensure proper administration of deworming and vaccinations for cattle, sheep and goats, pigs and other relevant measures for disease management. • Prepare for arrangements for transportation of critically injured livestock. • Identify space for burial of animals and ensure proper disposal of dead animals.
11	Bharat Sanchar Nigam Limited	<ul style="list-style-type: none"> • Procure recovery plans from private communication service providers for their recovery time objectives. • Prepare for alternate communication System
12	Development and Panchayat	<ul style="list-style-type: none"> • Prepare mechanism for proper solid waste management, disposal of waste and removal of debris in shelter and relief camps, feeding centres and affected rural areas. • Prepare for sanitation operations in view of post flood situations. • Ensure availability of tractor trolleys and other required equipment for the same. • Plan to provide building/guest house / dharamshalas at different locations to establish control room, first aid and medical post or shelters during emergency. • Prepare a database of catering services providers. • Prepare mechanism for proper solid waste management and disposal of waste in shelter and relief camps, feeding centres and affected villages. • Prepare for prompt provision of temporary toilets/ trench latrines in the affected area and relief camps in rural area.
13	Education Department	<ul style="list-style-type: none"> • Organise awareness generation programs in schools and colleges for students, teachers, administrative staff and other helpers. These programs should focus on dos and don'ts for various hazards and safe evacuation in case of any emergency. • Conduct hygiene promotion activities as per direction issued by the Health Dept. on a regular basis. • Ensure preparation of first aid and disaster management kit in each school and college. • Ensure preparation of school and colleges disaster management plan. • Identify safe schools and colleges to serve as relief shelter in case of any emergency within that area, only for short period of time.
14	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/ recommissioning of affected power supply system.

		<ul style="list-style-type: none"> • 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.
15	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. • 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.
16	Forest Department	<ul style="list-style-type: none"> • Ensure proper functioning of all equipment and vehicles. • Prepare a database of Aara 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.
17	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.
18	Irrigation Department	<ul style="list-style-type: none"> • Ensure proper early warning mechanism in place for flood by monitoring water level of surface water bodies. • Ensure proper and timely inspection of conditions of bunds, siphons, regulators, embankments, inlet and outlets of lakes and reservoirs, etc. • Ensure timely de-silting and dredging of rivers and canals, if required. • Ensure prompt repair of channels, if required. • Ensure proper functioning of all equipment including dewatering pumps.

		<ul style="list-style-type: none"> • Prepare for the arrangements of clean drinking water for affected livestock and poultry. • Ensure availability and well-functioning of all equipment and vehicles. • 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. • 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.
19	Municipal Council / Committee	<ul style="list-style-type: none"> • Prepare for sanitation operations in view of post flood situations within jurisdiction of the area. • Ensure cleaning of drains before the monsoon season. • Prepare mechanism for proper solid waste management and disposal of waste in shelter and relief camps, feeding centres and affected area. • Ensure availability of tractor trolleys and other required equipment for the same. • Prepare mechanism for proper solid waste management, disposal of waste and removal of debris in shelter and relief camps, feeding centres and affected areas in their jurisdiction. • Plan to provide building/ guest house at different locations to establish control room, first aid and medical post or shelters during emergency in coordination with HUDA.
20	Pollution Control Board	<ul style="list-style-type: none"> • Prepare a database of hazardous chemicals and pollutants in the districts and their probable adverse effects on environment. • Prepare for methods and techniques of decontamination of the same.
21	Public Relations Department	<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. • Ensure distribution of IEC material to community for awareness generation about the same. • Publicize the information in the interest of public awareness through booklets, pamphlets, radio, television, film shows, newspapers, documentary films, door to door campaign, meetings, etc.

22	Public Works Department (B&R)	<ul style="list-style-type: none"> • Ensure availability and functioning of all equipment like cranes, JCB, etc. • 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. • Prepare for prompt establishment of helipad near the affected site for VVIP visits. • Prepare for restoration of government buildings damaged during disaster.
23	Regional Transport Authority	<ul style="list-style-type: none"> • Make a database of private vehicles available with schools, colleges and other private agencies.
24	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. • Prepare Flood Control Order by 31st May of each year. • 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 form as care and housing. • Identify site(s) for temporary burial.

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

- Preparation of Disaster Management Plans at District and local level
- Implementing of Disaster Management Plans

- Holding regular meetings at District and Sub-Division level to reviewing the readiness of the administrative machinery to deal with disasters.
- Constitution of Relief Committees at all levels.
- Regular training programmes of Government functionaries, PRIs, ULBs and other stakeholders in various facets of disaster management.
- Public awareness and education in disaster management.
- Community training and empowerment.
- Taking preventive and mitigation measures for the identified hazards.
- Integration of Disaster Risk Reduction (DRR) into on-going development programmes of all departments.
- Establishing effective early warning system for the vulnerable areas and communities.
- Improving the response capacities of the search and rescue teams.
- Conducting regular mock drills
- Preparedness for response after a disaster by the District Administration should take into consideration some guidelines and appropriate action.

5.3 FORMATION OF TEAM

5.3.1 EARLY WARNING SYSTEM

District Emergency Operations Centre has the responsibility of disseminating warning of any sort with regard to any likely exigency received from the agencies responsible for generating these; IMD, CWC and GSI. Key Responsibilities with regard to this include: The systems of DEOC shall be designed in such a way that information can be promptly accessed and spread to concerned frontline departments. Rapid dissemination contributes to quick response and effective decision-making during emergencies. DEOC would ideally be the meeting place of DDMA and would act as master coordination and control point for all disaster management efforts, as the place of decision-making and effective implementation under a unified command. The DEOCs shall function round the clock and shall maintain direct linkage with SEOCs through phone, fax, wireless and internet. Ham radios, integrated wireless systems, voice logger (computer recorded audio and video facility, automatic recorders for receiving all communication), high frequency radio telephone (100w) transistorized radio receiver, satellite and computer operational system GIS and GPS.

Table: 5.2: Warning agencies / Responsible Departments in the District

Type of Disaster	Warning agencies	Responsible Departments in the District
Earthquakes	IMD, Ministry of Earth sciences / Geological Survey of India, Wadia Institute of Himalayan Geology	District administration and all departments in the district
Landslides	IMD, Ministry of Earth sciences, Wadia institute of Geology, RS Environment SC& T. BRO, Urban Development.	District administration, Public Work Department
Floods / Flash Floods / Cloud Burst	IMD,CWC, Dept. of ES&T	District administration, Irrigation and Public Health

Village fire	IPH, Health and Admin., Home	District administration, Fire Department
Forest Fires	Fire Department, RS, Home and Admin.	District administration, Forest Department
Drought	IMD, Revenue, RD, DRDA, Nauri and Palampur university, Horticulture, S&T	Agriculture & Horticulture
Industrial Hazard	Labour & Employment, Admin, Home, Pollution Control Board	District administration , Dept. of Industry
Wind Storm Hazard	IMD, Agriculture and Horticulture	District administration, Revenue
Road Accidents	Transport, PWD, BRO, home and Health, District Road Safety Committees	District administration
Boat capsizing	District DDMA, Home and Health and Family Welfare	District administration, fishery
Stampede	Admin, Health and Family Welfare & Art Language and Culture	District administration, Police, Home Guard
Dam / Reservoir Burst	IPH, Environment Science and Technology, CWC and Administration	District administration HPSEB

Table 5.3: Details of the early warning agencies

#	Hazard	Name of the Warning Agency	Contact Details
1	Earthquake	N - (IMD) Indian Meteorological Dept. Shimla S - SDMA / SEOC D - DDMA / DEOC	011-24641697 Delhi. 0177-2626211/ 0177-2629724 / 0177-2624976; 9816127668 <i>mm_sandhu@yahoo.co.in</i> 1077, 01892-229050 to 53
2	Landslide	N - (GSI) Geological Survey of India / DDMA / D - DEOC	0172-2622529 Fax; 0172-2621945; Mob: 094173-71954. <i>Joginder.singh@gsi.gov.in</i> <i>gsichd@sancharnet.in</i> 1077, 01892-229050 to 53
3	Heavy Rain / Snowfall	N - (IMD) Indian Meteorological Dept. / S - SEOC D - DEOC	0177-2626211 1070 1077, 01892-229050 to 53
4	Flood / Flash Flood	N - (CWC) Central Water Commission S - (CWC) Central Water Commission D - Irrigation and Public Health Dept. / DEOC	0183-236105 Amritsar 0177-2624036, 0177-2624224 <i>dirmashimlacwc@nic.in</i>

5.3.2 SEARCH & RESCUE

After any disaster, main activity is search and rescue. By effectively performing this activity loss due to disasters can be minimized. People who are trapped under destroyed buildings or are isolated due to any disaster need immediate assistance. The District Commissioner, in conjunction with local authorities will be responsible for the search and rescue operations in an affected region. At present, Nodal Dept. for this activity is Home Guard 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. There are other bodies too that help these departments in this work, like, Health department, Fire department. The district administration should acquire the expenditure on constituting, training, equipping and maintaining search and rescue teams. In doing so, the DC will be guided by relevant disaster management plans and will be supported by Government departments and local authorities.

Setting up and training of Search and Rescue team:

- Search rescue teams will be established drawing staff from suitable uniformed services
- Search and rescue teams will be trained on the collapsed structure, confined space search & rescue, and rope rescue etc.
- Required equipment for the teams will be procured
- Regular drills will be held to practice and demonstrate search and rescue skills by the teams

5.3.3 EVACUATION

Evacuation is a risk management strategy. It involves the movement of people to a safer location in some contexts, related to the threat and impact of natural hazard events such as severe storms, floods, earthquakes and wild fires, hundreds to millions of people may need to move within a very short period of time. Planning for such situations is critical to effectively mobilize and coordinate capacity and resources, and manage the safe and timely evacuation of all persons at risk, to meet emergency needs for shelter and assistance, and to ensure evacuees and other affected people are able to recover from the disruption and risks created by their displacement as safely and quickly as possible.

The following factors need consideration:

- Identification of alternative routes.
- Transport arrangement.
- Approaches to the shelter location in light of disruption due to hazard impact and traffic blockades.
- Provision of essential facilities like drinking water, food, clothing, communication, medical, electrical and feeding arrangements, etc.
- Financial and immediate assistance.
- First-aid
- Security
- Counselling
- Appropriate welfare measures throughout all stages.

Evacuation route maps in life line Building

Evacuation route maps have been posted in each work area. The following information is marked on evacuation maps:

- Emergency exits

- Primary and secondary evacuation routes
- Locations of fire extinguishers
- Fire alarm pull stations location
- Assembly points

Evacuation Team in the District

- Revenue Department
- Police
- Commandant of Home Guards
- Regional Transport Officer
- Fire Station

5.3.4 DAMAGE AND LOSS ASSESSMENT IN THE DISTRICT

Damage Assessment Teams will be multi-disciplinary teams, whose having knowledge of disaster affected area, physical characteristic of the region, language etc. These officials should share a common interest and commitment, to be set up immediately after disaster. There should be a clear allocation of responsibilities among team members It should include Z.P. members, agricultural officer to assess the crop damage, executive engineer of PWD to assess the damaged houses, S.P to maintain the law and order situation, NGOs and volunteer organizations, Tehsildar, etc. This team may immediately assess the damage undergone due to disaster and report it to the concerned Dept. to get the immediate relief material from the government. Damage assessment procedures are required to avoid litigations and delays in gratuitous relief and compensation, including insurance. The response to disaster would be more effective if the damage assessment is immediate and timely. The formats for damage assessment are given in the annexures-12.

5.4 PROTOCOL FOR SEEKING HELP FROM OTHER AGENCIES

Disasters affect all aspect of human life and all aspects of development. Therefore, Disaster Management is a multi-agency function. It involves actions by all departments, organization and agencies. In short, it involves all departments of the State Government, Central Government, Armed Forces, civil society and commercial organization (NGOS, CBOs, Faith Based Organization, Traders Organizations, and Corporate Sector), international organizations working in the field of disaster response, UN Agencies etc. It is therefore, important that roles and responsibilities of each stakeholder is laid down during normal time and coordination mechanism worked out so that the same works during emergencies.

5.4.1 CORPORATE SECTOR

District Authorities shall ensure participation of corporate sector in activities related to three phases of disaster management. The corporate sector is expected to provide resources to the government under CSR.

5.4.2 ARMY / AIR FORCE

The assistance from army / air force wing can be taken on requirement during major rescue operations as per standing guidelines given at ANNEXURE-10.

5.4.3 FOREIGN ASSISTANCE

As a stated policy of the Government of India no appeals shall be made seeking foreign aid for disaster response. However, if the foreign national governments voluntarily offer assistance as a goodwill gesture in solidarity of the disaster victims, the Ministry of Home Affairs will coordinate with the Ministry of External Affairs for obtaining and channelizing such assistance. All national and international non-government agencies while rendering emergency support functions on the ground will function under the overall command of the State Government through the Incident Commander.

5.5 OPERATIONAL CHECK-UPS OF VARIOUS SYSTEM

Warning system are checking periodically like, Satellite phone, Hot Line, Telephone connection, HIMSWAN connectivity etc. In Pre- monsoon meeting also give direction for checking warning system like, port signals. Operational check-up of warning system is done twice a year at the time of conduct of mock drill on January/February and July/August. Operational check-up of Emergency Operation Centre is carry out month wise and check out all facility and equipment in DEOC.

5.6 COMMEND & COORDINATION

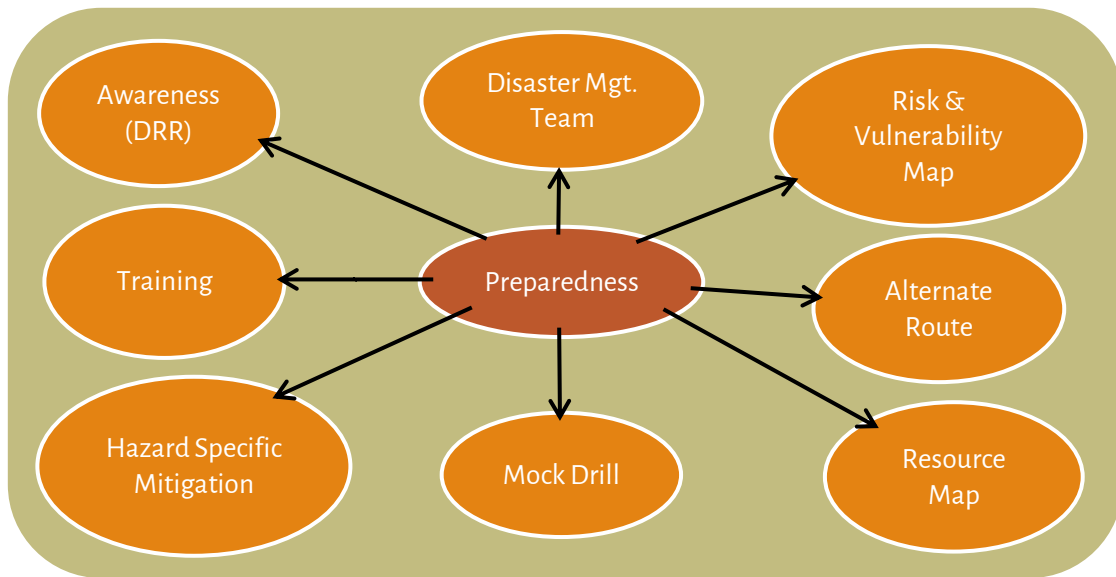
Command allows agencies with different functional authorities, roles, and responsibilities to work together effectively without affecting individual accountability. Under a Unified Command, a single, coordinated Incident Action Plan will direct all activities. The commanders at the Incident Command System will supervise a single Command and all stakeholders will seek the same purpose in conducting emergency operations. Regular Liaison and discussions with concerned line departments / organizations, NGO's, CBO's / PRIs, etc. and their representatives at various locations, keeping Incidence Commander (IC) informed about arrivals of all the Government and Non-government agencies and their available resources, and briefing meetings to all Government and Non-government agencies with the IC. This coordination will also involve facilitating disaster-response by addressing special needs of services delivery mechanism.

5.7 COMMUNITY EDUCATION AND PREPAREDNESS PROGRAMME

Community is the first and last to face the disaster. Equipping them, educating and preparing them for the recurring disasters are of vital importance. The most vulnerable areas are to be identified and periodic awareness programme are to be provided at the Ward level, Panchayat level, Educational Institutions, Social Organizations etc. It is essential to examine the various methods in which the community can be effectively involved in planning for disaster management. A community which is aware and well equipped to handle disasters will face them boldly.

Community awareness programmes are conducted regularly in various parts of the district. During 2013-16, such workshops were conducted at Sadar, Shri Naina Devi Ji, Chumarwin and Jhandutta block and awareness was spread among the community. The stakeholders from PRI", SHG", NGO's, ULBs, NCC, NSS and Scouts and Guides volunteers and local officers were sensitized about various measures of preparedness and relief and rescue operations. During 2013-16, the Dept. of Civil defence, NDRF, & Language Dept. has also conducted mock drills / Nukar Natak in educational, religious and office premises for spreading awareness among grass root level stakeholders.

Fig-5.1 Community Education and Preparedness Programme



5.8 STANDARD OPERATING PROCEDURES

During Post disaster district may require support from other adjoining districts, for this the DEOC head can seek help from other districts through Divisional Commissioner or SEOC. This portion will elaborate the issues pertaining to mutual support, understanding and coordination at the inter district level. In Una district inter district coordination was possible only at collector level or head of Dept. level during disaster and also to prevent any mishap like flood situation arising out of release of water from dam of other district.

This section will elaborate the mutual coordination, and clarity of role amongst intra district nodal agencies at the district, and sub district level (including Block level headquarters), with reference to disaster management functions. In the present scenario, intra district coordination is possible only with the orders of District collector or senior officer.

5.9 KNOWLEDGE MANAGEMENT: INDIA DISASTER KNOWLEDGE NETWORK

It is a web portal, which offers a broad array of resources and services, such as knowledge collaboration, networking, maps, emergency contact information system and several other valuable information related to natural disasters. It provides a platform to share knowledge and create an environment to learn about disaster management through interactive process. The main goal of IDKN is to create an easy to use unified point of access to disaster management knowledge and services and facilitate in accelerated and improved quality of disaster mitigation and response. There are more than 20 knowledge partners in IDKN which includes 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 utilize their experience and knowledge for DM in the district.

5.9.1 DOCUMENTATION OF 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. The Thalot tragedy at Mandi which occurred in June, 2014 has been kept in mind while devising plans for people living around the catchment areas of Koldam and Bhakra Dam areas where there is also huge influx of tourists mainly during the summer season. The Dam authorities sound hooters before discharging water, people are being regularly sensitized through local bodies and sign boards have been put up by NTPC authorities in sensitive spots as warnings to people to check them from going near the river bed. The safe evacuation of two workers trapped inside the Tihra Tunnel, the site of four lanes, in September 2015, at a distance of approximately 16 KMs from District Headquarters, has been set up as a bench mark for saving and valuing human lives in rescue operations for all the times to come. Different departments namely HPPWD, I&PH, Education, Home Guards, Police, DRDA, Rural Development have been corresponded with, to prepare their specific Dept. related disaster management plans on priority basis and to submit the same with DDMA so that the same can be processed and taken up with SDMA for further updation.

5.10 RESOURCE MANAGEMENT: INDIAN DISASTER RESOURCE NETWORK

India Disaster Resource Network is a crucial database for response any disaster. It is a nation-wide electronic inventory of resources that enlists equipment and human resources, collated from districts, states and national level line departments and agencies. It is a web based platform, for managing the inventory of equipment, skilled human resources and critical supplies for emergency response. This database will also enable them to assess the level of preparedness for specific vulnerabilities. Total 226 technical items listed in the resource inventory. Primary focus of IDRN portal is to enable the decision makers to find answers on availability of equipment and human resources required to combat any emergency situation. This database will also enable them to assess the level of preparedness for specific disasters. IDRN updation is regularly base work.

5.11 MEDIA MANAGEMENT

Media can play a major during disaster. They can aid in information dissemination about help-line, aid-distribution camps, emergency phone number or the needs of the people. Further, they can also help in quashing rumours, for crowd management and prevent panic situation. Media can 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. This may be done through various media such as newspapers, television, radio, internet, media and information van, street theatre, etc. The DPRO in consultation with the DDMA would take appropriate steps in this direction.

5.12 PREPARATION OF DISABILITY INCLUSIVE PLAN

Early warning provides a very important link between preparedness measures and response action, which in turn reduces the risk of exposure and injury of community members. A comprehensive early warning system is very important in any community, however, even more so in a community with PWDs as they are frequently overlooked in disaster situations.

Table 5.4: Disability Inclusive plan

Types of Disabilities	Warning System	Responsibility
Visual Impairment	<ul style="list-style-type: none"> • Auditory Signal System / Alarms • Announcements • Posters written with large characters and colour contrast 	DDMA, Social Welfare Department, Individual Household
Hearing Impairment	<ul style="list-style-type: none"> • Visual Signal Systems - Red Flag, Symbols • Pictures • Turn lights off-on frequently 	
Physical Impairment	<ul style="list-style-type: none"> • Auditory Signal System / Alarms • Announcements 	
Intellectual Impairment	<ul style="list-style-type: none"> • Special Signals- Red flag, Symbols • Clear and brief announcements by rescue workers 	

5.13 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.

5.14 HOSPITAL PREPAREDNESS

The Chief Medical Officer of the district in coordination with the DDMA will ensure that the hospitals and health centers in the district are prepared to respond to various disasters. Towards strengthening preparedness, the following action will be undertaken:

- Train the medical staff to respond to disasters
- Prepare hospital level disaster response and preparedness plan and hold mock drills
- Maintaining a stockpile of emergency resources
- Prepare resource mobilization plan
- Maintain emergency contact numbers of various hospitals including private and military hospitals
- Map and identify blood banks and blood donors in and around the district
- Map and identify suppliers for critical medicines

5.15 SCHOOL PREPAREDNESS

The District Education Officer of the district in coordination with the DDMA will ensure that the schools in the district are prepared to respond to various disasters. Towards strengthening preparedness, the following action will be undertaken:

- Train the school teachers, staff and students to respond to disasters
- Prepare school disaster management and preparedness plan and hold mock drills
- Prepare school level task forces and train them
- Maintain emergency contact numbers of service providers such as Police, Hospitals, Ambulance services, DDMA etc.

6. CAPACITY BUILDING AND TRAINING MEASURES

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

- Identification of existing resources and resources to be acquired or created;
- Acquiring or creating resources identified under sub-clause (i);
- Organization 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.

6.1 TRAININGS AND CAPACITY BUILDING

Following stakeholders are key for disaster response and hence they need to be adequately trained for managing response. The capacity building will cover functional, managerial as well as policy aspects of Disaster Management. To enhance capacity for disaster management the following training plan is proposed:

Nature of training	Responsibilities	Demand	Target departments	Potential training institutes	Timeline and approach
DDMA Senior Officials and Staff	Chairman - DDMA				
Police <ul style="list-style-type: none"> • Trained personnel to maintain the emergency law and order situation, search and rescues, and must be placed on record within a district-level database of persons trained in disaster management. • Trained to prevent human trafficking which is increasingly common in the after math of disasters. • Trained NCC / NSS / NKYS / self-defense and their role in case of emergency 	Primary Dept. - SP, Una Supporting Dept. - Home Guard / Fire / DDMA	40 Personnel	Police, Home-Guard and Civil defence, NCC, NSS, NKYS	In District Police training Complex and Colleges	

<p>Home-Guard / Civil Defence</p> <ul style="list-style-type: none"> • Provision of trainings for volunteers in Search and Rescue (SAR), First Aid, Traffic Management, Dead Body Management, Evacuation, Shelter and Camp Management, Mass Care and Crowd Management etc. 	<p>Primary Dept.- Commandant, Home Guard, Una Supporting Dept.- Police, Fire and DDMA</p>	<p>40 Personnel</p>			
<p>Medical and Health</p> <ul style="list-style-type: none"> • Provision of training for the preparation of ward-level and village level First Aid teams. • Ensure organisation of blood donation camps on a regular basis during normal times. • Organise drives to recruit volunteers to help with blood donation camps and other activities. • Formation and training of damage and needs assessment teams within the department. • Provision of trainings for Quick Response Medical teams (QRMTs) of paramedics, mobile medical teams, psychological first aid teams and psycho-social care teams. • Timely procurement/purchase of portable equipment for field and hospital diagnosis, triage, etc. • Provision of trainings for health attendants and ambulance staff in First Aid and life-saving techniques. • Provision of training to members of local communities in health and hygiene practices. • Capacity-building at the institution all level should be done by carrying out various activities under the Hospital Emergency Preparedness Programme (HEPP). 	<p>CMO, Una</p>				
<p>ASHA</p>	<p>Red Cross, AC</p>				
<p>Electricity Department</p> <ul style="list-style-type: none"> • The timely purchase of electric equipment necessary for maintaining state of adequate preparedness and for speedy and efficient disaster response, through the appropriate channels of the District Administration. • To make the response task force for dealing power problems and provide trainings on electrical safety to departments and community. 					
<p>First Aid / CPR</p>	<p>CMO, Una</p>				

<p>Sensitization Training for Engineers</p> <ul style="list-style-type: none"> • There is strong evidence that appropriate engineering intervention can significantly reduce the risk of disasters. Civil engineers also play an important role in post-disaster conditions - in rescue operations, damage assessment and the retrofitting of structures. Civil engineers need to keep themselves updated about the latest research and developments in construction technology, advances in construction materials and analysis or design procedures. Civil engineers should also take support from other branches of engineering for the better planning, execution and functioning of their building and infrastructure projects. Trainings to Civil Engineers will be provided by CDM, HIPA. Furthermore, at the district level, civil engineers will conduct training of masons for construction of earthquake - resistant structures. Such trainings will be facilitated by the DDMA. 	PWD and TCP				
<p>PRIs Representative</p> <ul style="list-style-type: none"> • Providing Awareness or Trainings among community on Disaster Preparedness. • Provision of training for formation of teams to engage with the issues of hygiene and sanitation at the village level through the Gram Panchayats. 	Dept. of Panchayat Raj				
<p>Forest Department</p> <ul style="list-style-type: none"> • Formation and training of teams within the Dept. for catching wild / escaped animals who pose a threat to human safety. • To generate awareness among community on Forest Fires. • To generate awareness on afforestation among communities. 					
<p>Himachal Pradesh Road</p> <ul style="list-style-type: none"> • Provision of training to drivers, conductors and staff in First Aid and basic life saving techniques • Adequate stocking / replenishing of First Aid kits and maintenance of fire extinguishers in all vehicles and depots in the district. 					
<p>Irrigation Department</p> <ul style="list-style-type: none"> • Provision of trainings to all human resources with regard to early-warning for flood. 					

<ul style="list-style-type: none"> The timely purchase of early warning and communication equipment through appropriate channels of the District Administration. 					
<p>Fire Services Department</p> <ul style="list-style-type: none"> For capacity-building, Fire Services in Una district should be made responsible for conducting fire-safety trainings for all district officials as well as for societies, shopkeeper associations, etc. from time to time. Himachal Fire Services should also be made responsible for conducting safety audit so of various government and civilian buildings in order to check whether they are compliant with fire-safety norms. Furthermore, the Fire Services should conduct mock-drills for firefighting and evacuation procedures regularly, following a schedule stipulated by the District Disaster Management Authority (DDMA - Una). Training programs on disaster management that are relevant to the role of the Fire Services are conducted by CDM, HIPA from time to time, and the District Administration, Una should ensure that fire personnel are deputed for such trainings. The trained Fire Services personnel should be placed on record with in a district - level database of persons trained in disaster management. Such trainings are thus an important aspect of capacity-building in the district. 					
Mahalia Mandal Representative	DRDA				
Nehru Yuva Kendra (NYKS)	Red Cross, AC				
NCC / NSS	Colleges, NCC Battalion				
Shelter Management	PWD				
MC / NAGAR					
Mass Casualty Management					
Physio-Social					

7. RESPONSE AND RELIEF MEASURES

7.1 INTRODUCTION AND OBJECTIVE

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

7.2 RESPONSE PLANNING

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

Table 7.1: Response planning phases during the early warning

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

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

Table 7.2: Response planning phases during the no early warning

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

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

7.3 DISASTER RESPONSE FUNCTIONS TO BE CARRIED OUT

7.3.1 EARLY WARNING PHASE:

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

7.3.2 IMMEDIATE POST DISASTER PHASE

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

Table 7.3: Damage assessment in context to Response

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

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

7.4 QUICK NEED ASSESSMENTS

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

Table 7.4: Need assessment in context to Response

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

7.5 RESOURCE MOBILIZATION

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

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

Table 7.5: Resource Mobilization and Responsible Dept.

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

7.6 RESPONSE MANAGEMENT

7.6.1 ACTIVATION OF EOC

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

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

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 Dept. for this activity is NDRF and Home Guard / Civil Defence Department. The helping departments for search and rescue are P.W.D., Nagar Panchayat / Nagar Palika, Self-help groups, N.S.S, N.C.C, and PRIs. There are other bodies too that help these departments in this work, like, Health department, Fire department. In doing so, the DC will be guided by relevant disaster management plans and will be supported by Government departments and local authorities.

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

7.6.4 INFORMATION MANAGEMENT AND MEDIA MANAGEMENT

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

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 designated 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 effected community due to their outreach at the grassroots level. As per the section 35 and 38 of the DM Act 2005 stipulates that the DDMA shall specifically emphasize the coordination of actions with NGOs. In typical disaster situation, DDMA with the support of DRDA, will coordinate the NGOs / CBO's and further manage their work in prompt response, relief and rescue, and also monitor the feedback at grassroots level by agreeable community participation.

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

8. RECONSTRUCTION, REHABILITATION AND RECOVERY

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

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

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

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

Sector	Approach	Process
Public assets: <ul style="list-style-type: none"> • Roads and bridges • Culverts • Public buildings like hospitals and schools 	Multi hazard resistant construction to be followed while reconstruction of public assets. For example <ul style="list-style-type: none"> • 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 Dept. 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. • Monitoring and evaluation: 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</p> <ul style="list-style-type: none"> • Water Supply • Electricity • Communication 	<p>Multi hazard resistant construction to be followed. For example:</p> <ul style="list-style-type: none"> • Water pipelines, communication equipment used can be of such material which can resist impact of certain hazards <p>Risk sensitive development will be ensured</p> <ul style="list-style-type: none"> • 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 entire area. • Develop a detailed recovery plan through multi departmental participation: Specific recovery plan through consultative process of different line Dept. 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.
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: <ul style="list-style-type: none"> ○ National and State schemes like Pradhan Mantri Awas Yojna (rural / urban) and Mukhya Mantri Awas Yojna can be included in construction of the individual houses. ○ 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 Dept. 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.
Economic restoration	<ul style="list-style-type: none"> • Multi sectoral assessment 	<ul style="list-style-type: none"> • Detailed damages and needs assessment: Multi sectoral / multi-disciplinary teams are to be made which

<ul style="list-style-type: none"> • Agriculture • Horticulture • Industry • Allied sectors • Tourism etc. 	<ul style="list-style-type: none"> • Assess direct and indirect losses. • 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 	<p>can do a detailed damage and need assessment of the entire area.</p> <ul style="list-style-type: none"> • Develop a detailed recovery plan through multi departmental participation: Specific recovery plan through consultative process of different line Dept. 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. <p>Monitoring and evaluation: The process of monitoring and manipulation is to be done by SDMA.</p>
<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 Dept. 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. <p>Monitoring and evaluation: The process of monitoring and manipulation is to be done by SDMA.</p>
<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 	<p>Arrange for funds from Central government, state government, multi-lateral (World Bank or ADB)</p>

9. FINANCIAL RESOURCES FOR IMPLEMENTATION OF DDMP

9.1 EXISTING SOURCES OF FUNDS FOR DISASTER MANAGEMENT

9.1.1 STATE DISASTER RESPONSE FUND (SDRF)

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

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

9.1.2 NATIONAL DISASTER RESPONSE FUND (NDRF)

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

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

9.1.3 FLEXI-FUNDS UNDER CENTRALLY SPONSORED SCHEMES

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

9.2 FUNDS TO BE CREATED UNDER DM ACT 2005

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

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

9.3 RESPONSIBILITIES OF THE STATE DEPARTMENTS AND AGENCIES

All State Government Departments, Boards, Corporations, PRIs and ULBS have to prepare their DM plans under Section 40 of The DM Act 2005. These Departmental DM Plans are already under preparation at the State Level including the financial projections to support these plans. The necessary financial allocations will be made as part of their annual budgetary allocations, and ongoing programmes. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMA to the appropriate funding agency.

9.4 TECHNO-FINANCIAL REGIME

Considering that the assistance provided by the Government for rescue, relief, rehabilitation and reconstruction needs cannot compensate for massive losses on account of disasters, new financial tools such as catastrophe risk financing, risk insurance, catastrophe bonds, micro-finance and insurance etc., will be promoted with innovative fiscal incentives to cover such losses of individuals, communities and the corporate sector. In this regard, the Environmental Relief Fund under the Public Liability Insurance Act, 1991, enacted for providing relief to chemical accident victims is worth mentioning. Some financial practices such as disaster risk insurance, micro-finance and micro-insurance, warranty on newly constructed houses and structures and linking safe construction with home loans will be considered for adoption.

9.5 OTHER FINANCING OPTIONS

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

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

10. DDMP: MONITORING, EVALUATION, UPDATION & MAINTENANCE

The District Disaster Management Plan is the sum and substance of the Horizontal and the Vertical disaster management plans in the district. District Disaster Management Plan of Una is a public document which is neither a confidential document nor restricted to any particular section or Dept. 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), Una will update the DDMP annually and circulate approved copies to all the stakeholder in Una District. DDMA, Una 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, Una 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, Una

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 Una at various levels:

Level 1: District Level

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

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

Level 2: Sub Divisional Level

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

Level 3: Block Level

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

Level 4: Panchayat Level

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

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. District administration 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 Una DC should ensure for maintenance of DDMP and analysis the identified gaps. All concerned departments and agencies have to participate and give recommendations on specific issues of District Disaster Management Plan, and submit their report.

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

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

11. COORDINATION MECHANISM FOR IMPLEMENTATION OF DDMP

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

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

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

11.1 INTRA DEPARTMENTAL COORDINATION

Each stake holder Dept. i.e., HPPWD, I&PH, HPSEB, Health and Family Welfare, fire and home guards, police, BSNL, Food and Civil Supply, forest, revenue Education, Agriculture horticulture, HRTC, Red Cross will constitute departmental level disaster management committee headed by a gazette officer pertaining to that department. The committees will organize quarterly meetings of the committee members to analyses the preparedness level of the Dept. 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.

11.1.1 SUB DIVISION LEVEL COORDINATION MECHANISM

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

11.1.2 TEHSIL LEVEL COORDINATION MECHANISM

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

11.2 ARRANGEMENTS AT LOCAL LEVEL

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

11.2.1 COORDINATION SYSTEM WITH INTER DEPARTMENTS AND AT DISTRICT LEVEL

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

11.2.2 PRE DISASTER COORDINATION

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

11.2.3 DISASTER PHASE COORDINATION

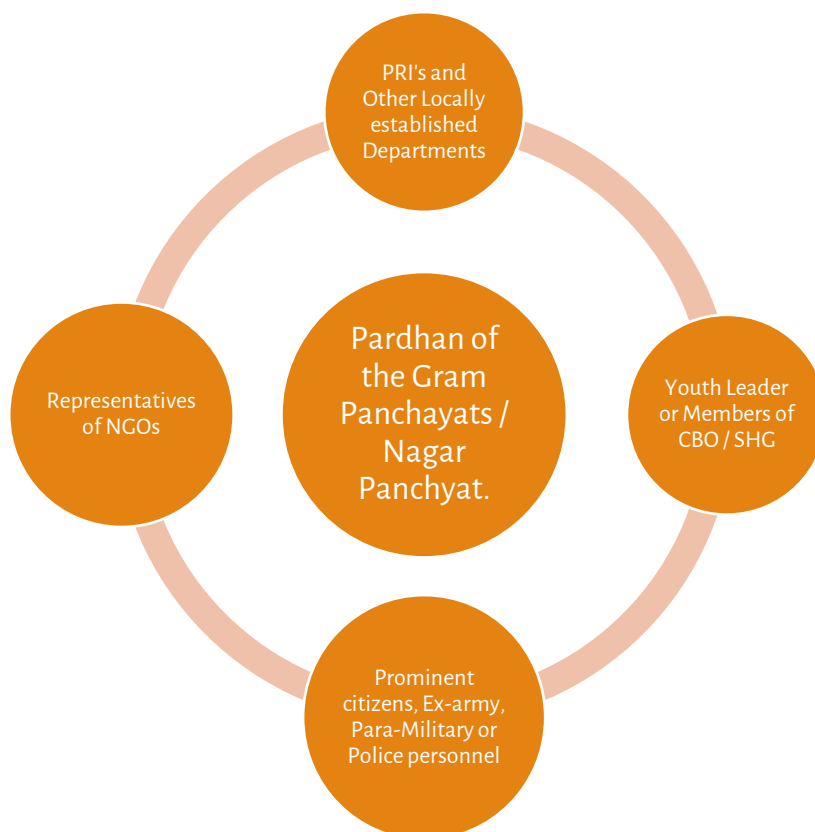
Coordination through phone or any other mode of communication in a disaster phase is not possible hence all the line departments and training institutes in the district should report to the DEOC as soon as the disaster strikes. After loss/damage assessment at the DEOC, the RO (D.C) would direct various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

11.2.4 POST DISASTER COORDINATION

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

11.3 COORDINATION MECHANISM WITH COMMUNITY

The community will be coordinated through the village disaster management committees. The mentioned committees generally comprise of Frequency of local Committee meetings. Local Committee meetings must be held at least once in every six months at particular time and place decided by the chairperson of the group. In addition, the chairperson of a Local Committee must call a meeting if asked, in writing, to do so by:



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

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

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

The strong linkages which NGOs CBOs have with grassroots communities can be effectively harnessed for creating greater public awareness on disaster risk and vulnerability, initiating appropriate strategies for

strengthening the capacity of stakeholder groups to improve disaster preparedness, mitigation and improving the emergency response capacities of the stakeholders.

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

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

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

11.3.2 COORDINATION WITH OTHER DISTRICTS AND STATE

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

12. STANDARD OPERATING PROCEDURES (SOPS) AND CHECKLIST

The 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: Dept. of Revenue team leader: Additional Deputy Commissioner.

Supporting Agencies: Police, Home Guards, 1st IRB Bangarh, Nehru Yuva Kendra, Mountaineering sub-centre Jispa, Fire

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 District 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: Dept. of Transport / RTO.

Support Agencies: HRTC, PWD

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: Dept. of food and civil supplies.

Support agency: IPH, Dept. 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 Nigam Ltd. (BSNL)

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: Dept. 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: Dept. of Revenue

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

Setting up of a Relief Camp:

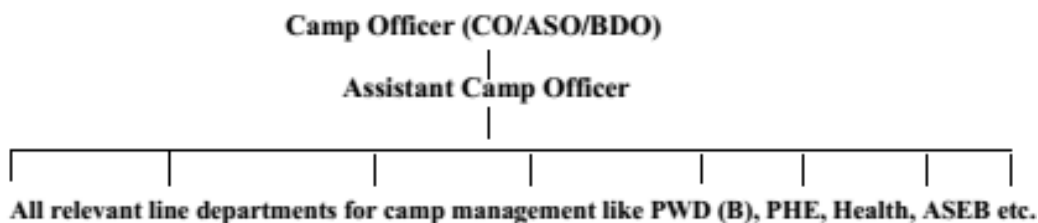
- On receipt of report from Revenue officials, the DC/SDO(C) will order to set up a relief camp at pre-decided location as per District/ Sub-divisional disaster management plan
- In case new location is to be selected for the camp due to unavoidable circumstances, following points should be considered 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) Dept. should be detailed to supervise the proper lighting arrangement in and around the camp and operation and maintenance of the generator set.
- One big candle and one match box should be provided in every room/tent.
- Petromax or emergency light should be arranged in sufficient numbers in the camp.
- Approach to toilet and water source should properly be illuminated

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 Dept. 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 population.
- 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.

