



**DISTRICT DISASTER MANAGEMENT PLAN**  
**OF**  
**DISTRICT SIRMAUR, HIMACHAL PRADESH**

**DISTRICT DISASTER MANAGEMENT AUTHORITY (DDMA)**  
**SIRMAUR**

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**Abbreviations:**

ARMVs	–	Accident Relief Medical Vans
BIS	–	Bureau of Indian Standards
CBOs	–	Community Based Organisations
CBRN	–	Chemical, Biological, Radiological and Nuclear
CSR	–	Corporate Social Responsibility
CRF	–	Calamity Relief Fund
CWC	-	Central Water Commission
DDMA	–	District Disaster Management Authority
DCMC	-	District Crisis Management Committee
DM	–	Disaster Management
DMC	-	Disaster Management Cell
EOC	-	Emergency Operation Centre
GIS	–	Geographic Information System
GSI	-	Geological Survey of India
Gol	–	Government of India
GPS	–	Global Positioning System
HPC	–	High Powered Committee
HIPA	-	Himachal Institute of Public Administration
IAY	–	Indira Awas Yojana
IAG	-	Inter Agency Coordination
ICIMOD	-	International Centre for Integrated Mountain Development
IRS	–	Incident Response System
ICT	–	Information and Communication Technology
IDRN	–	India Disaster Resource Network
IDKN	–	India Disaster Knowledge Network
IMD	-	Indian Meteorology Department
ITK	–	Indigenous Technical Knowledge
MFA	-	Medical First Aid
MHA	–	Ministry of Home Affairs

NCCF	–	National Calamity Contingency Fund
NDEM	–	National Database for Emergency Management
NDMA	–	National Disaster Management Authority
NDMF	–	National Disaster Mitigation Fund
NDRF	–	National Disaster Response Force
NEC	–	National Executive Committee
NGOs	–	Non-Governmental Organisations
NIDM	–	National Institute of Disaster Management
NSDI	–	National Spatial Data Infrastructure
NYKS	–	Nehru Yuva Kendra Sangathan
PPP	–	Public-Private Partnership
PRIs	–	Panchayati Raj Institutions
QRT	–	Quick Response Teams
RH	-	Reproductive Health
SAARC	–	South Asian Association for Regional Cooperation
SAR	-	Search and Rescue
SASE	-	Snow and Avalanche Study Establishment
SCMC	-	State Crisis Management Committee
SDMA	–	State Disaster Management Authority
SDRF	–	State Disaster Response Force
SEC	–	State Executive Committee
SOPs	–	Standard Operating Procedures
UN	–	United Nations
L0 Disaster	–	Disaster which can be managed at the District Level
L1 Disaster	–	Disaster which can be managed at the State Level
L2 Disaster	–	Disaster which is beyond the coping capacity of state and intervention of National Govt. is required.
Responsible Officer–		Chief Secretary at the State level and Deputy Commissioner at the District Level (As per the IRS Guidelines of NDMA)

## Objectives of District Disaster Management Plan (DDMP)

The objective behind the preparation of the District Disaster Management Plan is:

- To mitigate impact of natural and human induced disasters through preparedness at District level.
- To provide effective support and resources to all the concerned individuals, groups and departments during disaster time.
- To assist the line departments, district administration, communities in developing compatible skills for disaster preparedness and management.
- To disseminate factual information in a timely, accurate and tactful manner while maintaining necessary confidentiality.
- To develop immediate and long-term support plans for vulnerable people in / during disasters.
- To create awareness among the people about hazard occurrence and increase their participation in preparedness, prevention, development, relief, rehabilitation and reconstruction process.
- To have response system in place to face any eventuality.
- To affect or elicit the least possible disruption to the normal life process when dealing with individuals in disaster.
- To ensure active participation by the Government Administration, Communities, NGOs, CBOs and Volunteers Task Forces at all levels making optional utilization of human and material resources at the time of disaster.

### **Paradigm Shift in Disaster Management**

On 23rd December, 2005, the Government of India took a defining step by enacting the Disaster Management Act, 2005, which envisaged creation of the National Disaster Management Authority (NDMA) headed by the Prime Minister, State Disaster Management Authorities (SDMA) headed by the Chief Ministers, and District Disaster Management Authorities (DDMA) headed by the District Magistrates or Deputy Commissioners as the case may be, to spearhead and adopt a holistic and integrated approach to disaster management (DM). There will be a paradigm shift, from the erstwhile relief-centric response to a proactive prevention, mitigation and preparedness-driven approach for conserving development gains and to minimize loss of life, livelihood and property.

**Section 2 (e) of the Act defines disaster management as follows:**

According to "Section 2(e) "disaster management" means a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary or expedient for-

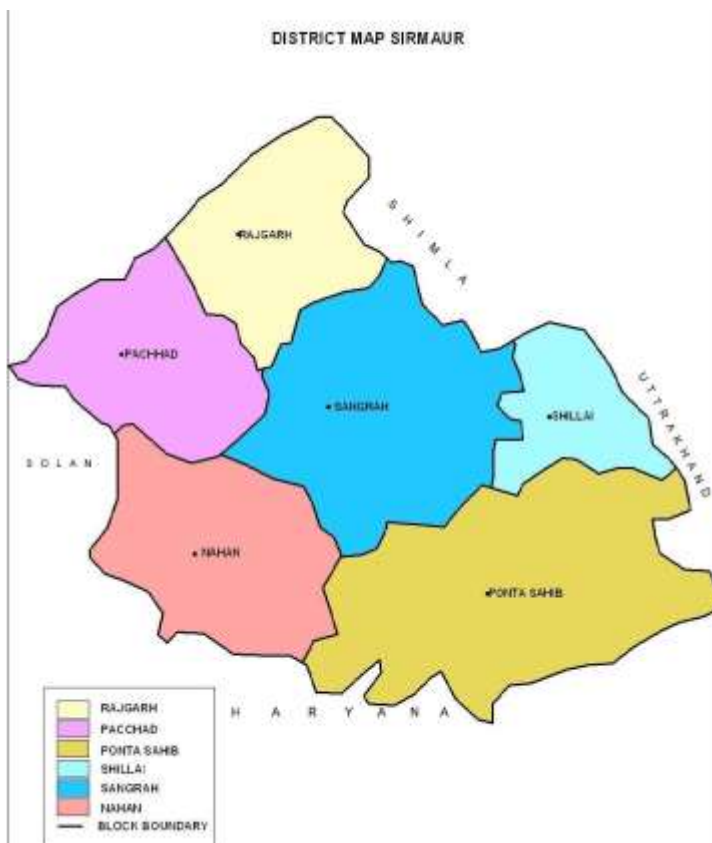
- (i) prevention of danger or threat of any disaster;
- (ii) mitigation or reduction of risk of any disaster or its severity or consequences;
- (iii) capacity-building;
- (iv) preparedness to deal with any disaster;
- (v) prompt response to any threatening disaster situation or disaster;
- (vi) assessing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

The definition encompasses the cycle of disaster management, which has the elements of pre-disaster phase such as prevention, mitigation, preparedness and capacity building. The SDMA and DDMA in the State were created on 1<sup>st</sup> June 2007 and these authorities would bring out a qualitative change in dealing with disaster in the State.

## Chapter – 1

### District Sirmaur- An Introduction

The Sirmaur district is one of the twelve administrative districts of Himachal Pradesh. District Sirmaur is located in outer Himalayas which is commonly known as Shivalik range. It has beautiful landscapes, pleasant climate through the year, several legendary temples which attract many tourists to the district. It is the southern-most district of Himachal Pradesh having a geographical area of 2825 sq km. The district has hilly and mountainous topography with intermontane valleys, the most prominent being the Paonta valley. The district has its headquarter at Nahan and lies between North latitude 31°01'00" to 30°22'00" and East longitude 77°01'00" to 77°50'00" and is covered by Survey of India degree-sheets 53F and 53E. Sirmaur is bound by Solan district towards West and Shimla district towards North. The district has inter-state boundary in the South with the State of Haryana and



Uttar Pradesh and in the East with Uttarakhand. The district is well connected by road network with national high way number 72 passing through the district. The nearest airports are at Ambala (Indian Air force) and Chandigarh.

Administratively, Sirmaur district has been divided in to three-sub division viz, Nahan, Paonta Sahib and Rajgarh and have ten tehsils [Nahan, Paonta Sahib, Puchad, Rajgarh, Shalai, Renuka, Nohra, Rohnat, Dadahu, Kamrau] and sub-tehsils. There are 228 panchayats, 968 villages and 3 towns in the district. The local inhabitants mainly depend on agriculture for their subsistence and adopt several traditional practices conducive for farming in sloping terrains. Large and small scale industrial units however have come up in Paonta valley.

### History of Sirmour District

After our independence in 1947, the princely states were given a choice to merge with the Union of India. The erstwhile Surajbansi Rajput princely state of Sirmour was merged into Himachal Pradesh on the 15<sup>th</sup> April, 1948 and given the status of district with princely state's physical jurisdiction intact. About the origin of the name Sirmour, there are different opinions. One view is that it derived its name as Sirmour having senior position it held amongst the princely hill states. Another version is that at the earliest times, the capital of state was at Sirmour, 14 kms. away from Paonta. Third version is that state was founded by the Raja Rasaloo of Jaisalmer, whose one of the ancestor's name was Sirmour.

Early history of Sirmour is not very clear and mingled with legends. As the legend goes, in 1046 AD. Raja Madan Singh was the ruler. A women expert in necromancy presented herself before the Raja and claimed to have superb skills. Raja promised her half of his kingdom if she could cross over Giri between Toka and Poka ranges by means of acrobatic rope. While she was coming back on rope, one of courtiers of Raja, treacherously cut the rope, women fell in the river and drowned. As a curse, havoc caused by floods swept away the town and princely family, leaving the state without a ruler. Thereafter, the subjects of Sirmour approached Raja of Jaisalmer, who was on visit to Hardwar to give one of his sons as the ruler of state and they ruled over Sirmour till the lapse of paramountcy in 1947. Some of the efficient rulers and reformers are Raja Kirat Singh (ruled from 1754 AD to 1770 AD), Raja Surendra Parkash, Raja Amar Parkash and last ruler, Raja Rajindra Parkash. They brought out various progressive reforms in the state in the field of education, industry, water supply and revenue.

### CLIMATE AND RAINFALL

The climate of the district is sub-tropical to temperate depending upon the elevation. Four major seasons - **winter** (extends from November to February) **summer** ( March to June), followed by the **monsoon** (extending from July to September end). Maximum precipitation in the form of rain occurs during July to September. Average annual rainfall in the district is about 982 mm with average of 60 rainy days. In the **non-monsoon** season precipitation as snowfall also occurs in the higher reaches above 1500 m amsl, the peaks of Chaur dhar remains covered by snow. During winter period rainfall also occurs in lower hills and valleys parts. Mean maximum and minimum temperature of 30°C and - 0°C respectively.

### GEOMORPHOLOGY AND SOILS

Sirmour district presents an intricate mosaic of high mountain ranges, hills and valleys with altitude ranging from 300 to 3000 m above MSL. There is general increase in elevation from south to north and from east to west. In general trans- Giri terrain exhibits highly rugged mountain terrain. The

highest peaks in Chaurdhar remain snow bound through out the year. Low denuded hill ranges of Siwalik represent the southwestern part of the district. In the areas underlain by high hill ranges of Himalayas, the valleys are narrow and deep with steep slopes. The terrain is moderately to highly dissect with steep slopes. Paonta valley, trending NW-SE, has an area of about 230 sq km and lies between the main Himalayan ranges on the north and outer Siwalik hill range in the south.

The Yamuna River that forms the eastern district boundary with the State of Uttarakhand drains a major part of Sirmaur district. Tons, Giri, bata are its major tributaries. Only a small area in the southeast is drained by river Markanda of the Ghaggar river basin. Giri River practically bisects the district in to two parts, namely trans-Giri area and cis-Giri area. Paonta valley is drained by river Bata a tributary of Yamuna.

Soils are vital natural resources on whose proper use depend the life-supporting system and socio-economic development of any country. More than 75 per cent of the geographical area of the District is suffering from one or other soil degradation problem. The main degradation problems observed was water erosion including topsoil loss and terrain deformation, flooding and acidity. Therefore, major challenge before us is to reduce these problems up to the tolerance limits for the sustainable agricultural development of the district. This calls for scientific land use planning on watershed basis and its proper implementation with the active involvement of politicians, Government officials and local farming community. There is a need to select watersheds representing each of the agro ecological situations of the district and develop these as models, which will act as wheels of agro-technology transfer for the development of the adjoining areas. A large area of the district has brown hill soils (Hapludolls, Hapludalfs and Udorthents) in gently sloping lands of Lesser Himalayas and alluvial soils (Udifluvents and Eutrochrepts) in other areas. Rocky outcrops on steep to very steep slopes are common. The soils of district Sirmaur are medium to high in available nitrogen, low to medium in available P & K. The organic carbon status of this district is medium to high. Most of the vegetable growing areas are showing the deficiency of micronutrients particularly zinc and boron. Rice growing areas in lower belt are also experiencing the deficiency of zinc. The soils of hilly terrain of the district are prone to water erosion.

### **Forests**

In Sirmaur district, the forests range between tropical and subtropical (scrub, Sal and Bamboo forests) near plains and Doon valley to the temperate (fir and alpine) at higher elevations. Lowest point of the southern boundary of the district is 427 metres above sea level and the highest range of Chur Dhar which is at an altitude of 3,647 metres in the north. The forests grown between these two extremes vary as the elevation itself. The chief factor effecting the distribution and quality of forest vegetation are rainfall and elevation aspect. The high level forests consist of oak, fir, spruce and chirr

pine. Apart from these, there are Deodar forests in the north of the Giri river mixed with kail and pine etc. These forests are very valuable and the timber extracted from these is sold in the plains at a very high price in the form of sleepers. In Dharthi range and Cis-Giri area, Chir pine forests are of great value for extraction of resin. Sal forests fall in the Dun valley and east of Nahan producing timber of great value. In the lower elevation, Bhabber grass grows which is of great value and so also bamboo forests though these are not of pure type but mixed with other species. Shorea robusta, Terminalia spp, Acacia catechu, Dalbergia sisoo, Dendrocalamus strictus, Pinus roxburghii, Pinus wallichiana, Quercus incana, Cedrus deodara, Quercus dilatata, Picea smithiana and Abies pindrow, Quercus semicapifolia are the major species of the trees found this district. Jhingan, Chal, Harar, Behara, Sain, Poola, Siris, Chhal, Kainth, Kamal, walnut, Horse chestnut, Poplar, Maple, Betula are the other important tree species found in the forests. The forests don't form the continuous and compact belt, but are interspersed in large areas of habitations, agricultural lands, grasslands, orchards. There is considerable influence of anthropogenic factors such as grazing, lopping, fires and forests felling upon their general health.

### **DEMOGRAPHIC DETAILS**

In 2011, Sirmaur had population of 530,164 of which male and female were 276,801 and 253,363 respectively. In 2001 census, Sirmaur had a population of 458,593 of which males were 241,299 and remaining 217,294 were females. There was change of 15.61 percent in the population compared to population as per 2001. In the previous census of India 2001, Sirmaur District recorded increase of 20.78 percent to its population compared to 1991. The initial provisional data released by census India 2011, shows that density of Sirmaur district for 2011 is 188 people per sq. km. In 2001, Sirmaur district density was at 162 people per sq. km. Sirmaur district administers 2,825 square kilometers of areas. Average literacy rate of Sirmaur in 2011 were 79.98 compared to 70.39 of 2001. If things are looked out at gender wise, male and female literacy were 86.76 and 72.55 respectively. For 2001 census, same figures stood at 79.36 and 60.37 in Sirmaur District. Total literate in Sirmaur District were 369,651 of which male and female were 209,608 and 160,043 respectively. In 2001, Sirmaur District had 274,643 in its district. With regards to Sex Ratio in Sirmaur, it stood at 915 per 1000 male compared to 2001 census figure of 901. The average national sex ratio in India is 940 as per latest reports of Census 2011 Directorate. In 2011 census, child sex ratio is 931 girls per 1000 boys compared to figure of 934 girls per 1000 boys of 2001 census data. In census enumeration, data regarding child under 0-6 age were also collected for all districts including Sirmaur. There were total 67,958 children under age of 0-6 against 68,431 of 2001 census. Of total 67,958 male and female were 35,202 and 32,756 respectively. Child Sex Ratio as per census 2011 was 931 compared to 934 of census 2001. In 2011, Children under 0-6 formed 12.82 percent of Sirmaur District compared to

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14.92 percent of 2001. There was net change of -2.1 percent in this compared to previous census of India.

Description	2011	2001
<b>Actual Population</b>	<b>530,164</b>	<b>458,593</b>
Male	276,801	241,299
Female	253,363	217,294
<b>Population Growth</b>	<b>15.61%</b>	<b>20.78%</b>
Area Sq. Km	2,825	2,825
<b>Density/km2</b>	<b>188</b>	<b>162</b>
Proportion to Himachal Pradesh Population	7.73%	7.55%
<b>Sex Ratio (Per 1000)</b>	<b>915</b>	<b>901</b>
Child Sex Ratio (0-6 Age)	931	934
<b>Average Literacy</b>	<b>79.98</b>	<b>70.39</b>
Male Literacy	86.76	79.36
Female Literacy	72.55	60.37
<b>Total Child Population (0-6 Age)</b>	<b>67,958</b>	<b>68,431</b>
Male Population (0-6 Age)	35,202	35,376
Female Population (0-6 Age)	32,756	33,055
<b>Literates</b>	<b>369,651</b>	<b>274,643</b>
Male Literates	209,608	163,415
Female Literates	160,043	111,228
<b>Child Proportion (0-6 Age)</b>	<b>12.82%</b>	<b>14.92%</b>
Boys Proportion (0-6 Age)	12.72%	14.66%
Girls Proportion (0-6 Age)	12.93%	15.21%

Description	Rural	Urban
<b>Population (%)</b>	<b>89.20 %</b>	<b>10.80 %</b>
<b>Total Population</b>	<b>472,926</b>	<b>57,238</b>
Male Population	246,599	30,202
Female Population	226,327	27,036
<b>Sex Ratio</b>	<b>918</b>	<b>895</b>
Child Sex Ratio (0-6)	935	888
<b>Child Population (0-6)</b>	<b>61,931</b>	<b>6,027</b>
Male Child(0-6)	32,010	3,192
Female Child(0-6)	29,921	2,835
<b>Child Percentage (0-6)</b>	<b>13.10 %</b>	<b>10.53 %</b>
Male Child Percentage	12.98 %	10.57 %
Female Child Percentage	13.22 %	10.49 %
<b>Literates</b>	<b>322,787</b>	<b>46,864</b>
Male Literates	184,197	25,411
Female Literates	138,590	21,453
<b>Average Literacy</b>	<b>78.54 %</b>	<b>91.51 %</b>
Male Literacy	85.84 %	94.08 %
Female Literacy	70.56 %	88.65 %

#### Sirmaur District Urban Population 2011

Out of the total Sirmaur population for 2011 census, 10.80 percent lives in urban regions of district. In total 57,238 people lives in urban areas of which males are 30,202 and females are 27,036. Sex

Ratio in urban region of Sirmaur district is 895 as per 2011 census data. Similarly child sex ratio in Sirmaur district was 888 in 2011 census. Child population (0-6) in urban region was 6,027 of which males and females were 3,192 and 2,835. This child population figure of Sirmaur district is 10.57 % of total urban population. Average literacy rate in Sirmaur district as per census 2011 is 91.51 % of which males and females are 94.08 % and 88.65 % literates respectively. In actual number 46,864 people are literate in urban region of which males and females are 25,411 and 21,453 respectively.

### Sirmaur District Rural Population 2011

As per 2011 census, 89.20 % population of Sirmaur districts lives in rural areas of villages. The total Sirmaur district population living in rural areas is 472,926 of which males and females are 246,599 and 226,327 respectively. In rural areas of Sirmaur district, sex ratio is 918 females per 1000 males. If child sex ratio data of Sirmaur district is considered, figure is 935 girls per 1000 boys. Child population in the age 0-6 is 61,931 in rural areas of which males were 32,010 and females were 29,921. The child population comprises 12.98 % of total rural population of Sirmaur district. Literacy rate in rural areas of Sirmaur district is 78.54 % as per census data 2011. Gender wise, male and female literacy stood at 85.84 and 70.56 percent respectively. In total, 322,787 people were literate of which males and females were 184,197 and 138,590 respectively. All details regarding Sirmaur District have been processed by us after receiving from Govt. of India. We are not responsible for errors to population census details of Sirmaur District.

## Chapter - 2

### Hazard Profile and Risk Analysis of Sirmaur District

Sirmaur is the most south-eastern district of Himachal Pradesh. It is largely mountainous and rural, with 90% of its population living in villages. It consists of the foothills of Himalayas, which is Shiwaliks and Middle Himalayas with the heights of the mountains ranging from 300 meters to 3000 meters above sea level. Most of the district is made up of unconsolidated material which is highly susceptible to erosion and is loose in nature. The region is fed by numerous perennial rivers which originate in the glaciers and supply water to the plains throughout the year. Besides that there are numerous seasonal rivers as well which drain into these rivers. Having a mountainous topography, this area is also prone to the incidents of cloud burst and flash flood. The hills across the district have been scarred by landslides which are triggered due to excessive rain fall. As has been seen in other parts of the State, landslides can wipe out entire villages as well as lead to blocking and cutting off of settlements for days from the rest of the state. Due to loose and unconsolidated material any kind of shaking can also trigger landslides or rock falls which also pose a threat to the district.

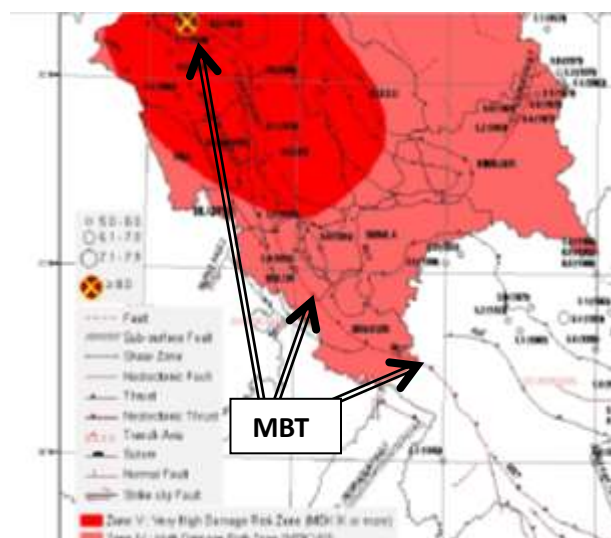
The district sits in the heart of Himalayas and is likely to be affected by earthquakes. Himalayas as we know are young mountains and are still growing. The area is home to numerous faults and has been affected by numerous shallow to deep earthquakes over the past few decades.

The upper reaches of the slopes of the Churdhar peak receive heavy snowfall during winters and is also prone to snowstorms which are accompanied with heavy winds. This result in closing of the roads and in some of the cases, leads to avalanche which have the tendency to wipe out villages. Avalanches are common in the more remote parts of the district.

The district has a rugged topography and not all the places are habitable. The population is more in valleys and plain areas rather than on slopes, and due to this reason communities are more vulnerable to certain hazards. Since 90% of population lives in rural setting the kind of houses and structures are not designed to withstand landslide, earthquakes and flash floods. The communities do not have the technical knowledge for developing and constructing houses which can withstand such hazards and in turn minimize the risk.

The following text will provide a brief overview of the hazards in the district of Sirmaur.

**Earthquakes:** The entire district of Sirmaur falls under Seismic Zone IV as per the Seismic Zoning Map of India (IS Code: 1893:2002 ) which makes it likely to be affected by earthquake shaking of upto intensity VIII. The Main Boundary Thrust (MBT) fault passes across the district and this is the continuation of the same fault which caused the 1905 Kangra earthquake. As mentioned in the previous section, there are also several smaller faults that can also generate earthquakes of high intensities within Sirmaur district.



**Impact of earthquakes felt in Himachal Pradesh in past 100 years**

Date	Locations affected	Magnitude / Intensity	Damage
4 April,1905	Kangra	Magnitude 8.0	Approx. 19,800 people died in Kangra District.
28 February, 1906	Shimla	Magnitude 6.5	26 people died, 45 severely injured
19 January,1975	Kinnaur	Magnitude 6.8	60 people died, 2000 dwellings housing devastated
26 April, 1986	Dharamshala	Magnitude 5.5	6 people died, Extensive damage to buildings
April, 1994	Chamba	Magnitude 4.5	Area at risk was Chamba town
24 March, 1995	Chamba	Magnitude 4.9	Fearsome shaking, More than 70percent houses faced cracks
July, 1997	Sunder Nagar	Magnitude 5.0	Some part of Sunder Nagar affected

### Hazard Profile

Past History	: As mentioned in the chart above many earthquakes had happened in the state and shaking was felt in the district also.
Frequency	: Likely.
Impact	: On buildings and other infrastructure of whole district.
Vulnerability	: All human and animal population, but the elderly, women and children are more vulnerable.
Magnitude	: As per zone IV the district may feel shaking upto VIII.

Responsible factors: Non complying the building construction bye laws and lack of knowledge of earthquake resistance building construction, poverty/low economic standards, apathy, location closure to slopes, belief, lack of infrastructural facilities, inaccessible places etc.

Likely damage	:	Minor cracks developed in 1986 earthquake
life	:	NIL
Property	:	NIL
Others	:	Nil

### Forest fires:

Forest fire is a major cause of degradation of forest. It is estimated that about 90 percent of the forest fires are caused due to human error. As per 2009 Forest Survey of India report, nearly 49% of Sirmaur is forest. Every year there are incidents of forest fire which may go on for days as many times these tend to happen very deep inside the forest where fire tenders are unable to reach. The rural population of the district depends on forests for various reasons as it tend to provide fire wood, wood, fruits, herbs etc to the people which they collect and sell as well as use for their own sustainence. Many times these fires are caused by the locals due to their carelessness and sometimes due to vested interest of some people as forest fire will lead to clearing of land for various uses. These fires are common in the summer season as the heat and the wind condition help spreading the fire rapidly. However, such fires have not spread to human habitations so far.

### Hazard Profile

Past History	:	Annual
Frequency	:	Very high
Impact	:	Household and the forest resources
Vulnerable population	:	community living near forest areas.

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Likely damage : Crops, forest resources, housing  
Life : Minimal

Responsible factors: Lack of awareness about how the forest fire starts like - throwing cigarette buds, lighting fire inside forest for picnic purpose, lightning, etc.

### Loss due to Forest Fires since 2007

Year	Total number of fire cases	Total area affected (in ha)	Loss in Rs.
2007-2008	45	1144.06	8,38,963
2008-2009	51	1209.15	6,31,805
2009-2010	223	3446.12	18,91,800
2010-2011	65	1078.91	6,95,900
2011-2012	7	70.10	
Total	391	6948.34	40,58,468

### **Drought**

Drought is a long period with no rain or with much less rainfall than normal for a given area. It can set in due to deficiency of rain or due to falling groundwater level over a long period of time. It is a slow process and can take few days to few months during which it tends to affect the population in different ways by causing depletion of water and affecting the agriculture. In the Himalayan belt of India the occurrence of drought has increased over a period of time and a major reason for this is climate change. Another reason that is being observed is due to increase in human activities and over exploitation of natural resources such as groundwater and deforestation.

The district was affected by drought in the year 2002 and year 2009 when the government declared drought due to lack of rainfall which further affected the agriculture in the district. This can be easily identified by the rainfall data from the revenue department.

### **Hazard Profile:**

Past history : Yes (Monsoon failure) 2009 and 2002  
Frequency : Likely.  
Impact : Tehsil wise (area wise)  
Vulnerable Population : Specifically  
Magnitude : Medium affect

Responsible factors for : Lack of rain water harvesting culture, lack of reservoirs/check dams for conserving water, poverty, poor economic standards, apathy, belief, dependence upon nature/rain, lack of infrastructural facilities/knowledge etc.

Likely damage : As provided on the table.

Year	Rainfall (in mm)
1995	1845.5
1996	1919.5
1997	1538.8
1998	1671.1
1999	1394.4
2000	1217.6
2001	1351.1
<b>2002</b>	<b>1217.6</b>
2003	1351.1
2004	1187.9
2005	1356.5
2006	1299.1
2007	1431
2008	1432.6
<b>2009</b>	<b>905.9</b>
2010	1578.6
2011	1213.7

### Landslides

Due to the mountainous terrain, several parts of the districts are prone to landslides. As per the landslide zoning map of North India (Vulnerability Atlas, BMTPC 2007), almost the entire district has a moderate to severe risk of landslides. Only a minor portion at the southern edge of the district is in the 'Unlikely' risk zone. There is also the possibility of landslides triggered by severe earthquakes with the possible loss of life and also blockage of important roads.

The district as per the Landslide atlas of India had witnessed a major landslide in the year 1955 October at Sirmurital. Similar landslides have affected the district and led to closing of 12 major roads in Sirmaur as per newspaper reports from Hindustan Times dated June 16, 2013. Another landslide in the district led to complete loss of 150 meter of road in between Giripool and Chhaila near Panyali as per the report in Hindustan Times dated April 4, 2014.

### Hazard Profile:

Past History : Yes (Monsoon season)

## District Disaster Management Plan 2012, Sirmaur (H. P.)

Frequency : very prominent

Impact : Roads, water and electricity supply system household, agricultural field and village.

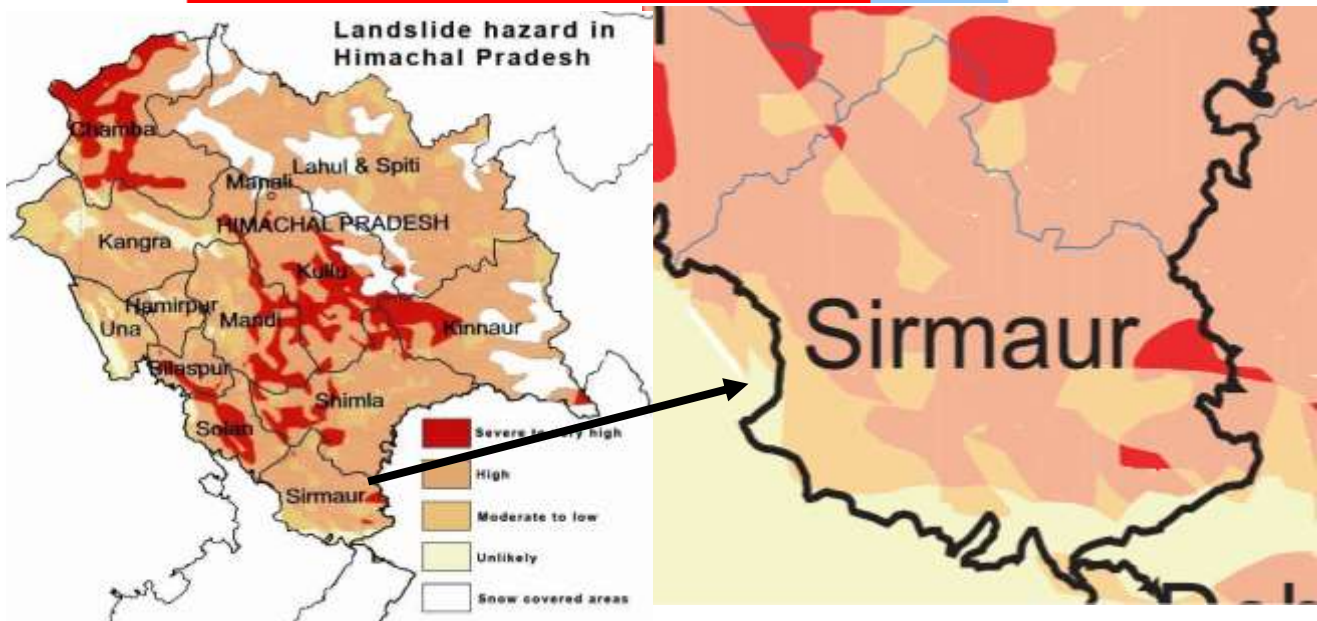
Vulnerable population : Local community and tourist on road. All over the district

Likely damage: Very high in terms of financial loss

Life : minimal.

Responsible factors for : Heavy rainfall, fragile soil condition, human encroachment, road construction, mining, toe removal, natural erosion, etc.

Landslide Prone Areas of Himachal Pradesh (Sq. Kms)					
District	Sever to very High	High	Moderate to Low	Unlikely	Total Area
Bilaspur	216	842	83	1	1142
Chamba	2120	3829	351	70	6370
Hamirpur	0	851	204	45	1100
Kangra	123	3698	1233	557	5611
Kinnaur	868	4956	498	0	6322
Kullu	1820	3512	65	3	5401
Lahaul & Spiti	127	11637	1825	2	13591
Mandi	968	1978	826	98	3870
Shimla	893	3345	767	14	5019
Sirmaur	95	1805	614	228	2742
Solan	556	1118	157	79	1910
Una	2	678	517	311	1508
<b>Total</b>	<b>7788</b>	<b>38249</b>	<b>7140</b>	<b>1408</b>	<b>54586</b>
<b>%age</b>	<b>14.27</b>	<b>70.07</b>	<b>13.08</b>	<b>2.58</b>	



## **Floods**

The passage of rivers such as the Yamuna, Giri, Tons etc. through the district make many parts of the districts prone to floods. There is also the possibility of flash floods in dry nallahs as happened in Paonta Sahib in 2012. Most of these rivers are perennial, originating in upper reaches of the mountains from the glaciers. The rivers are further fed by numerous streams and seasonal rivers. In the summers when the glaciers start melting the volume and level of the river can rise by as much as 40 feet and for this reason there is provision of a small barrage and canal near Paonta Sahib called as Assan barrage. The rivers in the district are prone to flash floods which can wreak havoc due to the local soil conditions as it is very loose and unconsolidated and can wash away easily due to excessive rains. According to news report from Hindustan Times dated 16<sup>th</sup> June, 2013, small seasonal rivers and nallahs had witnessed flash floods which had swept away cattles and caused landslides and blocked roads across the district.

### **Major rivers flowing through the district causing flood hazard:**

#### **Yamuna**

This river originates from the Jamnotri mountain in the Himalayas at a height of about 7,924 m from the mean sea level. Within the boundary of this district the estimated maximum width of the river is about 91m and the depth about 6m but this limit is far exceeded during the rainy season. Its notable tributaries in the district, are the Tons meeting it at Khodari Majri, the Giri joining it near Rampur Ghat and the Bata mingling its water with it at Bata Mandi.

#### **Giri**

By far the greater portion of the district is drained by the Giri or its tributaries. It takes its rise in the hills of Jubbal and courses through the hills of Kot-Khai and Tatesh, parts of Shimla district, and enters in the district on its south-west side. It continues its course for about forty kilometers forming the boundary with the Keonthal area of the Shimla district. At village Mandoplasa, this district debouches in the Yamuna at Rampur Ghat.

#### **Tons**

The source of this river lies in the Jamnotri mountains and after coursing through the territories of Jubbal and Jaunsar it enters the district near village Kot separating it from the Jaunsar area, once a part of the erstwhile princely state of Sirmour. After flowing for about 50km and forming the eastern boundary of the district it joins the Yamuna near Khodar Majri, too soon losing its name in that of the Yamuna, which is trebled in size after the junction of the two rivers.

#### **Jalal**

This small, shallow and narrow river rises near village Bani below Nehi in tehsil Pachhad and forms a dividing line between the Sain and the Dharthi. At Dadahu in SubTehsil, it falls into the Giri river

losing its name. It is generally fordable and rarely up-passable except when it flood which passes away soon.

**Markanda**

It rises at Baraban in the hills of Katasan and pass below a temple of Katasan Devi. With in the district, irrigating Bajora area, it passes on to the Ambala district at Kala Amb where it is quite wide at village Dewani it is joined by a streamlet named Salani. Areas of Bajora, Kala Amb the lands of Shambhuwala, Rukhri and the garden of Bir Bikrambag and the Khadar Bag are irrigated by its water and few water mills are also run. Its only tributary, of any importance, is the Salani.

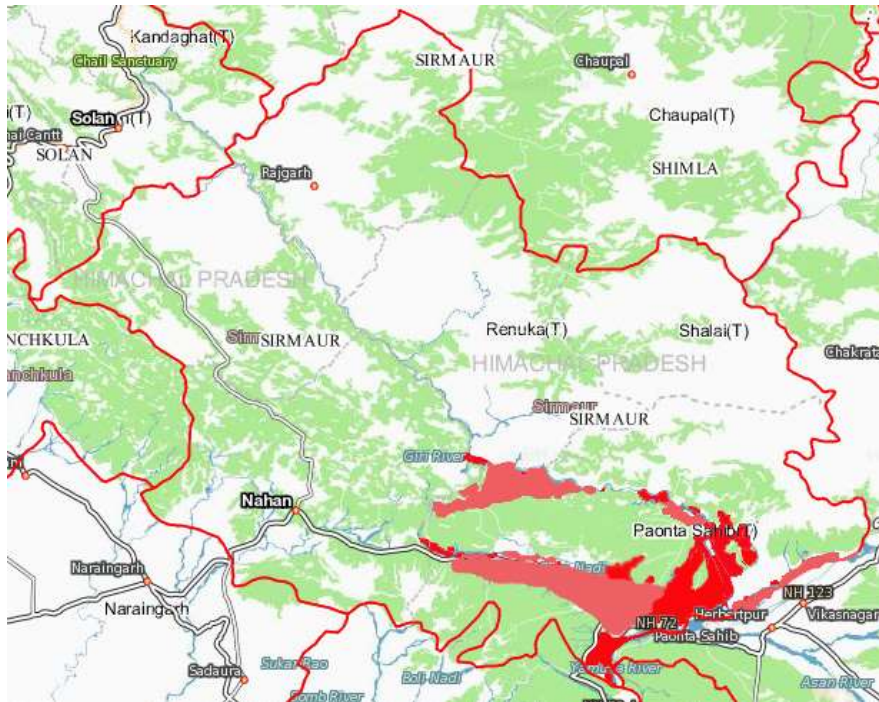
**Bata**

This river issues from Siori spring in the Dharthi range, located in village Bagna tehsil Nahan and takes easterly direction reverse to the course of the Markanda. Dividing Kayarda Dun into two parts it joins Yamuna at Bata Mandi and loses its separate entity and name.

**Hazard Profile:**

- Past History : Annually the Tehsil like Paonta Sahib is affected by flood from Yamuna, Bata, Giri and Majra rivers.
- Frequency : Medium (During monsoon season)
- Impact : Villages near the river bank (flood plain areas), damage of property and houses.
- Vulnerability : Villages on the bank of the rivers Yamuna, Bata, Giri, etc.
- Magnitude : Medium in Paonta Tehsil specific.

Responsible factors for damage : Over flowing of rivers, sudden gradient change of the rivers, and encroachment of the river flood plains.



**Flood hazard vulnerable areas of Sirmaur district. Dark Red is denoting high risk and Light Red is denoting low risk areas.**

### High Winds

The South western parts of the district of Sirmaur are also prone to the effects of very high winds as per the Vulnerability Atlas of India 2007. The remaining portions are in the High damage risk zone. During summers, there are instances of thunderstorms accompanied by heavy winds, hail and



lightning that can cause immense damage to the surrounding areas. Most of the population is rural and depend on agriculture which gets affected by hail and strong wind causing monetary losses.



### Hazard Profile

Past History	:	Yes.
Frequency	:	Likely (all seasons)
Impact	:	Household, electricity supply,
Vulnerable population	:	Around the district
Likely damage	:	Crops. Houses, electric pole.
Life	:	Minimal

### Industrial hazards

The main industrial areas in the district are Kala Amb and Paonta-Sahib. Kala Amb is an emerging town for industries that hosts production units for Paper, Metal, chemicals, thread mills and Air-Conditioners. In the Paonta-Sahib industrial area, the major industries are cement, pharmaceuticals, textiles, chemicals & food products. Due to the presence of about 92 medium to large industrial units and about 1458 Small Scale industries in the district, there is a possibility of industrial accidents, fire etc.

The state pollution control board has declared 142 industries as category red industries which deal with hazardous material such as chemicals and gasses. The list is available at the website of pollution control board, Himachal Pradesh (<http://hppcb.nic.in/Consent/RCI.pdf>).

### Hazard Profile

Past history	:	Yes.
Frequency	:	Likely
Impact	:	Industrial complexes, workers and local residents.
Vulnerable population	:	Industrial workers, local community near the area.
Magnitude	:	Medium to high in the Kala Amb region and Paonta Sahib region where there are many industries.
Life	:	Few

Responsible factors: Non complying the safety procedures, construction bye laws, no care for fire proof buildings or facilities, inadequate safety measures, untrained officials to fight with fire etc.
--

**Road Accident:**

The National Highway 72 has passed through the district and there are several State Highways making the state well connected to other parts of the state and also with neighbouring states. But in the meantime due to the sharp curves, cliffs, and less width of the roads the district has been affected by highest number of road accidents.

**Hazard Profile**

Past history : Everyday hazard  
Frequency : Very high  
Impact : Local community/travelers/tourist etc.  
Vulnerable Population : Local community, young generation

Responsible factors : High terrain and typical topography of the roads, narrow road, sharp curves, rash and drunken driving also plays a destructive role.

Likely damage : As per assessment made in past years.

**Hazard Profile for a few other important hazards**

**Heavy Rainfall:**

Past History : Yes  
Frequency : Likely (During monsoon season)  
Impact : Infrastructure, household and community.  
Vulnerability : Whole district  
Magnitude : High damage in a particular period  
Likely damage : Every year there are incidences.

Vulnerable Population : Houses which are old enough and not constructed according to building bye laws, construction on the steep slope.

**Falling from Cliff:**

Past history : Yes  
Frequency : Low, specially Ronhat, shillai, Sangrah areas.  
Impact : House hold  
Vulnerable Population : Women going for grass collection

**Water (drowning):-**

Past history : Yes.  
 Frequency : It happens in the Yamuna river every year.  
 Impact : Tourist coming to Paonta Sahib  
 Vulnerable population : Tourist  
 Life : Few

**Epidemic:-**

Past history : Yes  
 Frequency : Likely.  
 Impact : House hold, and community.  
 Vulnerable population : All  
 Likely damage : NIL  
 Life : Few

**Overall Vulnerability of the District**

On the basis of above analysis the overall vulnerability of the district is very high. The figure below which the HP State Council for Environment, Science and Technology has compiled for the State shows Sirmaur to be very high vulnerable district for hazard susceptibility.

Elements at Risk	Degree of Vulnerability to Various Hazard								
	Earth quake	Land slide	Flash Floods/ GLOF	Avalanches	Drought	Forest Fires	House hold Fires	Dam Failure	Road Accidents
Community	Very High	High	Very High	High	High	High	Very High	High	High
Infrastructure	Very High	Very High	Very High	High	Moderate	Moderate	Low	High	Low
Houses	Very High	Very High	High	Moderate	Low	Low	Very High	High	Nil
Social Sector	Very High	High	Moderate	Low	Moderate	Low	Very High	Low	High
Livelihood Sector	Very High	High	Moderate	Low	Very High	High	High	High	High
Environment	Very High	Very High	Very High	High	Very High	Very High	Very High	Very High	Low

**Figure 13: Overall Vulnerability of Himachal Pradesh**

District Disaster Management Plan 2012, Sirmaur (H. P.)

**Damage assessment due to heavy rain, flood and landslide for 6 years**

Year	Population Affected	Damage to Crops		Damage to Houses		Human lives lost	Livestock lost	Damage to Public utilities like roads, I&PH, Elect.,	Total damage of the District (in lakhs)	Villages affected
		Area (in hect.)	Value (in lakhs)	Number (Houses and Cattle sheds)	Value (in lakhs)					
2013	2 people dead	Fruit crop lost due to excessive rains	1500	47 houses damaged, 10 completely, 14 cow sheds and 4 retaining walls damaged.	22.16	2	32	NH-72 NH-73 PWD link roads	5114.05	Banore, Charna, Surajpur, Majra
2012	9 people washed away	Fruit and vegetable crop	447.70			9		Land lost due to flash flood and landslide. Drinking water, power lines and irrigation schemes washed away.	2636	Shamalka Khud- flash flod, Bharapur Khud, Chuchheti (Banor)- landslide. Toka Nagla, Abhi Khala
2011	8	Crops	41,71,000	319 villages with 4245 people being affected. 494, 25 completely	87,28,000	8	42	Power supply, telecommunication, road transportation, food godown, irrigation.	34,57,30,583	Rajgarh, Pachhad.
2010	11000	Crops	38.33	950 houses, 32 damaged completely. 689 cow sheds,	219.6	12	45	Roads, irrigation, bridges, buildings	52,98.31	Sangarh, Rajgarh, Paonta Sahib, Shillai.
2009	902 villages	Crops affected	40,18,73,300+32,3	Nil	Nil	Nil	Nil	Crops severely affected	40+25 lacs spent on	More than 80% affected due to

District Disaster Management Plan 2012, Sirmaur (H. P.)

	affected.	due to drought	9,82,000						transportation of water and fodder	drought.
2008	15253 people affected.	Crop and horticulture	30,37,78,343	252 houses and 507 cowsheds	1,17,98,000	14	437	Crops, roads, irrigation, electric department.	86,62,31,343	Bhogdhar, sangrias, gehal, chandani, manal, gorkhuwala, navada, pain kuffar

**Tehsil wise Hazard Risk Vulnerability Analysis**

**Tehsil- Paonta Sahib**

Hazard	Risk			Significant vulnerable areas
	High	Medium	Low	
Landslide			It's a valley area hence the landslide risk is low	
Rock fall			It's a valley area hence the landslide risk is low	
Flood	All the rivers like Yamuna, Giri, Bata and Majra which overflow during monsoon season.			Villages on bank of Bata, Giri, Majra and Yamuna river
Heavy rain		During monsoon heavy rain tend to cause damage in the region.		
Road accident	Due to sharp turns and narrow roads more accident tend to occur			Across the Tehsil
Earthquake	As per the seismological map of India it is in High risk zone			Across the Tehsil
Industrial accidents	This area has lots of industries and hence the risk is more			Along the industrial belt
River drowning	Due to carelessness of tourist it happens in Yamuna river			In Yamuna river

**Tehsil- Shillai**

Hazard	Risk			Significant vulnerable areas
	High	Medium	Low	
Landslide	Removal of toe zone during road construction, unplanned housing, soil condition and heavy rain			Paonta-Hatkoti road, Kamrau, Kathowar, Bhajon
Rock fall			As per the reports occurrence of rock fall is low	
Heavy rain		During monsoon heavy rain tend to cause damage in the region.		Damage to houses across the Tehsil
Road accident	Due to sharp turns and narrow roads more accident tend to occur			Across the Tehsil
Earthquake	As per the seismological map of India it is in High risk zone			Across the Tehsil
Industrial accidents			No reports of any industrial accident	

**Tehsil- Rajgarh**

Hazard	Risk			Significant vulnerable areas
	High	Medium	Low	
Landslide	Removal of toe zone during road construction, unplanned housing, soil condition and heavy rain			Panali, Salech (house were damaged)
Rock fall			As per the reports occurrence of rock fall is low	
Heavy rain		During monsoon heavy rain tend to cause damage in the region		Damage to houses in Nohra
Road accident	Due to sharp turns and narrow roads more accident tend to occur			Across the Tehsil
Earthquake	As per the seismological map of India it is in High risk zone			Across the Tehsil
Industrial accidents			No reports of any industrial accident	

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**Tehsil- Sangrah**

Hazard	Risk			Significant vulnerable areas
	High	Medium	Low	
Landslide	Removal of toe zone during road construction, unplanned housing, soil condition and heavy rain			Gutta Dhar, Naini dhar, Dadahu (near bridge), Baylagu
Rock fall	Due to the topography, presence of lose rocks			Karkoli, Borli, Kheduwa
Flood		Flooding happens along the low lying areas near Giri and Jalal rivers		Villages situated near Giri and Jalal river, Ronhat, Bhangal Khad,
Heavy rain		During monsoon heavy rain tend to cause damage in the region		Across the Tehsil
Road accident	Due to sharp turns and narrow roads more accident tend to occur			Across the Tehsil
Earthquake	As per the seismological map of India it is in High risk zone			Across the Tehsil
Industrial accidents			No reports of any industrial accident	
Falling from Cliff	Women who gather fuel and fodder are the common victims			Rast, Khijwadi.

**Tehsil- Pachhad**

District Disaster Management Plan 2012, Sirmaur (H. P.)

Hazard	Risk			Significant vulnerable areas
	High	Medium	Low	
Landslide	Removal of toe zone during road construction, unplanned housing, soil condition and heavy rain			Kumar, Tetus, Raha
Rock fall	Due to the topography, presence of lose rocks			All along the roads
Heavy rain		During monsoon heavy rain tend to cause damage in the region		Across the Tehsil
Road accident	Due to sharp turns and narrow roads more accident tend to occur			Across the Tehsil
Earthquake	As per the seismological map of India it is in High risk zone			Across the Tehsil
Industrial accidents			No reports of any industrial accident	

**Tehsil- Nahan**

## District Disaster Management Plan 2012, Sirmaur (H. P.)

Hazard	Risk			Significant vulnerable areas
	High	Medium	Low	
Landslide	Removal of toe zone during road construction, unplanned housing, soil condition and			Shambhuwala, Moginand Ambwala Sainwala
Rock fall		Topography, heavy traffic and animal activities		
Heavy rain		During monsoon heavy rain tend to cause damage in the region		Across the Tehsil
Road accident	Due to sharp turns and narrow roads more accident tend to occur			Across the Tehsil
Earthquake	As per the seismological map of India it is in High risk zone			Across the Tehsil
Industrial accidents	This area has lots of industries and hence the risk is more			Kala Amb

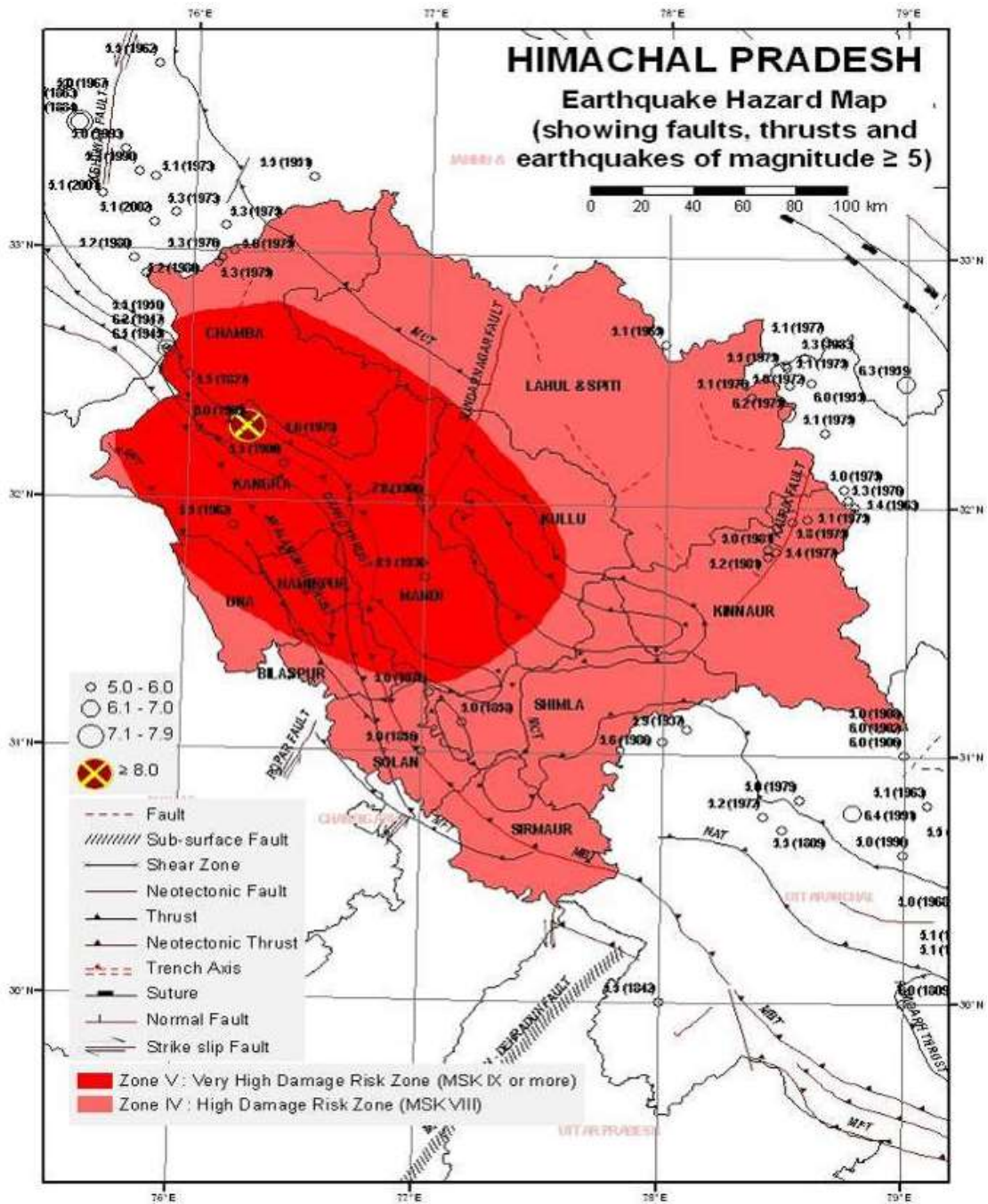
The district is home to 90% rural population which depends on agriculture and many of them are unskilled labors working in various cities. The district is one of India's most backward districts and receives grants from the Backward Regional Grant Fund Programme. The density of population as per 2001 census is only 188. The population is more accumulated at certain points and the rest of the district is covered by mountains and forests.

The socio economic status of the people is average except for some areas such as those who are living in the district capital of Nahan or the industrial belt of Paonta Sahib and Kala Amb. The people practice agriculture and horticulture over small pieces of land and the economy is dependent on it.

Many families have individuals working in other cities as well as agriculture land and are hence have better living standards than others. The fact that they depend entirely on agriculture makes them more vulnerable to the effects of landslides, flash floods and wind related incidents as these hazards tend to affect agriculture more than any other hazard. The development of industrial belt in Kala Amb and Paonta Sahib has led to unplanned development in the region and being very close to the river Yamuna it is more vulnerable to floods. The whole district is situated in zone 4 of earthquake and there are numerous faults passing through it which can cause earthquakes in future. The kind of construction in the district which may not have considered earthquake as a hazard while constructing houses makes the population of the region more vulnerable to the effects of future earthquakes.

**Table: 5 Districts of Himachal Pradesh with Seismic Intensities as per Zoning**

Sr. No.	Name of District	Seismic Zones	Intensity MSK IX or more % Area	MSK VIII % area
1	Kangra	V/IV	98.6	1.4
2	Mandi	V/IV	97.4	2.6
3	Hamirpur	V/IV	90.9	9.1
4	Chamba	V/IV	63.2	36.8
5	Kullu	V/IV	53.1	46.9
6	Una	V/IV	37.0	63.0
7	Bilaspur	V/IV	25.3	74.7
8	Solan	V/IV	2.4	97.6
9	Lahaul & Spiti	V/IV	1.1	98.9
10	Kinnaur	V/IV	---	100
11	Shimla	V/IV	---	100
12	<b>Sirmour</b>	<b>V/IV</b>	<b>----</b>	<b>100</b>



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

Figure 15: Earthquake Hazard Map of Himachal Pradesh

### Capacities and resources

The capacity in terms of disaster management is the ability of the people to bounce back to the conditions which existed prior to the disastrous event. Capacities can be identified using various factors such as income, level of education, age, technology available etc. As per the census of 2001, 90% of population is rural and many depend on agriculture and tourism which may suffer the effects of natural hazards such as flash floods, landslides, earthquakes and wind related hazards. The coping capacities of the people in the region varies from place to place, the level of income of the people in the industrial belt and tourist spots are very different from those who are living in the interiors and depend on agriculture for their sustenance. Similarly those families with a member working and earning outside the district are better placed than those who depend entirely on the resources available in the district. People with better income are also able to afford better houses and structures and are also more educated and aware of their surroundings and environment. They live in houses which are built better with engineering inputs.

**The district is highly prone to Landslide hazard, so it is very essential that all the tehsils should have capacity to work immediately to clean the roads. So, a detailed resource inventory of the PWD department as Tehsil wise provided below.**

#### Machine/ Vehicles available in working order under 12<sup>th</sup> circle HPPWD, Nahan

S. No.	Name of Division	Tipper/truck	Loader/JCB	Dozer
1	Nahan Division	Truck HP-18A1302/ Truck HP-18-4819/ Truck HP-18A-1303/Truck HP-18-4823/ Tipper HP-18-4822/ Tipper HP-18-4853 Truck HP-14-9051/ Tipper HP-17-3039/ Tipper HP-17-5281	Loader JCB HP-18B-0363	Dozer –D-50-7588
2	Paonta Sahib	LCV HR-17-3148 /Truck HP-14-8987/ Truck HP-18A-0889 Truck HP-07-0378	Loader-710/365 JCB-39094 JCB HP-17A-8173	
3	Shillai Division	Tipper HP-18-4854/ Tipper HP-18-4986/ Truck HP-18A-1307 Truck HP-07A-2379	JCB HP-17A-0326 L&T HP-17AB-0314	Buldozer D-50-G-12750 Buldozer D-50-G-13636
4	Rajgarh	Tipper HP-16-1248 /Tipper HP-16-1016 / Tipper HP-38A-3480/ Tipper HP-18A-1561	Loader back hok HP-16-1549 Loader back hok HP-16-0564 Loader back hok HP-16-3310	Dozer-D-50-8949
5	Sangarh division	Tipper HP-14A-2453/ Truck Hp-18-4907	L&T 3662 JCB SN39088	Dozer D-50-G-12690 Dozer B-D-50-G13586

**List of some of the public health centres and hospitals in Sirmaur**

<b>Hospital</b>	<b>Location</b>
Regional hospital	Nahan
Civil Hospital	Rajgarh
Civil Hospital	Ponta Sahib
Referral Hospital	Dadahu
Civil Hospital	Sarahan
Community health centre	Shillai
Community health centre	Sangrah
Primary Health Centre	Dhamla
Primary health centre	Naura Dhar
Primary health centre	Kaula-Wala-Bhoond
Primary health centre	Dhagera
Primary health centre	Parara
Primary health centre	Badag
Primary health centre	Jamta
Primary health centre	Banethi
Primary health centre	Narag
Primary health centre	Bagthan
Primary health centre	Mangarh
Primary health centre	Chilog
Primary health centre	Ghinni
Primary health centre	Dhamla
Primary health centre	Koti-padhog
Primary health centre	Dimber
Primary health centre	Phagu
Primary health centre	Rohnat
Primary health centre	Kafota
Primary health centre	Kayari-Gunda
Primary health centre	Lana-Cheta
Primary health centre	Haripurdhar
Primary health centre	Koti-Dhiman
Primary health centre	Bogdhar
Primary health centre	Gatadhar
Primary health centre	Naura dhar
Primary health centre	Charna
Primary health centre	Chokar
Primary health centre	Tikkari Dasakna
Primary health centre	Kanti Mashwa
Primary Health Centre	Jakhna
Primary Health Centre	Majra
Primary Health Centre	Khundian
Primary Health Centre	Kamrau
Primary Health Centre	Sataun

Primary Health Centre	Rampur-Bharapur
Primary Health Centre	Banog-Baneri
Primary Health Centre	Naina Tikkar



**Detailed Resource Inventory is provided in Appendices**

## Chapter – 3

### Institutional Mechanism

#### National Level

The Disaster Management Act, 2005 lays down institutional, legal, financial and coordination mechanisms at the National, State, District and Local levels. These institutions are not parallel structures and will work in close harmony. The new institutional framework is expected to usher in a paradigm shift in DM from erstwhile relief centric approach to a proactive regime that lays greater emphasis on preparedness, prevention and mitigation. The NDMA, as the apex body at national level for disaster management, is headed by the Prime Minister. The Act also provides for the National Executive (NEC) at the National level. The NEC comprises the Union Home Secretary as Chairperson, and the Secretaries to the Govt in the Ministries/Departments of Agriculture, Atomic Energy, Defence, Drinking Water Supply, Environment and Forests, Finance (Expenditure), Health, Power, Rural Development, Science & Technology, Space, Telecommunications, Urban Development, Water Resources and the Chief of the Integrated Defence Staff of the Chiefs of Staff Committee as members. Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, Shipping, Road Transport & Highways, and the Secretary, NDMA will be special invitees to the meetings of the NEC. The NEC is the executive committee of the NDMA, and is mandated to assist the NDMA in the discharge of its functions and also ensure compliance of the directions issued by the Central Government. The NEC is to coordinate the response in the event of any threatening disaster situation or disaster.

#### State Level

2. At the State level, the State Disaster Management Authority under the chairmanship of the Chief Minister stood constituted on 1.6.2007 and has the responsibility of policies, plans and guidelines for DM and coordinating their implementation for ensuring timely, effective and coordinated response to disasters. The Chief Secretary is the Chief Executive Officer of the SDMA. Besides, the SDMA has seven other members. The SDMA will, inter alia approve the State Plan in accordance with the guidelines laid down by the NDMA, approve DMPs prepared by the departments of the State Government, lay down guidelines to be followed by the departments of the Government of the State for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects, coordinate the implementation of the State Plan, recommend provision of funds for mitigation, preparedness measures, review the developmental plans of the different Departments of the State to ensure the integration of prevention, preparedness and mitigation measures and review the measures being taken for

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

### **State and District Crisis Management Group**

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

### **District Disaster Management Authority (DDMA)**

4. The DDMA for the district has been notified on 1.6.2007 as under:-

i) Deputy Commissioner	Chairman
ii) Superintendent of Police	Member
iii) Chief Medical Officer	Member
iv) Superintendent Engineer (I & PH)	Member
v) Superintendent Engineer (Power)	Member
vi) Superintendent Engineer (PWD)	Member
vii) Chairman Zila Parishad	Member
viii) Additional District Magistrate	-Member Secretary

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

6. The DDMA will also coordinate response to any threatening disaster situation or disaster, coordinate with, and provide necessary technical assistance or give advice to the local authorities in the district for carrying out their functions, examine the construction in any area in the district and issue direction the concerned authority to take such action as may be necessary to secure compliance of such standards as may be required for the area, and identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places, establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice. The DDMA will encourage the involvement of non-governmental organisations and voluntary social-welfare institutions working at the grassroots level in the district

for disaster management, ensure communication systems are in order, and disaster management drills are carried out periodically.

### Local Authorities

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

### Role of State Government Departments at District Level

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

9. The department will also make provision for resources in consultation with the State/District Authority for the implementation of the District Plan by its authorities at the district level, make available its resources to the National Executive Committee or the State Executive Committee or the District Authorities for the purposes of responding promptly and effectively to any disaster in the State, including measures for- providing emergency communication with a vulnerable or affected area, transporting personnel and relief goods to and from the affected area, providing

evacuation, rescue, temporary shelter or other immediate relief, carrying out evacuation of persons or live-stock from an area of any threatening disaster situation or disaster, setting up temporary bridges, jetties and landing places, and providing drinking water, essential provisions, healthcare and services in an affected area and such other actions as may be necessary for disaster management.

### **District Administration**

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

### **Other Institutional Arrangements**

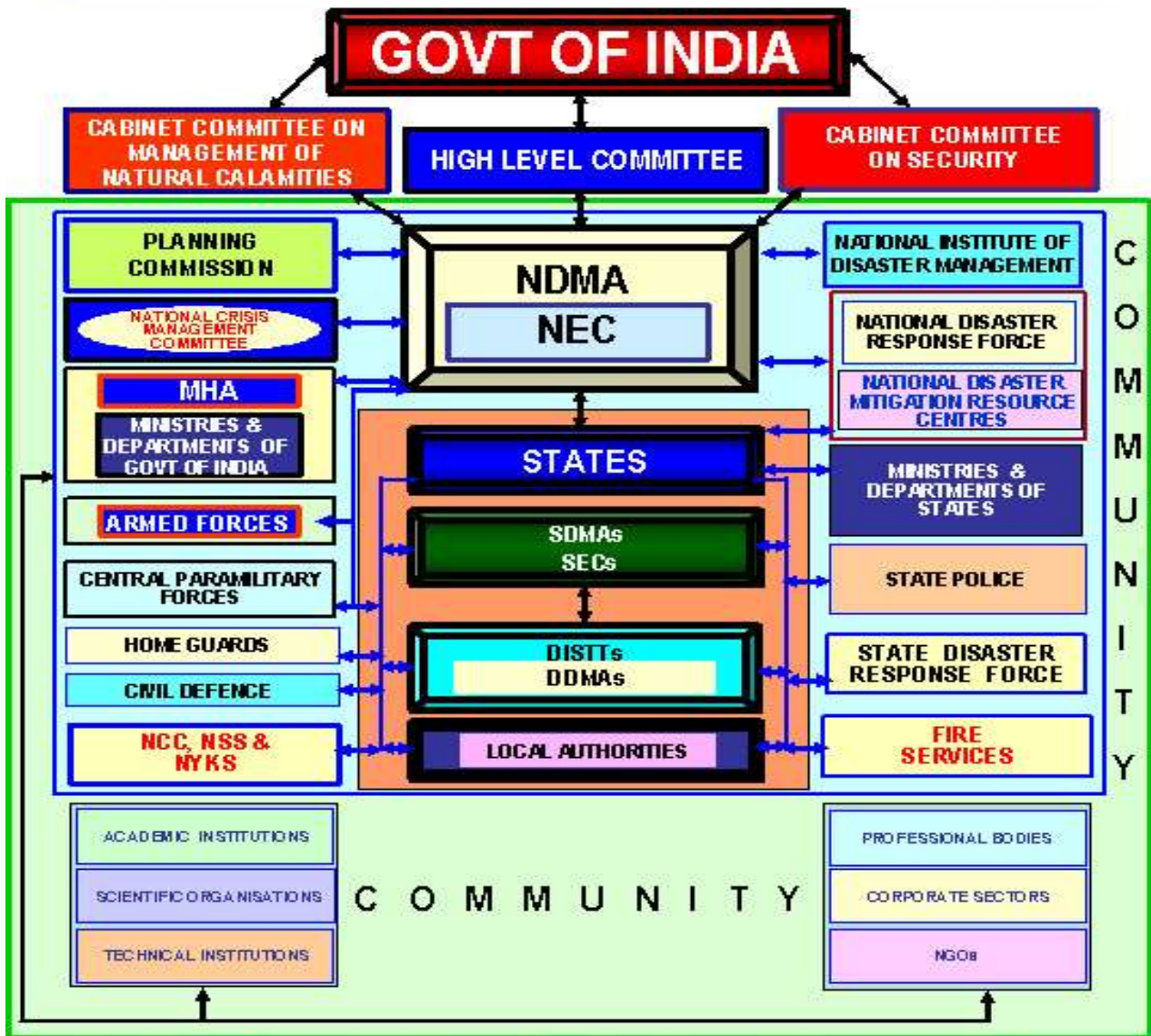
#### **Armed Forces**

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

#### **Central Paramilitary Forces**

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

**NATIONAL DISASTER MANAGEMENT STRUCTURE**



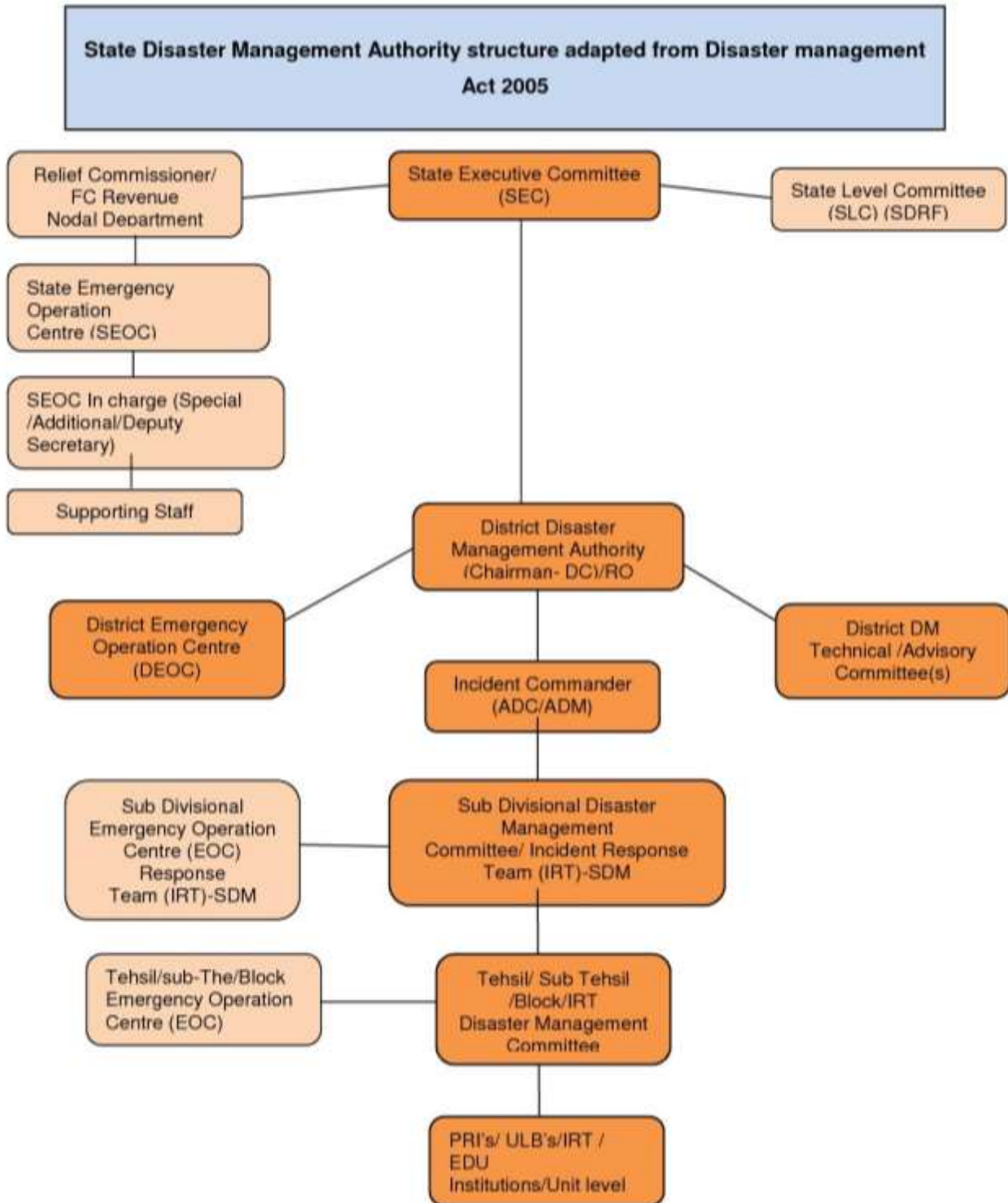
- Notes:**
1. This diagram reflects interactive linkages for synergised management of disasters and not a hierarchical structure.
  2. Backward and forward linkages, especially at the functional level, are with a view to optimise efficiency.
  3. Participation of the Community is a crucial factor.

**State Police Forces and India Reserve Battalions**

13. The State Police Forces and the India Reserve Battalions are crucial for immediate responders to disasters. The existing Police Forces located in the district will be trained in advanced SAR and MFA techniques so that their services can be utilised in disaster situations/events.

The overall institutional structure for DM is as in the next page:-

Figure 17: Disaster Management Structure



### **Fire Services and Home Guards**

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

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

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

### **Role of District Collector in Disaster Management**

16. The Act prescribes responsibilities to various authorities at all levels. The roles and responsibilities of DDMA has been elaborated in Section 30, 31, 33, and 34 of the Act. Keeping in view the provisions of the Act, the District Collector, the Chairman of the DDMA shall ensure the following:-

- i. Preparation of the Disaster Management Plan (DDMP) for the District with the assistance of the DDMA and other experts as per the provisions of the Act, guidelines issued by the NDMA, SDMA and the State Executive Committee (SEC);
- ii. Preparation of DMP by the departments of the Government and other agencies based on the DDMP;
- iii. Periodic mock drill to test the efficacy of the DMPs;
- iv. Integration of Disaster Risk Reduction (DRR) into development programmes and policies of all departments;
- v. To monitor the implementation of the DDMA and regular updating of the same;
- vi. Setting up the district control room and making it function effectively;
- vii. Earmarking and entrusting responsibility to the various departments including Emergency Support Functions (ESF) and appointment of Nodal Officers by various departments to perform the ESFs;
- viii. Coordination with all the line departments of the State, Central, Armed Forces and other agencies;

- ix. Periodic review of preparedness of departments at all levels;
- x. To liaise with the Government periodically about the disaster and the action taken;
- xi. Integrating the MARG (Mutual Aid and Response Group) of the industrial belt with the disaster management committee;
- xii. Equip and prepare the district machinery before the disaster;
- xiii. Identification of building/open spaces for relief camps and setting up relief camps and transit camps whenever needed;
- xiv. Conducting relief and rescue operations;
- xv. Establishing GO-NGO Coordination during normal time so that it works during emergencies and to coordinate the actions of NGOs/CBOs, relief agencies and departments for effective disaster response and relief;
- xvi. Organizing Training and conducting mock drills to the Government officials, community and other stakeholders;
- xvii. Ensure public awareness on all the hazards which the district face regularly;
- xviii. Transmission of Early Warning alters to the vulnerable community with the effective means of communication;
- xix. Maintaining the supply of essential commodities;
- xx. Stocking of minimum essential relief material for ready availability; and
- xxi. Any other action which is needed for the requirement of the situation or to comply with the provisions of the DM Act and instructions issues by the NDMA, SDMA or the SEC.

#### **District Emergency Operation Centre (DEOC)**

17. The District Collector would be assisted to perform the roles assigned to him and the DDMA by the District Emergency Operation Centre (Control Room). The DEOC would perform the following functions:-

- i. District control room would be the nerve centre for the disaster management;
- ii. To monitor, coordinate and implement the actions for disaster management;
- iii. Activate the ESF in the event of a disaster and coordinate the actions of various departments/agencies;
- iv. Ensure that all warning, communication systems and instruments are in working conditions;
- v. Receive information on a routine basis from the district departments on the vulnerability of the various places and villages (parts of the districts);

- vi. Receive reports on the preparedness of the district level departments and the resources at their disposal to arrange and meet their requirements;
  - vii. Upgrade the Disaster Management Action according to the changing scenario;
  - viii. Maintain a web-based inventory of all resources through the India Disaster Resource Network (IDRN);
  - ix. Provide information to the Relief Commissioner' Office of the disaster/emergencies/accidents taking place in the district regularly and maintain a database of disasters and losses caused by them;
  - x. Monitor preparedness measures and training activities;
  - xi. Providing information at district level, local level and disaster prone areas through appropriate media;
  - xii. Brief the media of the situations and prepare day to day reports during the disasters;
  - xiii. To report the actual scenario and the action taken by the District Administration;
  - xiv. Maintain a database of trained personnel and volunteers who could be contacted at any time;
  - xv. Liaise with on-site operation centre, State EOC and other emergency services.
18. The Assistant Commissioner to Deputy Commissioner shall be the Nodal Officer for Disaster Management would be in-charge of the DEOC. The design, layout, equipment and operation of the DEOC would be as per the EOC Manual prepared at the State level.

#### **Measures to be taken for Disaster Management**

19. Generally speaking the following measure would help in dealing with disasters in the district:-
- i) Preparation of Disaster Management Plans at District and local Level
  - ii) Implementing of Disaster Management Plans
  - iii) Holding regular meetings at District and Sub-Division level to reviewing the readiness of the administrative machinery to deal with disasters.
  - iv) Constitution of Relief Committees at all levels.
  - v) Regular training programmes of Government functionaries, PRIs, ULBs and other stakeholders in various facets of disaster management.
  - vi) Public awareness and education in disaster management.
  - vii) Community training and empowerment
  - viii) Taking preventive and mitigation measures for the identified hazards
  - ix) Integration of Disaster Risk Reduction (DRR) into on-going development programmes of all departments.

- x) Establishing effective early warning system for the vulnerable areas and communities.
- xi) Improving the response capacities of the search and rescue teams.
- xii) Conducting regular mock drills

#### Action during Disasters

20. The following would be the broad guidelines for actions during disasters:-
- a) Assess the full extent of the disaster/calamity and the damages/losses incurred
  - b) Plan and supervise search and rescue operations
  - c) Allocate clear responsibilities to the officers and provide them necessary resources along with necessary delegations
  - d) Mobilise resources from outside the district if the situation so warrants
  - e) Finalise the relief to be provided to the affected persons and ensure its timely distribution
  - f) Collect and maintain full information of the disaster and steps taken to tackle it
  - g) Document the disaster including the lessons learnt
  - h) Last but not least, keeping informing the higher authorities about the whole incident

## Chapter – 4

### Mitigation Strategy for the District

The adverse effects of disasters can be minimised if mitigation policies, plans, and projects are undertaken. Keeping in view the hazard and vulnerability profile of the district the following mitigation actions would be taken to mitigate the impacts of various hazards.

#### I. **Action Plan for Earthquake Mitigation**

- i. Revision and adoption of model building bye-laws for construction both in urban and rural area.
- ii. Wide dissemination of earthquake-resistant building codes, the National Building Code 2005, and other safety codes.
- iii. Training of trainers in professional and technical institutions.
- iv. Training professionals like engineers, architects, and masons in earthquake resistant construction.
- v. Launching demonstration projects to disseminate earthquake-resistant techniques.
- vi. Launching public awareness campaigns on seismic safety and risk reduction and sensitising all stakeholders to earthquake mitigation.
- vii. Establishing appropriate mechanisms for compliance review of all construction designs submitted to ULBs.
- viii. Undertaking mandatory technical audits of structural designs of major projects by the respective competent authorities.
- ix. Developing an inventory of the existing built environment.
- x. Assessing the seismic risk and vulnerability of the existing built environment by carrying out structural safety audits of all critical lifeline structures.
- xi. Developing seismic strengthening and retrofitting standards and guidelines for existing critical lifeline structures.
- xii. Undertaking seismic strengthening and retrofitting of critical lifeline structures, initially as pilot projects and then extending the exercise to the other structures (as detailed in a phased manner).
- xiii. Preparation of DM plans by schools, hospitals, main buildings visited by large number of public etc., and carrying out mock drills for enhancing preparedness.
- xiv. Strengthening the EOC network and flow of information.
- xv. Streamlining the mobilisation of communities, civil society partners, the corporate sector and other stakeholders.

- xvi. Preparing community and village level DM plans, with specific reference to management of earthquakes.
- xvii. Carrying out the vulnerability assessment of earthquake-prone areas and creating an inventory of resources for effective response.
- xviii. Introducing earthquake safety education in schools, colleges and universities and conducting mock drills in these institutions.
- xix. Strengthening earthquake safety research and development in professional technical institutions.
- xx. Preparing documentation on lessons from previous earthquakes and their wide dissemination.
- xxi. Developing an appropriate mechanism for licensing and certification of professionals in earthquake-resistant construction techniques by collaborating with professional bodies.
- xxii. Preparing an action plan for the up gradation of the capabilities of the IMD and BIS with clear roadmaps and milestones.
- xxiii. Developing appropriate risk transfer instruments by collaborating with insurance companies and financial institutions.
- xxiv. Operationalising the local companies of Home Guards and IRBs/Police for disaster response.
- xxv. Strengthening the medical preparedness for effective earthquake response, etc.
- xxvi. Enforcement and monitoring of compliance of earthquake-resistant building codes, town planning bye-laws and other safety regulations.

### **II. Land Slide Mitigation**

The main features to be included in the plan are:

- i) Revision of town planning bye-laws and adoption of model land use bye-laws in hilly areas.
- ii) Wide dissemination of model land use practices in hilly areas.
- iii) Training of trainers in professional and technical institutions.
- iv) Training of professionals like engineers and geologists for landslide mapping, investigation techniques, analysis, and observational practices.
- v) Launching public awareness campaigns on landslide hazard and risk reduction, and sensitising all stakeholders on landslide hazard mitigation.
- vi) Establishing appropriate mechanisms for compliance reviews of all land use bye-laws in hilly areas.
- vii) Preparing an inventory of existing landslides, active or inactive, in the area.
- viii) Developing an inventory of the existing built environment in areas around existing landslides and in high hazard zones as per the LHZ maps.

- ix) Assessing the status of risk and vulnerability of the existing built environment.
- x) Preparation of DM plans by educational and health institutes/organisations, government offices, etc., and carrying out mock drills for enhancing preparedness in vulnerable areas.
- xi) Strengthening the EOC and communication network.
- xii) Streamlining the mobilisation of communities, government agencies, the corporate sector, and other stakeholders.
- xiii)** Preparing community and village level DM plans, with specific reference to the management of landslides.

### **III. Management of Drought**

The salient features of mitigation plan will be:

- i) A Drought Management Cell (DMC) will be established in the Local Agriculture Department.
- ii) Drought management plans for the entire season will be prepared by the Agriculture Department well in advance in the month of May, based on the long season forecast issued by IMD in April and also the previous season's rain fall.
- iii) Drought management plans will be prepared block wise.
- iv) As the season progresses from June onwards, the DMC will review the plans prepared earlier at the onset of the monsoon and revise the strategy if required.
- v) Weekly monitoring of the season and crop condition from June onwards till the end of the season and make necessary midseason corrections as and when required.
- vi) The DMC will make use of the frontier techniques like remote sensing and GIS while providing the inputs to the DDMA.
- vii) A sound database will be created and updated regularly on weather, crop conditions, input supply, credit, insurance and market information, fodder supply etc. in order to assist the DDMA for Drought declaration and Management.
- viii) Awareness will be brought among the farmers on drought regulations and enforcement.

### **IV. Managing Chemical, Biological, Radiological and Nuclear Emergencies – Contamination of Water Supply.**

To manage an incident of CBRN contamination of water supply, a modal SOP as given under may be referred to:

### **Incident Reporting**

Any breach of security or suspected event of accidental or intentional contamination should be communicated to the officer in charge of the water facility through quickest possible means. Subsequently, he will inform the same to local police, law enforcement and intelligence agencies, and request for physical quarantine of the contamination site. The incident should also be reported to all pre-identified nodal agencies with request to remain at stand by.

### **Site Characterization**

Water facility in charge along with law enforcement agencies would visit the site and make on site inspection for identification of physical evidences to confirm the incident. Police & Law enforcement agencies would collect and preserve physical evidences for further investigation and necessary action. Water facility in charge will also make an initial hazard assessment based on available evidences for determining potential need for specialized men, material, techniques or equipment. Based on the findings of initial site evaluation, both to and fro water supply should be stopped immediately.

### **Preliminary Screening**

Trained personnel would be deployed for sample collection and spot testing as described in this document. Sample should be collected from the nearest point. Sample collected should be divided into two, one for spot testing and another for laboratory testing. First set should be subjected to spot testing by prescribed methods. Once the incident and nature of contamination is established the same should be communicated to district administration in precise and clear language for activating their crisis management plan. Following positive screening, second half of the sample should be immediately sent to pre identified reference laboratories.

### **Risk Communication**

District administration in association with disaster management authority will make public pronouncement of contamination event in clear and precise language along with requisite precautions to be taken. All care to be taken to avoid undue panic situation.

### **Alternate Supply**

The Water facility manager in association with district administration would make alternate supply arrangements. In absence of alternate supply, water should be decontaminated through the technique of reverse osmosis. The mobile water purification van developed by DRDO could be utilized for same.

### Decontamination

Supply lines and storage facilities should be decontaminated using appropriate and available technology. Do not try to decontaminate water that has been exposed to chemical agents by using chemicals; rather it should be purified through the systems based on Reverse Osmosis and Carbon Columns. Such a system has been developed by Defence Laboratory, Jodhpur and is named as Water Purification System (WPS) and it is suitable for purification of water including that contaminated by CBRN agents.

### Restoration of supply

Following repair and decontamination of facility, a fresh water sample should be retested and certified for public consumption.

### V. Psycho-Social Care and Mental Health Support (PSSMHS)

- i) Strengthening of District Counseling Centres under the Department of Social Welfare & Child Development.
- ii) Integrating with DM mental health plans and Health/Hospital DM Plans.
- iii) Integrating with all training in the area of Psychology, Social Work, Mental Health, Emergency Medical Response, Hospital Administration, Nursing and Paramedics.
- iv) Inclusion in the CBDM Plan and training of PRI team members.
- v) Developing awareness material for the community.
- vi) Evolve a mechanism for community outreach education programmes on PSSMHS.
- vii) Creation of a core group of master trainers at district level.

### VI. Early Warning System for Flash Floods/GLOFs

Forecasting and early warning helps in mitigating the effects of disasters. The loss of life and property can be considerably reduced with accurate and timely warning. Climate-meteorological disaster such as flash floods, GLOF, avalanches etc. be predicted with certain degree of accuracy.

- i) A network of rain/snow gauges would be strengthened in the district.
- ii) Tie-up with IMD, CWC would be strengthened so that EWS can be effectively communicated to the vulnerable community.
- iii) Community networking would be done to communicate the EWS to the vulnerable sections.
- iv) Modern media would be utilized to communicate the EWS.
- v) Tie-up for sharing of information would be done with the power projects.

- vi) For GLOF related events arrangement would be made with the Chinese authorities through Government of India for timely sharing of information.
- vii) ICT tools need to be used for data receptions, forecasting and timely dissemination.

#### **VII Mitigation Strategy for Fires**

- i) Vulnerable habitations would be identified and mitigation actions would be taken to avoid/reduce incidents of domestic fires.
- ii) Community education would be initiated to reduce and mitigate fire incidents.
- iii) Fire and emergency services would be strengthened in the district.
- iv) Fire insurance would be promoted to transfer the risk.
- v) Community would be involved in tackling forest fires and their participation would be ensured.
- vi)

#### **VIII. Training and Capacity Building**

- a) Training and orientation of Government official would be carried out immediately and in a time frame for the same would be prepared.
- b) Training would be carried out as per the training needs assessment of various departments.
- c) Regular refresher courses would be organized at regular intervals.
- d) The training would be practical in nature and would focus on skill up-gradation.
- e) The capacity of the departmental training institutes would be upgraded so that they can take up training on DM.
- f) The community, CBOs, NGOs would be targeted for training and capacity building.
- g) A Cadre of local volunteers would be created who would be trained in various aspects of DM such as SAR, MFA etc.
- h) The list of trained officials would be maintained and uploaded in the DDMA website and regularly updated.
- i) New entrants to the Government services would be trained and oriented to DM at the entry level training.
- j) Safe construction practices needs to be promoted and for this local masons, bar benders, carpenters, construction supervisors, contractors would be specifically trained and targeted.

#### **IX Public Awareness**

- a) Focused and targeted public awareness programmes would be launched on various aspects of DM.

- b) Hazard specific do's and don'ts would be communicated to the local population in the simplest language.
- c) Traditional modes of promoting knowledge and awareness would be adopted such as use of folk songs, *nukad nataks*, etc.
- d) Community would be targeted through local fairs and festivals.
- e) Documentaries in local language would be screened through local cable networks etc. and mass media would be roped to promote education and awareness.

#### **X Institutional Strengthening**

Disasters can be effectively handled and their adverse effects minimized only when the institutional strengthening is done. The departments which have role in emergencies such as fire, police, home guards, health, PWD, I & P, revenue etc. would be strengthened and equipped so that their capacity to deal with disasters is increased. Specific actions would include:

- a) The DDMA would be made functional and active.
- b) DEOC would be set-up
- c) Network of fire services would be increased and they would be equipped to deal with other emergencies too.
- d) Home Guards companies would be equipped to deal with and respond to emergencies.
- e) SAR equipment would also be given to police and fire stations.
- f) Local units of police force would be trained in specialized SAR operations.

#### **XI. Climate Change Adaptation**

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

effective manner, synergies in our approach and strategies for climate change adaptation and disaster risk reduction shall be encouraged and promoted.

#### **XII. Medical Preparedness and Mass Casualty Management**

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

#### **XIII. Communications and Information Technology (IT) Tools for DM**

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

- a) Creating decision support system for the policy makers, disaster managers and responsible officers at all levels;
- b) Real time dissemination of early warning to the all the stakeholders –authorities, DMTs, QRTs, threatened community etc.;

- c) Information and broadcasting mediums such as television, radios, FM stations etc. can be used keeping in view their geographical reach and availability;
- d) Emergency communication system during disasters; and
- e) Collecting and collating information on damage and needs assessment.

#### **XIV. Setting up and strengthening of the Emergency Operations Centres**

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

#### **XV. Training, Simulation and Mock Drills**

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

#### **Partnerships for Mitigation and Preparedness**

##### **XVI. Community Based Disaster Preparedness**

Communities are not only the first to be affected in disasters but also the first responders. Community participation ensures local ownership, addresses local needs, and promotes volunteerism and mutual help to prevent and minimise damage. The community participation for DM would be promoted on the motto of “self-help”, “help thy neighbour” and “help thy community”. The needs of the elderly, women, children and differently able persons require special attention. Women and youth will be encouraged to participate in decision making committees and action groups for management of disasters. Networking of youth and women based organisation would be

done and they will be trained in the various aspects of response such as first aid, search and rescue, management of community shelters, psycho-social counselling, distribution of relief and accessing support from government/agencies etc. Community plans will be dovetailed into the Panchayat, Block and District plans.

### **XVII. Mobilising Stakeholders' Participation**

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

### **XVIII. 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 formalise their role in the DM process for ensuring safety of the communities. The corporate sector also needs to be roped up for on-site and off-site emergency plans for hydro-power projects. 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.

### **XIX. Media Partnership**

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

## Chapter – 5

### Response Plan

There is need of a response structure to activate the Disaster Management Plan (DDMP) once a disaster strikes. In Sirmaur District the Deputy Commissioner shall be the focal point acting as a Responsible Officer for directing, supervision, and monitoring the DDMP. The Deputy Commissioner shall function with the assistance of the District Emergency Operation Centre (DEOC) to be activated to its full capacity at time of disaster and shall be the nodal center for disaster management. All information regarding disaster situations shall at once be communicated to the District Emergency Operation Centre (DEOC). The DEOC would work as per the EOC manual.

#### **Role of Emergency Operation Centre (EOC) on occurrence of disaster**

The EOC will function to its fullest capacity on the occurrence of disaster. The district EOC will be fully activated during Level 0 and Level 1 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 such agency which is competent to issue such a 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.

The occurrence of Level 1 and Level 2 disaster will be communicated to the following by means of telephone and subsequently fax:-

- i) Governor;
- ii) Chief Minister;
- iii) Revenue Minister;
- iv) MPs and MLAs from affected areas;
- v) Chief Secretary
- vi) State Disaster Management Authority
- vii) Relief Commissioner
- viii) NEOC
- ix) Joint Secretary, NDM, Ministry of Home Affairs, GOI.

The disaster/emergency would be communicated to the following DM, SP, CMO, SDM, Commandant Home Guard, Fire Officer immediately on phone. A written report about the disaster/event would be sent to the DM by the local agency/ authority where disaster took place.

The occurrence of disaster shall be immediately communicated to the members of District Disaster Management Authority at district and sub-division level and other stakeholders such as NGOs, trained SAR volunteers through SMS gateway for which specific provision of group mobile directory would be made. The directory would be grouped according to the disaster specific response groups. All the messages received in and sent out of the EOC will be entered into the message register.

The occurrence of disaster would essentially mean the following activities have to be undertaken:

- a) 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.
- b) Establish an on-going VSAT, wireless communication and hotline contact with the Divisional Commissioner, and Collector/s of the affected district/s.

[The EOC in its expanded form will continue to operate as long as the need for emergency relief and operations continue and the long-terms plans for rehabilitation are finalized].

#### **BRANCH OFFICERS/NODAL OFFICERS**

Branch arrangements would be activated only on the occurrence of major disaster in and it would provide for division of tasks, information gathering and record keeping and accountability of the Branch officer to the Responsible Officer for specific functions. Each Branch should have a Branch Officer of the rank of Deputy Secretary or Joint Secretary at the State Level and Head of Office of the concerned department at the District level assigned.

- i) The Branch/Nodal Officers for Operations, Services, Logistics, Communication and Information Management, Resource Branches will be from the Revenue Deptt.
- ii) For Health Branch, the officer will be from the Public Health Deptt.
- iii) For Public works and Engineering, the officer will be from the Public Works Deptt.
- iv) For adequate water supply, the officer will be from I & PH Deptt.
- v) For Food and Supply, the officer will be from Food & Public Distribution Deptt.
- vi) For Law and Order, the officer will be from Police Deptt.

All Branch/Nodal Officers will work under the overall supervision and administrative control of the Responsible Officer. All the decisions taken in the DEOC during emergency have to be approved by the District Magistrate/ Sub Divisional Magistrate.

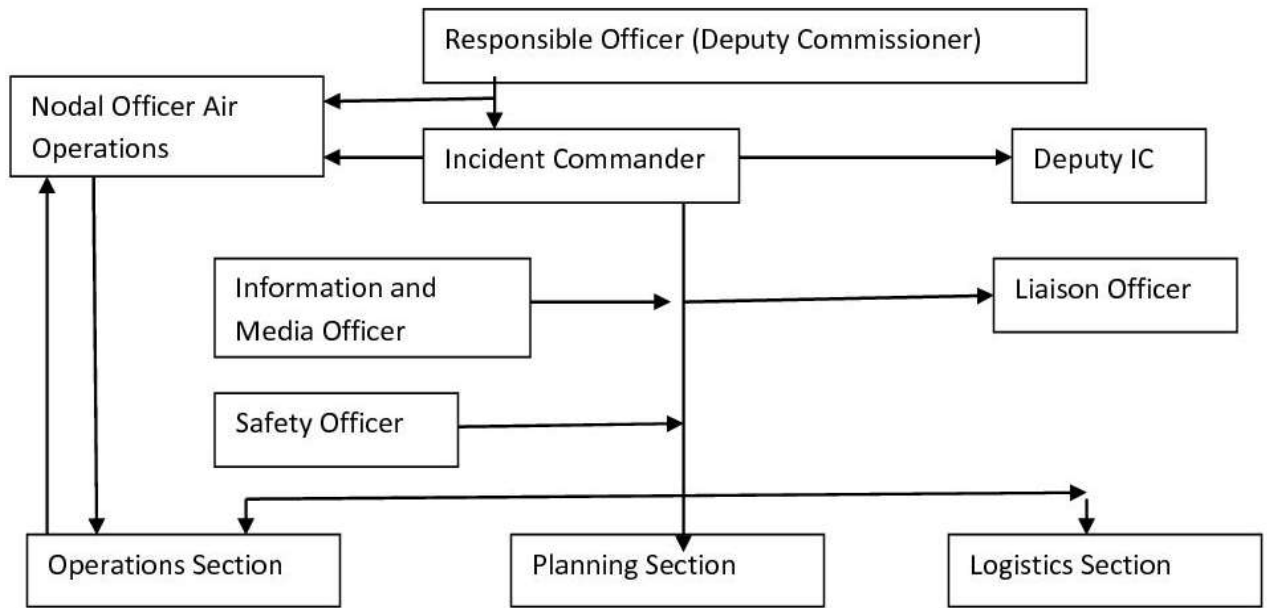
**Besides the above the DEOC would also do the following functions:-**

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

The DEOC would function through Emergency Support Functions (ESFs). The ESF Plan for the district has been prepared and placed at Annexure –K. The response for search and rescue, medical, arrangements for logistics, communication, food, water, temporary shelter etc. would be as per the ESF plan prepared for the district. The primary agency responsible for a particular ESF would act a coordinator and seek necessary assistance from the secondary agency. If the assistance of the secondary agencies involves the requisitioning from the Deputy Commissioners office, the primary agency would place a request to this effect with the DEOC.

**Response Structure**

The response structure would be based on Incident Response System (IRS) as per the Guidelines issued by the NDMA. The IRS system would work through various service divisions. The IRS system would contract and expand depending upon the nature and magnitude of emergency/disaster. The IRS structure would work at District, Sub-Division, Tehsil, Block level. IRS Structure for District level is given in Figure 25. Deputy Commissioner (Responsible Officer) works through Incident Commanders and Incident Response Teams.



**Figure 25: Structure of IRS at District Level**

The Incident Commander would be assisted by various service divisions of the District Disaster Management Authority and Sub-Divisional Authorities. These sections would work to the requirement of the emergency. Incident Commander would be assisted by the Incident Response Teams (IRTs) consisting of functionaries from various department depending upon ESF Plan and roles of various departments. The DDMA would notify incharge for all positions as per the IRS system for the district, Sub-division and block level. A sample IRT framework is given in figure 26. The DDMA would also form IRTs for all divisions and notify them. All the functionaries of IRT and IRS would be trained to understand the IRS system.

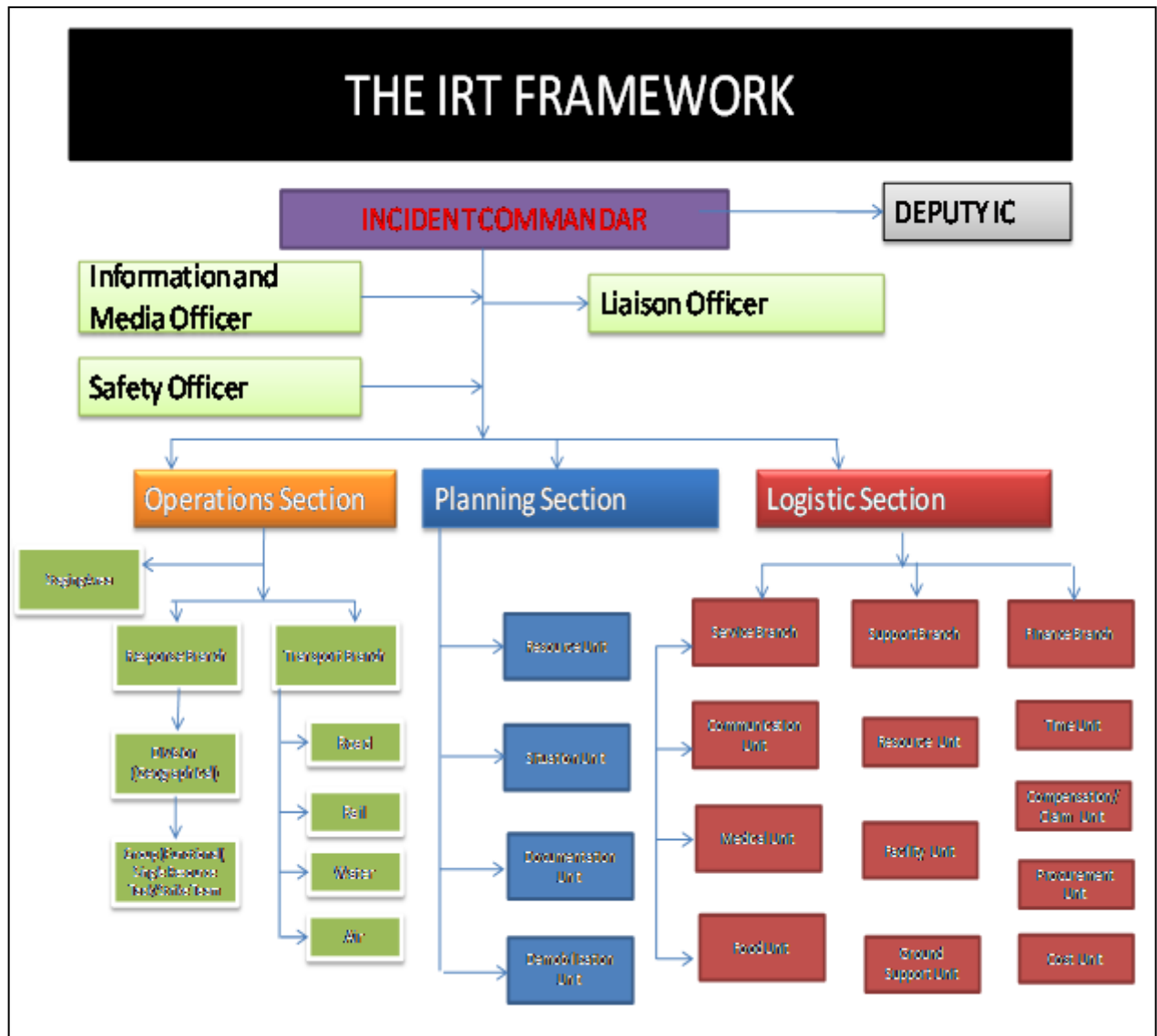
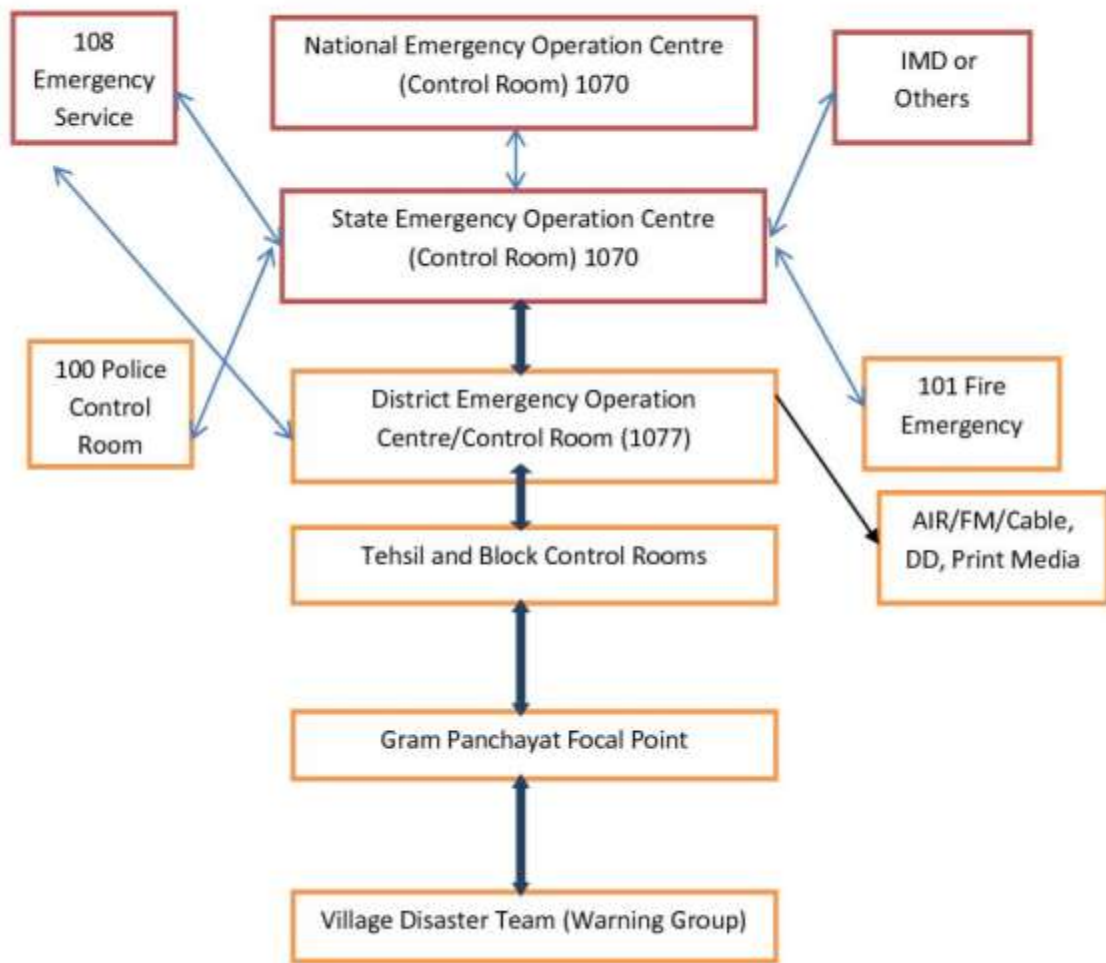


Figure: 26 IRT Framework

### Incident Response Structure (IRS) Leadership

The response structure would run parallel from district to village/panchayat level on the basis of ESF plan for various departments and agencies. The IRS would be headed at the district level by the Deputy Commissioner, Sub-division level by the Sub-Divisional Officer (Civil), Tehsil (where Tehsil and Sub-Division is not co-terminus) by the Tehsildar, at the MC level by the Chairman of the ULB and at the Panchayat level by the Panchayat Pradhan. The officers/officials of various departments would be provide the ESF at the appropriate level.

**Emergency Warning and Dissemination**



**Figure 27: Flow of Early Warning System**

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 fig 27 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.

**Rapid Damage Assessment and Reporting**

The response to disaster would be more effective if the damage assessment is immediate and timely. The field staff and agencies of various departments would communicate the damage/loss to the DEOC at the earliest. Initially first information report would be sent which would

be followed by the detailed damage assessment reports. The formats for damage assessment are given in the annexures.

## **Response vis a vis Various Disasters**

### **i) Drought**

#### **Response Action of Administration**

- The DC shall ensure calling to tenders through advertisement in at least one English and one vernacular newspaper by end of April for supply of potable drinking water throughout the district in advance so that at the time of drought, the formalities be completed.
- The DC shall ensure identification of suppliers and fixation of rates for transportation of drinking water through tankers/tractors Sub-division wise by the first week of April in case of poor rainfall during the preceding winter and otherwise by end of May.
- The DC shall authorize the SDMs for issuing orders for supply of drinking water through tankers as per need.
- The DC shall identify nearest market in adjoining district/ state from where fodder (Straw) is easily available and direct SDMs to advise people to procure fodder from such place and fix the rates thereof plus freight rates to the different places.
- The DC shall submit report to the Government regarding crop loss due to drought and seek funds for utilization in employment generation.
- The DC shall submit report to Government with regard to situation of drinking water supply.
- The DC in consultation with Animal Husbandry dept. shall assess requirement of fodder on the occurrence of drought and submit report to the Government.
- The DC shall constitute joint emergency Sub-Division level and Tehsil level teams consisting of Executive Magistrate, Doctor, SDO (I&PH) for monitoring outbreak of water borne diseases.
- The DC shall issue direction regarding cleaning of Traditional water Bodies prior to onset of summer and succeeding rainy season.
- The DC shall review availability of stock in all fair price shops in view of crop failure.
- The DC shall issue prohibitory orders with regard to sale of over ripe/rotten fruits and vegetables.
- The DC shall ensure stocking of medicines for water borne diseases in all health institutions.
- The DC shall ensure availability of Chlorine tablets and bleaching powder at the village/ Panchayats level.

- The DC shall converge various programmes and schemes of government for tackling drought situations.

#### **Response Action of SDM**

- SDM shall submit weekly report regarding drinking water availability in respective jurisdiction from first week of May to the DC.
- SDM shall prepare route chart for distribution of drinking water in consultation with the Executive Engineer I&PH department.
- SDM shall identify source of drinking water in consultation with the I&PH dept. from where shall take their supply.
- SDM shall direct deployment of water tankers for supply of drinking water.
- SDM shall monitor smooth supply of water through tankers. There shall be made at least two trips in a day by the tankers.
- SDM shall keep record of movement of water tankers in coordination with the I&PH dept.
- SDM shall constitute a team comprising of panchayat Pradhan, Patwari and Veterinary Doctors at local level for verification of fodder procured.
- SDM shall ensure proper voucher/ invoice/ bill produced for providing transport subsidy as per relief manual.
- SDM shall have the drinking water transportation bills verified through the I&PH dept. and release payment for the same.

#### **Response Action by I&PH**

- The XEN shall submit weekly reports of status of water supply in departmental schemes from the week of May to the Superintendent Engineer.
- The SE shall compile status of water in the district and submit same to the DC on weekly basis.
- The XEN shall submit demand of supply of water through tankers to the SDM.
- The XEN shall identify source for filling of water tanker.
- The XEN shall ensure chlorination of such water supply.
- The XEN shall ensure purification of natural water sources and all departmental schemes.
- The XEN shall deploy personal (eg. Water guard) with each tanker to ensure proper and equitable distribution of water.
- The XEN shall maintain a register of movement and supply by each tanker which shall be verified by officer authorized by him.

- The XEN shall try to install more hand pumps in areas which chronically face water scarcity during summer.

**Response Action by Agriculture Department.**

- The Agriculture Officer shall monitor the situation for impact of drought on crop growth and consequent yield.
- The Agri. Officer shall submit weekly report starting from last week of May and first week of January regard to status of Kharif and Rabi crops.
- The Agri. Officer shall prepare contingency plan for any crop failure due to drought and submit same to the Government and DC.
- The Agri. Officer in view of drought shall organize extensive field camps to advise farmers on alternative crop and strategies.

**Response Action by Horticulture Department.**

- The Deputy Director Horticulture shall monitor the situation for impact of drought on tree growth and consequent fruit yield.
- The Deputy Director shall submit weekly report starting from last week of May and first week of January with regard to status of fruit bearing trees.
- The Deputy Director shall prepare contingency plan for any crop failure due to drought and submit same to the Government and DC.
- The Deputy Director shall view of drought shall organize extensive crop and strategies.

**Response Action by Health Department.**

- The CMO shall ensure all medical institutions are stocked with adequate medicines, especially for water borne diseases.
- The CMO shall constitute emergency medical teams at all PHC level to attend to outbreak of any epidemic (eg. Water borne disease.).
- The CMO shall convene a meeting under the DC of all concerned departments including Revenue, Rural Deptt. I&PH, Ayurveda with regard to prevention of water borne diseases.
- The CMO shall ensure issuance of notification banning sale of over ripe/rotten and uncovered fruits/vegetables/flood by the District Magistrate.

## ii) Road Accident

### Response Action by SDM

- The SDM shall immediately inform the DC of occurrence of accident and establish a control room at Sub-Divisional headquarter.
- The SDM shall immediately direct SHO concern to rush Police personnel to spot.
- The SDM shall immediately direct the Tehsildars/Naib-Tehsildar to rush to the spot.
- The SDM shall immediately put the Health Dept. on the alert by information CMO/BMO concerned.
- The SDM shall depending upon the magnitude of the accident request for assistance from Commandant Home Guard, PWD etc.
- The SDM shall depending upon the magnitude rush to the spot of the accident.
- The SDM shall arrange for search & rescue on the spot taking assistance of Police, Home Guard, Fire Brigade, PRIs, NGOs and local population.
- The SDM shall evacuate people directly involved in the accident and also general public if it is deemed necessary.
- The SDM shall direct the health dept. to depute ambulance and paramedical and medical staff to the spot immediately for on the spot treatment and first aid.
- The SDM shall arrange for dead van if so required.
- The SDM shall coordinate between the Police, Health dept. Victims and their kith and kin for search and rescue, law and order, traffic management post shall coordinate with the health dept. For conduct of immediate post mortem and early handing over of dead bodies to kith and kin.
- The SDM shall ensure submission of a brief and comprehensive detailed report of the accident within 12 Hrs to the DC. The report shall contain the following information.
  - ❖ Location and details of vehicle involved in the accident.
  - ❖ Prima facie cause of accident.
  - ❖ Detail of passengers with identification if any.
  - ❖ Detail of relief provided in from of medicines and cash.
- The SDM shall keep the DC informed on action being taken on the spot from time to time.

### Response Action for Health Department

- The CMO on receiving information regarding the accident shall immediately put on casualty/emergency ward of District Hospital for referred cases.
- The CMO shall inform the BMO concerned and the SMO of the concerned sub-divisional hospital for similar action.
- The CMO shall arrange for immediate movement of ambulance with medical and paramedical staff to the site of accident.
- The CMO shall ensure portable stretchers are available site for evacuation on the injured and the dead.
- The CMO shall ensure availability of first Aid on the spot.
- The CMO shall depute doctors from surrounding PHC/CHC to the CHC where the injured have been evacuated if staff strength is not enough at that health institution.
- The CMO shall maintain a detail of victims admitted to various health institutions including those referred to specialized health institutions outside the district. The CMO submit in writing to the DC such detail including status if health within 12 Hrs. in consultation with the SDM.

#### **Response Action of SHO**

- The SHO shall immediately inform the SDM, SP and DC regarding the incident with details of site.
- The SHO shall immediately deputy a team of police personal to the site.
- Depending upon the magnitude, the SHO shall rush to the site and personally coordinate search and rescue, evacuation, traffic regulation, law and order.
- The SHO shall communicate factual information to the SP on reaching the spot on the following.
  - ❖ Exact location
  - ❖ Prima facie cause of accident
  - ❖ Vehicles involved, transport company
  - ❖ No. of injured
  - ❖ No. of fatalities
  - ❖ Status of driver and conductor
  - ❖ Status of injured
- The SHO shall arrange for search and rescue in consultation with the SDM.
- The SHO shall ensure smooth movement of traffic.
- The SHO shall divert the traffic if required in consultation with the SDM.

- The SHO shall arrange for a guard to protect the property of the victims at the site.
- The SHO shall take necessary legal action as low and also initiate an inquiry into the causes of the accident.
- The SHO shall arrange for early post mortems and quick release of bodies to the kith and kin.
- The SHO shall submit a brief and comprehensive report regarding the accident in consultation with the SDM to the SP with in 12 Hrs of the accident.

#### **Response Action of PWD**

- The XEN concerned shall provide equipment and manpower to the SDM at the accident site on request.
- Equipment such as crane, JCB, Bulldozer, Gas cutter etc shall be provided by the XEN as per request of the SDM.
- The XEN/SDO/JE shall supervise such operations at site depending upon the magnitude of the accident as assessed by the SDM.
- The XEN shall ensure manpower is provided at site on the request of the SDM.

#### **Response Action of Home Guards**

- The Commandant shall ensure movement of fire brigade immediately to the site when called for by the SDM.
- The Commandant shall provide manpower for assistance in search and rescue, removal of dead, traffic management, first aid etc.

### **iii) Landslide**

#### **Response Action for PWD**

- SDO/JE shall immediately inform XEN, SDM, Police Station/ Police Post concerned of occurrence of land slide.
- SDO/JE of B&R/NH shall immediately rush to the spot on receipt of report of landslide along with Moving Vehicle-JCN/Bulldozer and manpower with manual equipment.
- SDO/JE shall assess on spot magnitude of slide and intimate XEN concerned who shall immediately inform DC / SDM. The assessment shall be of estimate time of clearance, need for diversion of traffic if any, requirement of additional equipment and manpower.
- XEN shall rush to the spot depending upon the magnitude of the land slide.
- XEN shall intimate DC/SP regarding need for diversion of traffic.

- XEN shall intimate DC in case of need for additional requirement of equipment, manpower from adjoining division or district for coordination.
- On clearance of road of landslide shall report back to SDM/DC.

#### **Response Action for Police.**

- SHO shall immediately inform SDM, PWD, SP, DC regarding occurrence of landslide.
- SHO shall immediately rush personnel to the spot for traffic control and management.
- Depending upon the magnitude of the landslide the SHO shall personally move to the spot and supervise the situation.
- SHO shall submit his independent assessment of the situation to the SP.
- In case of assessment of need to divert traffic, SHO shall in discussion with the SDM intimate SP/DC.
- SP shall intimate DC regarding need for diversion of traffic for coordination.
- The Police personnel shall ensure maintenance of law and order at spot.
- The personnel shall ensure non-interference in the road clearing work PWD.
- On opening of road, the Police personnel shall remain on the spot till all traffic has cleared.
- On clearance of road and traffic shall report back to the SP.

#### **Response Action of Administration**

- SDM shall immediately inform DC of occurrence of landslide.
- SDM shall immediately inform PWD of occurrence of landslide and direct movement of equipment and manpower to spot.
- SDM shall immediately inform Police Station of occurrence of landslide and direct SHO to rush personnel to spot.
- SDM shall direct Tehsildar/Naib-Tehsildar concerned to move to spot as per magnitude of the landslide.
- SDM shall activate revenue staff for assessment and report from the spot.
- SDM shall coordinate with Police and Home Guard if any Search and Rescue effort is to be launched under intimation to DC
- SDM shall rush to the spot depending upon the magnitude of the landslide and coordinate PWD, Police and Public.
- SDM shall assess need for diversion of traffic in consultation with PWD and Police order for same in consultation with the DC.
- In case of unavailability of alternate route for diversion and long duration of clearing operation, SDM shall coordinate with PRIs/NGOs/Local population to make available water and refreshment for the travelers/tourists.

## Chapter – 6

### Role of Key line Departments at District Level

#### Role of key line departments at District Level

<b>Role of Key Line Departments at District Level</b>	
Major Points of Attention: Each Department and Government agency involved in Disaster Management and Mitigation will:	
1.	Designate a Nodal officer for emergency response who will act as the contact person for that department/agency.
2.	Ensure establishment of fail-safe two-way communication with the State, District and other emergency control rooms, as well as within the organization.
3.	Focus on communication systems used regularly in normal times with more emphasis on the use of VHF's with automatic repeaters, mobile phones with publicized numbers, HF radio sets, etc. It should be remembered that SAT phones fail during prolonged emergencies and electric failure. Phones also fail if they cannot be re-charged.
4.	Work under the overall supervision of the District Collector during emergencies.
5.	Develop Disaster Management Plans; Update the Disaster Management Plan quarterly, with focus on Hazard, Vulnerability, Risk and Capacity Analysis (HVRCA). Plan preparation should involve all concerned line departments and stakeholders in the district.
6.	Ensure awareness generation of the community to various hazards, its impact, basic do's and don'ts, their roles and responsibility for reducing the risk, as well as their role to support the response mechanism.
<b>Revenue</b>	
(In-charge Officer: District Revenue Officer/ADM Revenue/ Deputy Collector (Emergency)/any other officer designated by the District Collector)	
<b>Pre-Disaster</b>	
1	Convene the meetings of District Disaster Management Authority to take stock of mitigation and preparedness
2.	Prepare and quarterly update the District Disaster Management Plan, with focus on Hazard, Vulnerability, Risk and Capacity Analysis (HVRCA) of the district with the active involvement of all concerned line departments and local bodies in the district.

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3	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, Tehsil. If more personnel are required, recall those on leave.
4.	Operate District and Sub-Divisional Control Rooms.
5.	Establish communications with all stakeholders for the purpose of receiving and sending early warning and information exchange through District Control Room.
6.	Establish early warning systems between the local and district levels, and also with media.
7.	Ensure compliance of construction norms for all types of buildings and public infrastructure as per Building Codes.
8.	Carry out identification of safe places for establishment of relief camps.
9.	Appoint Officers in-charge of Response Base
10	Prepare pre-positioning of staff list for site operation centres and intimate staff.
11.	Identify staff to form teams from concerned departments who would undertake damage land need assessment and provide them training.
12.	Prepare a training calendar and facilitate training involving different stakeholders to enhance capacity building of the community and all departmental staff.
13.	Regularly check and update inventory of resources.
14.	Ensure capacity building of the community and all departmental staff through regular drills and mock exercises.
15.	Review the status of the godowns and ensure supply of food grains through the public Distribution System.
16.	Prepare a list of relief items to be distributed for different hazards.
17.	Invite tenders/quotations for all the relief items and fix the rates and suppliers.
18.	Ensure formalizing supply contracts for all departments that require additional manpower during emergencies.
19.	Create teams including transport, relief material and equipment for responding to the disaster incident.
<b>During and Post-Disaster</b>	
20.	Convene an emergency meeting and take stock of the situation.

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21.	Prepare an evacuation plan for the marooned/devastated areas.
22.	Prepare a list of transit/temporary shelters, and check their suitability for accommodating people.
23.	Establish relief camps and organized relief materials in consultation with local bodies.
24.	Facilitate preparation of a transportation plan for supply of relief items.
25.	Convene meetings of NGOs, Youth Clubs, Self-Help Groups, etc., in the district, and assign them specific responsibilities for relief, recovery and rehabilitation.
26.	Activate Village Level Preparedness Teams with the help of PRIs, local NGOs, and revenue officials.
27.	Prepare evacuation plan for population from dangerous buildings, if pre-quake vibrations are felt and if the central agencies advise.
28.	Coordinate with Army, Air Force, and Navy for support towards evacuation, rescue and relief.
29.	Initiate IRS and Emergency Support function System.
30.	Recall important functionaries from leave; communicate to the staff to man their places of duties like the ward and divisional offices, as well as respective departments.
31.	Plan for proper disposal of dead bodies and carcasses through Police, NGOs, Medical, Public Health and Forest Departments.
32.	Sanction the general cleaning of the entire city area through water and sanitation, Municipal Corporation, Public Health Department etc.
33.	Ensure collation of expenditure accounts for sanctions and audits.
34.	Ensure disbursement of compensation.
35.	Facilitate preparation of rehabilitation plan for displaced population.
36.	Activate the help-lines through police and health departments and district public relations office.
37.	Ensure proper media briefings through District Public Relations Officer.
38.	Exhort the public to maintain calm and avoid panic
39.	Have a back-up communication system.
40.	Ensure provision of nutritional aspects of food for disaster victims and privacy for young

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	girls, pregnant women and elderly.
<b>Police:</b> (In-charge Officer: Senior Superintendent of Police/Superintendent of Police)	
<b>Pre-Disaster</b>	
1.	Prepare and quarterly update disaster management plan, especially indentifying the sensitive areas with the active involvement of all concerned line departments and local bodies in the district.
2.	Prepare a Deployment Plan for the Police Force, based on the needs of the most vulnerable and sensitive areas.
3.	Ensure that a sufficient number of Police Force is available for responding to the disaster situation.
4.	Ensure adequate personnel are available for response, if more personnel are required: recall the out-of-station officers or those on leave.
5.	Constitute 'Search & Rescue' Teams from the Police Force, and arrange training for these units. At least, one Search and Rescue Team for every district should be in place; more Teams could also be constituted depending upon the area and magnitude of disaster.
6.	Establish coordination with the State Armed Police, Defense and House Guards.
7.	Check the wireless communication network, and secure additional wireless sets for deployment during a disaster.
8.	Installation of radio communications at: <ul style="list-style-type: none"> <li>• District Control Room, Deputy Commissioner/District Collector/District Magistrate and SP Office;</li> <li>• Control Room at affected site; and</li> <li>• Departmental Offices within the District and Division.</li> </ul>
9.	Keep the police vehicles and other modes of transport in readiness for deployment of the police.
10.	Review and update emergency measures and procedures, and ascertain with staff the precautions that have been taken to protect equipment.
<b>During and Post-Disaster</b>	
11.	Call for emergency meeting to take stock of the situation. Develop a strategy and a mission underlining objectives.

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12.	Ensure that all field staff and stationed officers submit the necessary action reports to the Control Room.
13.	Ensure that evacuation ordered by Deputy Commissioner/District Collector/District Magistrate and Superintendent of Police is carried out.
14.	Seek assistance from community leaders for evacuation of community and livestock, under appropriate security, law and order.
15.	Report all evacuation to Deputy Commissioner/District Collector/District Magistrate and Senior Superintendent of Police/Superintendent of Police immediately.
16.	Dispatch Police to systematically identify and assist people and communities in life-threatening situations.
17.	Provide convoys for relief materials.
18.	Provide guards wherever needed, particularly at stores and distribution centers.
19.	Help injured people, and assist the community in organizing emergency transport of seriously injured to medical treatment centers, with the assistance of health professionals.
20.	Ensure the functioning of police station staff in disaster situation.
21.	Assist relevant agencies and the community in road-cleaning operation.
22.	Assess and identify roads on the bases of following conditions/facilities: <ul style="list-style-type: none"> <li>• One-Way</li> <li>• Blocked</li> <li>• Alternate route</li> <li>• Overall Traffic Management, and</li> <li>• Other access roads.</li> </ul>
23.	Organize training and mock-drill for police officers to handle disaster/crisis situation.
24.	Provide security in transit and relief camps, affected villages, hospitals, and medical centers, and identify areas to be cordoned off.
25.	Divert transport carrying transit passengers (that is, passengers travelling through trains or buses and passing through the district)
26.	Ensure security of key installations like power, water and supply, telecommunication, etc.
27.	Provide security arrangements for visiting VVIPs and VIPs.

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28.	Assist district authorities to take necessary action against Hoarders, Black Marketers and those found manipulating relief material.
29.	Activate a public helpline, with the help of government offices, to: <ul style="list-style-type: none"> <li>• Respond to personal inquiries about the safety of relatives in the affected areas;</li> <li>• Serve as a rumor control centre: and</li> <li>• Build confidence among the public.</li> </ul>
30.	Make available officers to inquire into deaths and record; them, as there is likely to be shortage of time or personnel available to carry out Standard Post-mortem Procedures.
31.	Monitor the medical needs and welfare of people sheltered in relief camps.
32.	Establish coordination with the Fire Services.
33.	Coordinate with military service personnel in the area.
34.	Provide adequate security to personnel of International Agencies for Search and Rescue, Medical Assistance and Security for their relief material and equipment, etc.
<b>State Fire Department</b> <b>( In charge of Search &amp; Rescue, Response and Capacity Building)</b>	
<b>Pre Disaster</b>	
1.	Fire auditing of life line buildings, schools, etc.
2.	Training and capacity development of government officials and in other institutions
3.	Resource Mapping and community awareness
<b>During and Post Disaster</b>	
1.	Search & Rescue after any incident
2.	Provision of divers and Life guards for responding to any drowning incident
3.	House hold, industrial and forest fire fighting
4.	Handling chemical related incidents.
<b>Irrigation</b> (In-charge Officer: Superintendent Engineer, Irrigation)	

Pre-Disaster	
1.	Prepare and quarterly update the disaster risk and vulnerability map with active involvement of all concerned line departments and local bodies in the district. The map should show the vulnerability and risks of the critical infrastructure related to irrigation and the presence of alternate source of water within the district.
2.	Quarterly update the departmental contingency plan, especially for the maintenance and repairs of bunds and embankments, and seek funds from the district/state authorities.
3.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division. Tehsil. If more personnel are required, recall those on leave.
4.	Commence timely repairs of critical bunds before and after monsoons, after surveying the damages of disasters/disaster in the previous year, and ensure that all the repairs are completed in time.
5.	Check the wireless network connecting disaster stations, and undertake necessary repairs.
6.	Set up; the protocol for exchange of information with Disaster Control Rooms at District, State and National levels.
7.	Prepare a duty chart for in-charge Junior Engineers. Make sure that the officials of the department at district level are aware of their role as per Incident Response System plan. Make available the list of in-charge Junior Engineers to Response Base, District/ Sub Divisional Magistrates, and all the control rooms.
8.	Undertake channel improvement for rivers and nullahs to the extent possible. Take up de-silting/clearing of nullahs and canals to improve the flow of water.
9.	Check all the siphons and regulators on the bunds and canals. Clean siphons before the monsoon. Increase their capacity or replace; them if the size of siphons and regulators is too small to prevent water from flowing in.
10.	Provide all necessary help for promoting fodder cultivation by providing water for irrigation on a priority basis. Such water could be provided to the farmers at a cheaper rate.
11.	Allow reservoir and tank beds under its control, to be leased out for cultivating short duration grass or seasonal fodder crops.
12.	Keep in readiness essential tool kits and protection material; at; critical; places for emergency deployment. These may include: <ul style="list-style-type: none"> <li>• Empty Cement Bags</li> </ul>

	<ul style="list-style-type: none"> <li>• Boulders</li> <li>• Ropes</li> <li>• Sand</li> <li>• Wire mesh</li> <li>• Shovels</li> <li>• Baskets</li> <li>• Lights, and</li> <li>• First Aid Kit</li> </ul>
13.	Check all the rain-gauge stations and ensure that they are functioning properly. Ensure that the readings from these stations are available immediately to the Irrigation Department. Prescribe a register for recording of rainfall.
14.	Make emergency tool kits available to each technical assistant.
15.	Ensure that all staff is well-aware of precautions to be taken to protect their own life, office and personal property.
<b>During and Post-Disaster</b>	
16	Recall important functionaries from leave; communicate to the staff to report to their places of duties.
17	Organize round the clock inspection and repair of: <ul style="list-style-type: none"> <li>• Bunds</li> <li>• Dams</li> <li>• Irrigation channels</li> <li>• Bridges</li> <li>• Culverts</li> <li>• Control gates</li> <li>• Overflow channels</li> <li>• Pumps</li> <li>• Generators</li> <li>• Motor equipment, and</li> <li>• Station building</li> </ul>
18.	Make certain that the level of impounding in the lakes is reduced to create increased capacity, and coordinate the same with officers on other site and District Control Room, if heavy rains are expected. The amount of lowering will depend on the rain fall forecast.
19.	Forewarn the settlements, in case of possibilities of a disaster in the downstream, and give necessary warnings for evacuation to the adjoining districts and to those districts

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	beyond the state borders.
20.	Inspect the inlet and outlet of lakes and reservoirs to ensure that waterways are unobstructed by trees or vegetation and encroachments.
21.	Secure all repairs/under construction activity with sand bags, rock falls, etc.
22.	Cover all material, stored inside and outside, which is likely to be damaged by rains, such as concrete in bags, electric motors, office records, etc., with plastic.
23.	Ensure that for all the bunds, which are close to villages, there are roads available for the movement of vehicles.
24.	<p>Field Office Priorities:</p> <ul style="list-style-type: none"> <li>• Continue round the clock inspection and repair of bunds, dams, irrigation channels, bridges, culverts, control gates and overflow channels, etc;</li> <li>• Make round the clock inspection and repair of pumps, generators, motor equipment and station buildings;</li> <li>• Clear the inlet and outlet to lake or reservoirs, on an on-going basis, in order to ensure that waterways are unobstructed by trees or vegetation; and</li> <li>• Use information formats and monitoring checklist for programme monitoring and development, and for reporting to Emergency Operations Centre (EOC). This is in addition to existing reporting system in the department.</li> </ul>
<p><b>Health</b> (In-charge officer: Chief Medical Officer of the District)</p>	
<b>Pre-Disaster</b>	
1.	Prepare and quarterly update health contingency plan with the active involvement of all concerned line departments and local bodies in the district. It should also include a list of civil and private hospitals, primary health centers and sub-centers, and medical personnel along with their capacity to handle emergency patients.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required, recall those on leave.
3.	Assign medical personnel for each Response Base, as identified by the district administration, to the extent possible. Keep essential medicines and first aid facilities with each Response Base.
4.	Constitute mobile response units consisting of a doctor, health workers and ANMs, and prepare a deployment plan. Each mobile health unit should be capable to cover at least one Response Base in a day.

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5.	Orient field staff with standards of services, procedures including tagging.
6.	Review and update precautionary measures and procedures with each hospital and medical centre.
7.	Review with staff, the precautions that have been taken to protect medical and non-medical equipments and stock emergency medical equipment.
8.	Undertake special vaccination programme in the most vulnerable villages.
9.	Keep ready at least one operating facility in each Response Base. Maintain all the equipment necessary for operations.
10.	Develop emergency admission procedures.
11.	<p>Check stocks of equipments and drugs which are likely to be needed most in disaster management. These can be categorized generally as:</p> <ul style="list-style-type: none"> <li>• Drugs used in treatment of wounds and fractures such as tetanus toxoid, analgesics, antibiotics, dressing material, and splints;</li> <li>• Drugs used for treatment of diarrhea, influenza, malaria, and infective hepatitis;</li> <li>• Drugs required for treating snake bite and infection;</li> <li>• Drugs needed for detoxification including breathing equipment; and</li> <li>• Intravenous fluids.</li> </ul>
12.	<p>Hospital administration should:</p> <ul style="list-style-type: none"> <li>• Establish work schedules to ensure that adequate staff is available for patients' needs;</li> <li>• Organize in-house emergency medical teams to ensure that adequate staff is available at all times to handle emergency casualties; and</li> <li>• Set up teams of doctors, nurses and paramedical staff as per IRS.</li> </ul>
13.	<p>Procedures of engagement should be clarified with:</p> <ul style="list-style-type: none"> <li>▪ Health Services of Government, private and other establishments at transit camps, relief camps and affected site/villages;</li> <li>▪ PHCs(Primary Health Centes);</li> <li>▪ CHCs (Community Health Centres);</li> <li>▪ Civil hospital;</li> <li>▪ Private Hospitals; and</li> <li>▪ Blood Banks; etc.</li> </ul>
14.	Ensure that local police, rescue teams and ambulance teams are aware of the resources at each hospital.

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15.	Ensure that provision of medical services is coordinated by Civil Surgeon with District EOC and site operation centres.
16.	Move medical personnel both for each Response Base and mobile unit as soon as possible.
17.	Determine type of injuries/illness expected and drugs and other medical items required, and accordingly ensure that extra supplies of medical items are obtained quickly.
18.	Provide information to all health staff about the disaster, likely damages and impact in the aftermath, as well as the ways to protect life equipment and property.
19.	Relocate non-ambulatory patients to the safest areas within the hospital. The safest rooms are likely to be: <ul style="list-style-type: none"> <li>• On ground floor;</li> <li>• Rooms in the Centre of the building away from windows; and</li> <li>• Rooms with concrete ceilings,</li> </ul>
20.	Sterilize a large enough number of dressing pads, to last for 4-5 days.
21.	Secure medical supplies in adequate quantity for dealing with these situations, which may include: <ul style="list-style-type: none"> <li>• Oral Rehydration Solutions;</li> <li>• Chlorine Tablets;</li> <li>• Bleaching Powder;</li> <li>• Anti-diarrheal and Antiemetic ( Used for controlling vomiting and nausea) medicines;</li> <li>• Intravenous fluids;</li> <li>• Suture material (A foreign body implanted into human tissues for closure of wounds);</li> <li>• Surgical Dressings;</li> <li>• Splints;</li> <li>• Plaster Rolls;</li> <li>• Disposable Needles and Syringes; and</li> <li>• Local Antiseptics.</li> </ul>
22.	Pack all valuable instruments such as surgical tools, ophthalmoscopes, portable sterilizers, ECG machine, dental equipments, ultrasound machine, analyzer, invertors, and computer hardware, etc., in protective coverings and store in rooms considered to the most damage proof.
23.	Protect all immovable equipment such as X-ray machines, Sterilizer, Dental Chair by covering them with tarpaulins or polythene

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24.	Ensure adequate supply of blood in the district through District Red Cross Society and other prominent agencies.
25.	Ready the designated operating facility for operations.
26.	Prepare a maternity facility for pregnant women in every Response Base/Advance Medical Post.
27.	Seek mutual aid arrangement with civil and military hospitals in the covered and nearby area.
28.	All electrical equipments likely to be affected should be marked & unplugged when disaster warning is received.
29.	Check the emergency electrical generator to ensure that it is operational and that buffer stock of fuel exists. If an emergency generator is not available at the hospital, arrange for one.
30.	Request central warehouse immediately to dispatch supplies likely to be needed in hospitals, on an emergency priority basis.
31.	Fill hospital water storage tanks, and arrange water storage tanks, if not in existence; and also keep drinking water in clean and protected containers.
32.	Prepare an area of the hospital for receiving casualties.
33.	<p>Field Office Priorities:</p> <ul style="list-style-type: none"> <li>• Arrange transport for transfer of seriously injured/sick patients from villages and peripheral hospitals to general hospitals. If roads are blocked, ensure arrangement of alternate mechanism by Nodal Officer/ Deputy Commissioner/District Collector/District Magistrate;</li> <li>• Establish health facilities and treatment centres at disaster affected site;</li> <li>• Maintain check posts and surveillance at all railway stations, bus stands, depots and all entry and exit points of the affected area, especially during the threat or existence of an epidemic/ pandemic</li> <li>• Develop a system of monitoring the outbreak of disease to ensure that timely measures can be initiated to counter them. Carry out monitoring for potable water and quality of food and disposal of waste in transit/ relief camps, feeding centres and affected villages.</li> <li>• Plan for emergency accommodation for auxiliary staff from outside the area.</li> <li>• Use information formats and monitoring checklist for programme monitoring and development and report to emergency operation centre at state level. This is in addition to existing reporting system in the department.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Seek security arrangements from Senior Superintendent of Police to keep curious persons from entering hospital areas and to protect staff from hostile actions.</li> <li>• Establish “Health Helpline” with means of communication to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations in disaster situations, and providing the list of admitted patients and dead persons, etc.</li> </ul>
<b>Agriculture</b> (In-charge Officer: District Agriculture Officer/Deputy Director, Agriculture Department/Head, Agriculture Department at the District)	
<b>Pre-Disaster</b>	
1.	Develop and quarterly update disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis with active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required, recall those on leave.
3.	Establish communication linkage between department, District Control Room and Agriculture colleges, and seed banks, nurseries (Private and public) within the division to deal with emergency situation.
4.	Review and update precautionary measures and procedures.
5.	Check and stock equipment, if possible agricultural materials, which are likely to be needed most, during and after a disaster.
6.	Review damages/ losses and diseases that are likely to occur, and the drugs and other insecticide items that will be required, in addition to, the requirements of setting up extension teams for crop protection; and accordingly ensure that extra supplies and materials, be obtained quickly.
7.	Suggest variety of seeds and cropping pattern, which can reduce losses and reduce the risks to farmers.
8.	Develop a pest and disease monitoring system so that timely steps can be taken to reduce damage to crops.
9.	Make the NGOs and other organization aware of the resources of the department.
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10.	Recall important functionaries from leave; communicate to the staff to man their places of duties like the ward and divisional offices and respective departments.
11.	Call for emergency meeting to take stock of the situation. Develop strategy and objectives for early recovery.
12.	Assess the extent of damage to soil, crop, plantation, micro-irrigation systems and storage facilities and ascertain the requirements of seeds, pesticides, equipments, etc., to salvage the situation or go for plantation.
13.	Pack all valuable equipments and instruments in protective coverings and store in room that is most damage-resistant.
14.	Unplug all electrical equipments when disaster/disaster warning is received.
15.	Assist Extension Officers to: <ul style="list-style-type: none"> <li>a. Establish work schedules to ensure that adequate work force is available; and</li> <li>b. Set up teams of extension personnel and assistants for visiting disaster/disaster affected sites.</li> </ul>
16.	Establish contact with soil and water testing laboratories.
17.	Coordinate the provision of agricultural services with irrigation department, DRDA, District EOC, Site operations Centres.
18.	Ensure that certified seeds of required varieties are available in adequate quantities. The Agriculture Department should work with National Seeds Corporation and other suppliers and ensure availability at their depots or have agents appointed for the same.
19.	Print and widely distribute the list of points where certified seeds are available along with names of varieties and rates. Affix notices at public places such as bus stands, buses, PHCs. Block headquarters, Tehsils, etc.
20.	Organize transport, storage and distribution of the above with adequate record keeping procedures.
21.	Ensure that adequate conditions through cleaning operations are maintained to avoid water logging and salinity.
22.	Plan for emergency accommodation for agriculture staff from outside the area.
23.	Use information formats and monitoring checklists as given in the section on 'Information and Monitoring Tools' for programme monitoring and development, and for reporting to District EOC. This is in addition to existing reporting system in the department.
24.	Establish a public information centre with means of communication, to assist in providing

	updated information to people. Ensure that the department is responsible for keeping the community informed of its potential and limitations in disaster situation.
25.	Assist farmers to re-establish their contacts with agriculture produce market and ensure that produce gets proper support price.
26.	Develop a strategy for farmers who have taken agricultural loans.
<b>Animal Husbandry</b> (In-Charge Officer: District Animal Husbandry Officer/ Head, Animal Husbandry Department at the District)	
<b>Pre-Disaster</b>	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required, recall those on leave.
3.	Review and update precautionary measures and precautions that have been taken to protect equipments.
4.	Prepare a list of water borne diseases that are preventable by vaccination. Publicize the information about common diseases affecting livestock and the precautions that need to be taken.
5.	Assist the Revenue Department in preparing plans for cattle camps and cattle feeding centres.
6.	Stock emergency medical equipments, which may be required during and post-disaster.
7.	Determine the kind of injuries/illnesses that could be expected, and the drugs and other medical items that may be required
8.	Make information on disasters available to all staff of veterinary hospitals and centres. Apprise them on likely damages and impact in disaster aftermath, and give information on the ways to protect life, equipments and property.
9.	Organize vaccination campaigns in hazard prone villages before disaster.
10.	Develop emergency admission procedures (with adequate record keeping).
11.	Undertake campaigns in the drought-affected areas to increase the awareness of farmers

	about cattle health issues related to fodder and feed, vitamins and minerals, and sanitation issues.
12.	Ensure that the local police and rescue groups are aware of the resources of each veterinary aid centre and hospital.
<b>During and Post-Disaster</b>	
13.	Call for emergency meeting to take stock of the situation. Develop a strategy for disaster preparedness.
14.	Establish radio communications with: <ul style="list-style-type: none"> <li>• Divisional Commissioner</li> <li>• Deputy Commissioner/District Collector/District Magistrate</li> <li>• District Control Room, and</li> <li>• Veterinary aid centres and hospitals (including private practitioners) within the division.</li> </ul>
15	Establish cattle camps and additional veterinary aid centres at affected sites, and accordingly ensure that extra supplies of medical items and materials are obtained quickly.
16	Assemble and sterilize surgical packs to last for 4-5 days.
17.	Store the sterilized surgical pack in protective cabinets to ensure that they do not get wet. Cover the stock with polythene as an added safety measure.
18.	Pack all valuable equipments and instruments in protective coverings and store in room that is most damage-proof.
19.	Unplug all electrical equipments when disaster warning is received.
20	Organize vaccination campaigns in disaster prone villages before, during and after the disaster.
21.	Prepare kits for veterinary diseases, which could be provided to veterinary doctors at the block level and extension officers at the village level.
22.	Check the emergency electrical generator, to ensure that it is operational, and that a buffer stock of fuel exists, Hire an emergency generator, if not available at the hospital.
23.	Arrange for emergency supplies of anesthetic drugs.
24.	Organize special vaccination campaigns in hazard prone villages during and after the disaster.

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25	Request central warehouses, on an emergency priority basis, that supplies likely to be needed be dispatched to the hospital immediately.
26	Fill department vehicles with fuel and park them in a protected area.
27	Fill hospital water storage tanks and encourage water savings. If no storage tanks exist, draw water for drinking in clean and protected containers.
28	Prepare an area of the hospital for receiving large number of livestock.
29	<p>Cattle camps and hospital administrators should:</p> <ul style="list-style-type: none"> <li>• Establish work schedules to ensure that adequate staff are available;</li> <li>• Set up teams of veterinary doctors, and assistants for visiting disaster affected sites;</li> <li>• Fix the quantity and quality of fodder and feed to be provided in the cattle camp. Issue fodder and feed for each cattle in accordance with these standards;</li> <li>• Arrange water supply for all the cattle camps in accordance with the total number of cattle admitted in these camps; and</li> <li>• Maintain accounts of the fodder and the feed provided through the cattle camps and reconcile it with the number of cattle staying in the cattle camp.</li> </ul>
30.	Organize transfer of seriously injured livestock from villages to veterinary aid centres, wherever possible.
31.	Ensure coordination of the provision of medical services by the District Animal Husbandry Officer with District Control Room, Site Operations Centres and cattle camps.
32.	Estimate the requirement of water, fodder and animal feed, for cattle camps and organize the same.
33.	Procure fodder through Forest Department, traders, private cultivators and neighboring stages, if required.
34.	Fix the price of fodder so that it is affordable to the farmers.
35.	Arrange for grazing of cattle in Army establishments, such as training centres or firing ranges.
36.	Ensure that adequate sanitary conditions through cleaning operations are maintained in order to avoid outbreak of any epidemic.
37.	Develop a system of monitoring outbreak of diseases to ensure that timely measures can be initiated to contain them.
38.	Plan for emergency accommodation for veterinary staff from outside the area.

39.	Use information formats and monitoring checklists for programme monitoring and development, and for reporting to Emergency Operations Centre. This should be in addition to its potential and limitations in disaster situations.
40	<p>Set standards for Cattle Camps:</p> <ul style="list-style-type: none"> <li>• The minimum number of cattle in the camp should be about 100 and the maximum 500;</li> <li>• The cattle camps should be located at suitable sites, bearing in mind that adequate supply of water and shade are most essential for the well-being of the cattle;</li> <li>• Cattle sheds constructed should not exceed 20 sq. feet per animal. Suitable arrangements for water trough and Supervisor(s) should be made; and</li> <li>• The feeding centres for cattle should be located in such a manner that:             <ol style="list-style-type: none"> <li>1. They should be within the radius of 8 km from the affected villages.</li> <li>2. They fulfill the cattle feed requirement of 6 kg per cattle head per day of fodder, and 1 to 1.5 Kg per cattle head per day, of concentrate like Bago molasses.</li> <li>3. There is a minimum of one camp manager, two labourers and two sweepers in each cattle camp.</li> </ol> </li> </ul>
<p><b>Water Supply and Sanitation</b> (In-charge Officer: Superintending Engineer (Public Health) Head, Water Supply and Sanitation Department at the District)</p>	
<p><b>Pre-Disaster</b></p>	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required. Recall those on leave.
3.	Review and update precautionary measures and procedures and ascertain with staff the precautions that have been taken to protect equipment.
4.	Assess the availability of water, depending on various factors, such as rainfall, the extent of percolation and ground water recharge, water storage and water use.

5.	Plan out the water resource management process for estimating the demand for water. It can be undertaken on the basis of the consumption needs of the total population of the district and the demand for water from industrial service and agricultural sector.
6.	Formulate a plan for managing the water situation in a drought-affected area through reservoir management; repairs and augmentation of existing water supply schemes; special measures and schemes for areas with drinking water scarcity, namely construction of temporary piped water supply, construction of bore wells and other emergency measures for supply of drinking water, including supply of water through tankers and bullock carts.
7.	Make sure the hospital storage tank is full, and the hospital is conserving water.
8.	Inform people to store an emergency supply of drinking water.
9.	Install standby diesel pumps or generators in damage proof buildings
10.	Make sure auxiliary generators and standby engines are in good working condition.
11.	Acquire a buffer stock of fuel for the motors and store in a protected place, especially in vulnerable pockets.
12.	Establish procedures for the emergency distribution of water, if existing supply is disrupted.
13.	Pre-requisition to acquire containers and storage tanks, required for storing water on an emergency basis.
14	Maintain a minimum level of stock for emergencies that includes extra lengths of pipe connections, joints, hydrants and bleaching powder Keep adequate tools on hand to carry out emergency repairs.
15.	Establish emergency work gangs for immediate and post-disaster repairs.
16.	Investigate alternate source of water and its supply.
<b>During and Post-Disaster</b>	
17	<p>On the receipt of Disaster warning, organize continuous monitoring of:</p> <ul style="list-style-type: none"> <li>• Wells</li> <li>• Intake structures</li> <li>• Pumping stations</li> <li>• Buildings above ground, and</li> <li>• Pumping mains; and Treatment plant.</li> </ul>

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18	Call for emergency meeting to take stock of the situation. Develop a strategy and a mission underlining objectives
19	Make available standby water supply in the event of damage, saline intrusion or other pollution of the regular supply.
20	Make provisions to acquire tankers and establish other temporary means of distributing water on an emergency basis
21.	Prepare plans for water distribution to all transit and relief camps, affected villages and cattle camps and ensure proper execution of these plans.
22.	Safeguard pumps and motors with adequate protection (if the building is not disaster-resistant) to prevent damage.
23.	Increase the concentration of the disinfecting solution to 100 mg/litre and reduce the contact period to 1 hour, if the demand for water is urgent, or the repaired main cannot be isolated.
24.	Take samples for bacteriological analysis and determination of chlorine residue, at the end of disinfection operations, but before the main is put back into service.
25	Repair sewage lines where damage is detected.
26	Fix water pipelines wherever damaged.
27	<p>Use methods described in the following paragraphs, when water treatment plant, pumping station, or distribution system is badly damaged and operation cannot be restored for some time:</p> <ul style="list-style-type: none"> <li>• Connect water from these sources, with adequate chlorination as necessary, to a distribution system or to the points of consumption;</li> <li>• Identify unacceptable water sources and take necessary precautions to ensure that no water is assessed from such sources, either by sealing such arrangements or by posting the department guards;</li> <li>• Ensure that potable water supply is restored, as per the standards and procedures laid down in "Standards for Potable Water".</li> <li>• Plan for emergency accommodations for staff from outside the area; and</li> <li>• Take special measures and schemes for areas with Drinking Water Supply.</li> </ul>
<p><b>Forest</b>  <b>(In-Charge Officer: Divisional Forest Officer/Head, District Forest Office)</b></p>	

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Pre-disaster	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required, recall those on leave.
3.	Identify areas that could be opened or made available for grazing or fodder collection in case of disaster.
4.	Ensure that adequate supply of small poles or bamboo is available for reconstruction of houses of the affected people, as well as wood for cremation of dead.
5.	Ensure plantation to the maximum possible extent.
During and Post-Disaster	
6.	Call for emergency meeting to take stock of the situation. Develop a strategy and a mission underlining objectives.
7.	Open certain forest land for free grazing when disaster waters enter villages, and there is not enough fodder available.
8.	Allow the transportation of fodder from forest areas, when the fodder is not freely available.
9.	Permit local farmers to take forest produce, such as fodder yielding trees, free of charge or on payment of fee.
10	Provide wooden poles and bamboo for relief and reconstruction at subsidized rate. Supply these materials to all the technical departments, which need them.
11.	Recall important functionaries from leave; and communicate to the staff to man their places of duties like the ward and divisional offices and respective departments.
<p><b>Public Works Department (Buildings &amp; Roads)</b>  <b>(In-Charge Officer: Superintending Engineer, PWD (B&amp;R)/Head, PWD (B&amp;R) of the District)</b></p>	

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Pre-Disaster	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis, with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required, recall those on leave.
3.	Ensure; personnel are aware and nominated to be available for emergency duties within the affected district and sub-division.
4.	Establish radio communications with State Emergency Operations Centre, Divisional Commissioner, District Control Room and departmental offices within the division/district.
5.	Make certain the Office In-charge PWD (B&R) is familiar with pre-disaster precautions and during and post-disaster procedures for road clearing and defining safe evacuation routes where necessary.
6.	Appoint Nodal officers (technical officers) and ensure they meet the staff to review emergency procedures in their jurisdiction.
7.	Review and update precautionary measures and procedures, and assess with staff the precautions that have been taken to protect equipment.
8.	Inspect vehicles, fill fuel tanks and batteries and cover electrical wiring as necessary.
9.	Move heavy equipments, such as front-end loaders to areas likely to be damaged and put them in a safe place.
11.	Maintain all the highways and access roads, which are critical from the point of view of supplying relief.
12.	Inspect all buildings and structures of the state government (including hospital buildings) by a senior engineer, and identify structures which are endangered by the impending disaster.
13.	Assemble emergency tool kits for each division, and ensure these include: <ul style="list-style-type: none"> <li>• Crosscut saws</li> <li>• Axes</li> <li>• Power chain saw with extra fuel, oil</li> <li>• Sharpening files</li> <li>• Chains and tightening wrenches, and</li> <li>• Pulley block with chain and rope.</li> </ul>

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14.	Identify, mark and designate routes strategic to evacuation and relief, in close coordination with police and District Control Room.
15.	Establish a priority listing of roads which will be opened first. Among the most important are the roads to hospitals and main trunk routes.
16.	Plan for the layout of roads, gardens and other alternative routes, from the view-point of preventing congestions, and facilitating quicker response.
17.	Inspect old buildings and suggest retrofitting of weak buildings/demolition of dangerous structures and evacuation of population.
<b>During and post-Disaster</b>	
18.	Ensure the Officer-in-charge-PWD (B&R) is responsible for mobilizing staff and volunteers to clear the roads in his section.
19.	Dispatch extra transport vehicles from headquarters and ensure these are stationed at safe strategic spots along routes likely to be affected.
20.	Give priority attention to urgent repair works that need to be undertaken in disaster affected areas.
21.	Secure all under construction works with ropes, sandbags and cover them with tarpaulins if necessary.
22.	Ensure emergency inspection by mechanical engineer of all plants and equipment at the district workshops.
23.	Check the evacuation routes and assist people, if they have to evacuate an area.
24.	Construct/reinforce the connecting roads from villages to roads, canals and bunds and raise their level so that people can access the high ground.
25.	Provide a work team carrying emergency tool kits, depending on the nature and extent of the disaster, essential equipments such as: <ul style="list-style-type: none"> <li>• Towing vehicles</li> <li>• Earth moving equipments, and</li> <li>• Cranes, etc.</li> </ul>
26.	Install adequate road signs to guide and assist the drivers.
27.	Coordinate with Public Works Department and Zila Parishad.
28.	Mobilize community assistance for road clearing by contacting community based organizations.

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29	Undertake clearing of ditches, grass cutting, burning or removal of debris, and the cutting of dangerous trees along the roadside in the affected area through area engineer's staff.
30	Institute repair of all paved and unpaved road surfaces, including edge metaling, pothole patching and any failure of surface, foundations in the affected areas by maintenance engineer's staff and keep monitoring their conditions.
31.	Take on construction of temporary roads to serve as access to temporary transit and relief camps and medical facilities for disaster victims.
32.	As per the decisions of the District Control Room, undertake construction of temporary structures required, for organizing relief work and construction of relief camps, feeding centres, medical facilities, cattle camps and Site Operations Centres.
33.	Keep an up-to-date report of all damage and repairs in the district office report book and communicate the same to the District Control Room.
<b>Power Supply</b> (In-charge Officer: Superintending persuade Electricity Board/Corporation/Head, power Supply Department/Board at the District)	
<b>Pre-Disaster</b>	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/Sub-Division, tehsil. If more personnel are required, recall those on leave.
3.	Ensure all personnel are available as per the IRS plan.
4.	Establish radio communications with State Emergency Operation Centre, Divisional Commissioner, District Control Room and departmental offices within District/Division.
5.	Review and update precautionary measures and procedures, and review with staff the precautions that have been taken to protect equipment.
6.	Protect Power Stations from disaster. Raise the height of compound walls. Arrange gunny bags. Install pump sets for draining water in case of Disaster/Cyclone/Tsunami, etc.
<b>During and Post-Disaster</b>	
7.	Ensure that the Power Supply department makes alternate arrangements of emergency

	<p>supply for the following offices on receipt of warning:</p> <ul style="list-style-type: none"> <li>• Hospitals</li> <li>• Public Health Departments</li> <li>• Deputy Commissioner/District Collector/District Magistrate Office</li> <li>• District EOC, Sub-Divisional EOC, Site Operation Centres.</li> <li>• Police Stations</li> <li>• Telecommunications buildings</li> <li>• Meteorological stations</li> <li>• Irrigation Office, and</li> <li>• Any other place, if required.</li> </ul>
8.	Check emergency tool kits, and assemble any additional equipment needed.
9.	<p>After receiving alert warning, immediately undertake inspection of the following:</p> <ul style="list-style-type: none"> <li>• High tension lines</li> <li>• Towers</li> <li>• Sub-stations</li> <li>• Transformers</li> <li>• Insulators</li> <li>• Poles, and</li> <li>• Other equipments.</li> </ul>
10.	Review the total extent of the damage to power supply installations by a reconnaissance flight, if possible.
11.	Instruct district staff to disconnect the main electricity supply for the affected area temporarily to avoid outbreak of fire, electrocution, etc.
12.	Dispatch emergency repair groups equipped with food, bedding, tents, and tools.
13.	Provide information to the people about the state of power supply, as it is one of the most important sources of information.
14.	Call for emergency meeting to take stock of the situation. Develop a strategy and a mission underlining objectives.
15.	Hire casual labourers on an emergency basis for clearing of damaged poles and salvaging conductors and insulators.
16.	Undertake repair/reconstruction.
17.	Assist hospitals in establishing an emergency supply by assembling generators and other emergency equipments, if necessary.

18	Establish temporary electric supplies to other key public facilities, public water system, etc., to support emergency relief.
19.	Establish temporary electric supplies to transit camps feeding centres, relief camps and Site Operation Centre, District EOC and on access roads to the same.
20.	Set up temporary electric supplies for staging area (staging area to hold the data, and perform data cleansing and merging, before loading the data into warehouse).
21.	Compile an itemized assessment of damage, from reports made by various electrical receiving centres and sub-centres.
22.	Report all activities to the head office and district EOC
23.	Plan for emergency accommodation for staff from outside the area.
<b>Transport</b> <b>(In-Charge Officer: District Transport Officer/Head, Transport Department at the District)</b>	
<b>Pre-Disaster</b>	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis, with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/Sub-Division, tehsil. If more personnel are required, recall those on lease.
3.	Prepare a list of vehicles-trucks, buses, jeeps, tractors, etc., of government and private agencies in the district, and provide the list to the District Control Room.
4.	Issue standing instructions to the state transport department for providing buses for evacuation and relief.
<b>During and Post-Disaster</b>	
5.	Call for emergency meeting to take stock of the situation. Develop a strategy and a mission underlining objectives.
6.	Provide required vans and ambulances for mobile health and animal husbandry teams.
7.	Make available trucks, buses, jeeps, tractors, etc., for evacuation and supply chain management.
8.	Recall important functionaries from leave; communicate to the staff to man their places

	of duties like the ward and divisional offices, as well as respective departments.
<b>Food and Civil Supplies.</b> <b>(In-Charge Officer: District Food and Civil Supplies Officer/Head, Food and Civil Supplies Department at the District)</b>	
<b>Pre-Disaster</b>	
1.	Develop and quarterly update the disaster management plan that includes the Contingency Action Plan for the Department based on HVRC analysis with the active involvement of all concerned line departments and local bodies in the district.
2.	Make personnel available to the Deputy Commissioner/District Collector/District Magistrate, within the affected district/sub-division, tehsil. If more personnel are required, recall those who are on leave.
3.	Ensure that personnel are available within the affected district and sub division during time of crisis
4.	List out items to be provided by Food and Supply department.
5.	Decide upon the places where the Response Base for Food, Fuel, Raw Material, etc., is to be set up.
6.	Check the inventory of resources.
8.	Check for the supplies of food grains through the Public Distribution System.
9.	List out wholesalers and distributors of food grains within and outside district.
10.	Prepare a list of Petrol Pumps, Kerosene Oil sellers, Gas agencies, etc.
11.	List out warehouses of the State and Central Governments.
12.	Establish communications with all stakeholders at the District, State and Central levels.
13.	Ensure security of stocks through Police.
14.	Establish co-ordination with Fire services.
15.	Prepare a list of NGOs, CBOs, CBOs, NCC/NSS volunteers who can help in food distribution and other activities of the Civil Supplies department.
<b>During and Post-Disaster</b>	

16.	Review the situation and develop a strategy for relief operation.
17.	Ensure the availability of food grains for starting relief immediately.
18.	Exercise surveillance over prices of essential commodities. If the local prices of food grains increase, bring it to the notice of the Deputy Commissioner/District Collector/District Magistrate who should bring it to the notice of the State Government.
19.	Prevent hoarding of essential commodities and manipulation in prices through creation of artificial scarcities.
20.	Ensure the availability of food grains for starting relief employment works under the NREGS or any other food-for-work programme. Wages can be paid to the workers in the form of food grains.
21.	Ensure that in those places, where Fair Price Shops are not available, new ones for the distribution of food grains are to be started through self-help groups or cooperatives or even village panchayats.
22.	Arrange for mobile Fair Price Shops in remote and/or disaster prone areas.
23.	Coordinate with Transport Department for arrangements of transport for supplies of relief materials of response base/relief camps, etc.
24.	Ensure capacity building of Emergency Support functions staff.
25.	Enable proper hygiene condition while preparing and packaging food.
26.	Ensure media briefing related to food stock, distribution, etc., through DPRO.

**2.Preparedness Check List for Local Bodies**

**Panchayati Raj Institutions.**

1.	Convene the meetings of Block/village Disaster Management Committee along with the executive authority.
2.	Prepare and update the Block/village Disaster Management Plan quarterly, with focus on Hazard, Vulnerability, Risk and Capacity Analysis (HVRCA) of the Block/village, with the active involvement of all concerned stakeholders
3.	Support activation of the Block/Gram Panchayat Level Control Rooms.
4.	Provide support to establish communications with all stakeholders for the purpose of receiving and sending warning and information exchange through Block Control Room.
5.	Ensure support to establish effective warning systems between the District and Block

	levels, and also with media.
6.	Coordinate and network with all stakeholders in preparedness programmes and emergency situations.
7.	Regularly check inventory of resources.
8.	<p>Ensure community involvement in disaster preparedness on:</p> <ul style="list-style-type: none"> <li>• Risk assessment (to point to which measures to implement);</li> <li>• Early warning systems;</li> <li>• Life safeguarding equipment;</li> <li>• Resources and emergency kits in anticipation of need;</li> <li>• Maintaining emergency rosters and evacuation plans;</li> <li>• Emergency information and communication systems;</li> <li>• Capacity building to ensure adequate emergency response capacity(Particularly amongst the local populace), maintenance of preparedness levels; and</li> <li>• Public education and preparedness campaigns.</li> </ul>
9.	<p>Make an inventory of elements at Risk at Block/village level through the following baseline data:</p> <ul style="list-style-type: none"> <li>• Population: age, gender, health;</li> <li>• Livelihoods: types, locations;</li> <li>• Local economy;</li> <li>• Agriculture and fisheries;</li> <li>• Buildings;</li> <li>• Infrastructure;</li> <li>• Cultural assets(that is, libraries, museums, historic monuments, etc.) and</li> <li>• Local institutions.</li> </ul>
10.	<p>Mitigate disasters in the Block/village through;</p> <ul style="list-style-type: none"> <li>• Mainstreaming mitigation into development process;</li> <li>• Funding Mechanism;</li> <li>• Specific schemes addressing mitigation;</li> <li>• Capacity Building;</li> <li>• Human Resource Development;</li> <li>• Community Participation;</li> <li>• Training and education;</li> <li>• Public education;</li> <li>• Evacuation Planning;</li> <li>• Institution building; and</li> <li>• Warning systems.</li> </ul>

11.	<p>Form Disaster Task Force (DTF or Teams at Village Level. Each Panchayat must have its own Community Emergency Response Team (CERT) comprising 10-20 members. These members should be chosen with the following criteria:</p> <ul style="list-style-type: none"> <li>• They must be young and trained persons;</li> <li>• There should be women representatives in the CERT;</li> <li>• There must be a member of the Gram Panchayat in the DTF;</li> <li>• The members must have detailed knowledge of the area, people and public infrastructure;</li> <li>• They should not be going to distant places for work during the daytime; and</li> <li>• They should have a strong commitment for community service and volunteerism.</li> </ul>
12.	<p>Help the line departments in pre-positioning of food, medicine, health functionaries, and water with Disaster Task Force and DM Teams.</p>
13.	<p>Convene meetings of NGOs, Youth Clubs, Self-Help Groups, etc., in the Block/Village, and assign them specific responsibilities for relief, recovery and rehabilitation.</p>
14.	<p>Ensure Disaster Response with focus on:</p> <ul style="list-style-type: none"> <li>• Community Participation in Response Actions.</li> <li>• Timely search, rescue and Evacuation.</li> <li>• Identification of Shelters for Victims.</li> <li>• Distribution of Food, Water, Medicine and Fodder.</li> <li>• Clearance of Debris.</li> <li>• Movement of Injured to Hospitals.</li> <li>• Sympathetic Attitude towards Victims.</li> <li>• Assisting Rescue Teams</li> <li>• Property Security.</li> <li>• Information Dissemination and Checking of Rumours, and</li> <li>• Immediate Damage Assessment.</li> </ul>
15.	<p>Actively undertake disaster recovery and rehabilitation through:</p> <ul style="list-style-type: none"> <li>➤ Damage assessment by including the following aspects:</li> <li>➤ Confirmed number of human losses; Number of livestock losses and their estimated value;</li> <li>➤ Details of damage to crops and estimated cost of produces;</li> <li>➤ Number of houses damaged or destroyed and their estimated value;</li> <li>➤ Loss to public works and utilities including Gram Panchayat property; and</li> <li>➤ Rough estimation of the financial losses in rupees;             <ul style="list-style-type: none"> <li>• Economic rehabilitation's aim is to bring the affected community into the mainstream again. PRIs need to work on the following for economic rehabilitation of the disaster-affected area:</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>➤ Provide for agricultural rehabilitation of disaster affected area by necessary assistance, with the help of state Government, to affected farmers in activities such as sowing/harvesting;</li> <li>➤ Make available requisite seeds and fertilizers free of cost to the farmers, of course, with the help of concerned government departments;</li> <li>➤ Provide agricultural equipment/tools through Banks and other funding agencies</li> <li>➤ Help in rehabilitation of artisans and marginal businessmen affected due to the disaster;</li> <li>➤ Provide small work-sheds, necessary tool kits and soft loans to enable affected people to secure raw materials and to market the final/finished products. Rehabilitation of livestock affected due to the disaster;</li> <li>➤ Ensure replacement of milch cattle to the affected farmers through free cattle feed for about 2 to 3 months; and</li> <li>➤ Provide for preventive medication for entire livestock to check the spread of any disease among the surviving cattle.             <ul style="list-style-type: none"> <li>• Social rehabilitation with the help of local community, NGOs and other stakeholders to:</li> </ul> </li> <li>➤ Make efforts to re-start schools as soon as possible and encourage children to attend school regularly:</li> <li>➤ Make children participate in activities pertaining to restoration of normalcy in the school.</li> <li>➤ Prepare school safety plans, conduct regular drills and mock exercises to prepare the children and school management for future disasters, ensure proper counseling of traumatized children and teachers.             <ul style="list-style-type: none"> <li>• Special care of women and children by:</li> </ul> </li> <li>➤ Protecting widows and orphans, and providing shelter, identifying family members, if that is not possible then identify foster families;</li> <li>➤ Organizing regular counseling to strengthen the mental health of women and children;</li> <li>➤ Initiating various training programmes to make the women economically self-sufficient;</li> <li>➤ Giving due attention to health, nutrition and hygiene in the long-term rehabilitation package for women and children;</li> <li>➤ Activating/reactivating the angan-wadis within the shortest possible time;</li> <li>➤ Setting up at least one multi-purpose community centre in the village;</li> <li>➤ Setting up vocational training camps to improve the skills of orphans and children; and</li> <li>➤ Ensuring that the existing programmes collaborate with the training efforts for women at the district level.</li> </ul>
16.	Mainstream disaster management with development process (Explained at length Section

	2.4 of Booklet IV of the Training
<b>Urban Local Bodies</b>	
1.	Convene the meetings of Urban Local Body (ULB)/Ward Disaster Management Committee.
2.	Prepare and update the ULB/Ward Disaster Management Plan quarterly, with focus on Hazard, Vulnerability, Risk and Capacity Analysis (HVRCA) of the ward & village with the active involvement of all concerned stakeholders.
3.	<p>Understand Hazards, Risk and Vulnerabilities of the cities to promote safe environment by the ULBs through:</p> <ul style="list-style-type: none"> <li>• Proper Hazard Risk Vulnerability Assessments of the urban areas;</li> <li>• Introduction of appropriate institutional mechanisms for DRR by ensuring that all development activities look into the DRR components. It could be accomplished through City Disaster Management Authorities/Committees, constitution of Disaster Management Teams at all levels of decentralized governance structure, as well as institutions like schools, offices, apartments;</li> <li>• Emergency Operations Centres for information collection and dissemination for early warning and effective response and sharing of relevant information;</li> <li>• Strong and enforceable techno-legal regime (Building Laws, Town Planning Act) to ensure safe infrastructure including houses, etc;</li> <li>• Capacity Building of all stakeholders in basic life-saving skills and specialized skills for safe environment like safe-construction techniques, mass-casualty management, etc and</li> <li>• Creation of forums to enhance partnerships for all stakeholders' participation for effective disaster management.</li> </ul>
4.	<p>Carry out the exercise of Disaster Mitigation Planning for addressing their specific needs for disaster management, which includes integration of Disaster Risk Reduction elements in land-use planning, infrastructure planning and overall city development planning. ULBs should thus;</p> <ul style="list-style-type: none"> <li>• Facilitate proper coordination mechanisms for preparation and implementation of the plan (through disaster management committee or working group);</li> <li>• Ensure participation of all stakeholders at all levels of planning and implementation;</li> <li>• Ensure that plan covers all the phases of disaster management with clear roles and responsibilities of each agency and stakeholder. Thus, a plan must identify the vulnerability of various parts of the city to different types of hazards;</li> </ul>

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	<ul style="list-style-type: none"> <li>• Establish clear and well-defined roles and responsibilities of each agency involved in the management of the city for all the phases of disaster management;</li> <li>• Incorporate measures to be adopted for the prevention and mitigation of disasters;</li> <li>• Include capacity building and preparedness measures that need to be taken;</li> <li>• Incorporate strategies for integration of mitigation measures with the ongoing development plans and projects;</li> <li>• Facilitate development of sectoral plans (Health, transportation, water supply, etc.)</li> <li>• Provide support in preparation of community plans (ward plans);and</li> <li>• Facilitate formation of a comprehensive crisis management plan covering various possible crises like terrorist attacks, stampedes, etc. This Plan could be a separate Plan, and if so, with proper linkages to the overarching Disaster Management Plan of the City.</li> </ul>
5.	Undertake mitigation measures as per the action plan devised under Disaster Management Plan based on HVRCA.
6.	Ensure clearing of drainage and desalting of drainage system within the jurisdiction of ULB well before onset of monsoon.
7.	Ensure implementation of Building Bye-laws, Town Planning Act, etc.,
8.	Coordinate and network among all stakeholders in preparedness programmes and emergency situations.
9.	Identify and engage local leaders for awareness generation and ensuring that various responsibilities for disaster management are clear and understood by the community.
10.	Ensure that local government personnel as well as community receive constant training in disaster management.
11.	<p>Streamline the Fire and Emergency Services, which are the most critical services in urban areas. These services cover a wide range of incidents such as house collapses, train and motor accidents, drowning accidents, tree collapses, earthquakes, floods, landslides, cyclones, oil and acid spillages, etc. These incidents would involve wide ranging skills from lifesaving medical service (First Aid) or rescue operations to basic humanitarian services like counseling or food distribution. ULBs thus need to ensure that:</p> <ul style="list-style-type: none"> <li>• Fire and Emergency Force is adequately equipped as well as trained to save lives and property in case of fire/disaster.</li> <li>• A proper assessment based on Hazard, Risk and Vulnerability is</li> <li>• Taken up to ensure that adequate infrastructure is developed to support this Force;</li> </ul>

	<ul style="list-style-type: none"> <li>• An interactive platform between community and the services is available to address the grievances; and</li> <li>• Required coordination mechanisms within various departments/agencies for effective services are in place.</li> </ul>
12.	<p>Strengthen the Health Sector, which is another critical sector in the ULBs. It is strongly felt that in any given emergency, the first 72 hours are critical in the life of any affected person. To cope with it, ULBs need to ensure that;</p> <ul style="list-style-type: none"> <li>• A well-designed Medical Preparedness and Mass Casualty Management system is in place;</li> <li>• A plan to enhance capacity of all staff for emergency medical response and mass causality management is being implemented;</li> <li>• Systems to address post-disaster disease surveillance systems, networking with hospitals, referral institutes and accessing services and facilities, such as availability of ambulances and blood banks have been created;</li> <li>• A well-managed system of mobile surgical teams, mobile hospitals and heli-ambulances for evacuation of patients is available;</li> <li>• Vulnerability Analysis for Hospitals and other related facilities has been done to address the gaps; and</li> <li>• Disaster resilient medical facilities are developed.</li> </ul>
13.	Establish a control room.
14.	Establish communication with all stakeholders for the purpose of receiving and sending warning and information through ULB control room.
15.	Help in disseminating timely warning to all concerned including media
16.	Ensure community involvement in all phases of disaster management.
17.	Prepare and regularly update inventory of resources.
18.	Recall important functionaries from leave and communicate to the staff to perform their duties.
19.	Play an effective role in search and rescue. It could be done through planning an urban search and rescue exercise to rescue people from a disaster affected area.
20.	Ensure identification of safe places in each ward for evacuation and establishment of relief camps and confirming their suitability.
21.	Prepare a list of relief items to be distributed.
22.	Ensure proper planning has been done for transport, equipment and materials for responding to a disaster incident.

23.	Constitute and activate, as and when required, ward level preparedness team with the help of elected representative from the concerned ward.
24.	<p>Facilitate business houses and industries in urban areas to:</p> <ul style="list-style-type: none"> <li>• Contribute to the economic health and development of communities through responsible business practices;</li> <li>• Minimize the negative impact of its activities on the environment and community through use of appropriate technologies;</li> <li>• Be accountable to all stakeholders through dialogue and transparency regarding economic, social and environmental impacts of business activities; and</li> <li>• Provide support in Capacity Development, Skill Development and Knowledge Management for disaster management activities ranging from prevention, mitigation and preparedness to response and recovery; and support activities that reduce risk of disasters like Building Safe Infrastructure, carrying out Hazard, Vulnerability Risk, and Capacity Analysis (HVRCA) for better planning, enhancing Early Warning Capability, etc.</li> </ul>
25.	<p>Sustain awareness created by large-scale devastations on the need for prevention and mitigation programmes, in order to minimize the loss of development gains and to reduce the vulnerability of communities to natural and human-induced hazards.</p> <p>Even before external aid arrives, local volunteers emerge from the devastation to share their skills and devote their time to assist those in need. Volunteers not only assist in such tasks as arranging shelter, food and first aid, search and rescue efforts, etc, but also help to contain epidemics, rebuild infrastructure and impart training on using technology to prevent and mitigate future disasters.</p> <p>Equally evident is the importance of promoting and strengthening the ability of volunteers, now mostly untrained force, to stimulate local populations in realizing their own potential in making any crisis more manageable. Volunteers of government based organizations like Nehru Yuva Kendra Sang than(NYKS),National Service Scheme (NSS), National Cadet Corps (NCC) and Bharat Scouts and Guides, United Nations Development Programme (UNDP), Non- Governmental Organizations, Corporate, Trusts including religious trusts and other volunteers engaged by donor organizations, have shown exemplary contributions in the process of Post-disaster response, rescue, recovery and development. These organizations have, in fact, been individually engaged in creation and promotion of volunteers. The Urban local bodies can thus support in;</p> <ul style="list-style-type: none"> <li>• Creating a common platform for interface of volunteers with government agencies, PRIs, Civil Society Organizations/other networks and vulnerable communities to broaden and enhance opportunities for better voluntary action;</li> </ul>

	<ul style="list-style-type: none"> <li>• Setting up a system that would encourage volunteers to register;</li> <li>• Facilitating optimal utilization of skilled manpower for disaster response actions and sustained management of volunteer infrastructure through a well-defined institutional mechanisms;</li> <li>• Formulating rules and regulations for volunteers 'engagement during emergencies; and</li> <li>• Developing/Enhancing human resources by undertaking well-designed capacity building programmes.</li> </ul>
26	Convene function of IRS (Incident Response System) and ESF (Emergency Support Function).
27	Maintain an Emergency Operation Centre.
28	Convene meetings of NGOs, Youth Clubs, Self-Help Groups, etc., in the urban area, and assign them specific responsibilities for relief, recovery and rehabilitation.
29	<p>Ensure Disaster Response with focus on facilitating the line departments and other stakeholders in carrying out the following post-disaster activities:</p> <ul style="list-style-type: none"> <li>• Arrangements for maintenance of law and order; Arrangements for evacuation of people;</li> <li>• Recovery of dead bodies and their disposal; Arrangements to be made for the medical care for the injured;</li> <li>• Supply of food and water and restoration of water supply lines;</li> <li>• Arrangement for temporary shelters like tents, mental sheds, etc;</li> <li>• Restoration of lines of communication and information flow; Quick assessment of damage and demarcation of damaged areas according to grade or damage;</li> <li>• Arrangement for cordoning off severely damaged structures liable to collapse during aftershocks; and</li> <li>• Establishment of hygienic and sanitary conditions in the relief area, etc.</li> </ul>
30	Undertake rehabilitation actively through: Damage Assessment; Physical Rehabilitation; Economic Rehabilitation; Social Rehabilitation; Special care of women, children and weaker sections of the society; etc; and
31.	Facilitate mainstreaming if disaster management with development.

## Chapter - 7

### Relief, Recovery, Rehabilitation, and Reconstruction Plan

### Approach

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

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

### Relief

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

In case of devastating disaster extreme weather conditions can be life threatening or when the period of stay in temporary shelters is likely to be long and uncertain, construction of site

specific befitting the local environment, ecology and culture, immediate shelters with suitable sanitary facility will be undertaken to ensure a reasonable quality of life to the affected people. The DDMA in consultation with the SDMA will plan such shelters which are cost effective and as per the local needs with multi-use potential. Pre-identification of their availability, supply and testing in the local conditions will be done.

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

### **Owner Driven Construction**

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

### **Reconstruction of Social Infrastructure**

Essential services, social infrastructure and intermediate shelters/camps will be established in the shortest possible time. For permanent reconstruction, ideally, the work including the construction of houses must be completed within two to three years. State Government and Departments of State Government should create dedicated project teams to speed up the reconstruction process. Involvement of PRIs and ULBs for reconstruction at local level will be encouraged.

### **Socio-Economic Rehabilitation**

Disasters destroy development and livelihood sources. In the post disaster situation there is great need to generate temporary livelihood options for the affected community. The relief and reconstruction programmes would be used to generate livelihood options for the needy. Ongoing or

new programmes may be launched which may help the affected community to earn their livelihood. It would be ensured that such programmes result in the creation of assets, infrastructure, and amenities community and equally important is that such assets are hazard resistant, durable, and sustainable. Disasters may also end up in destroying the existing village or housing sites and re-settlement in the existing locations may no longer be possible. Possible sites for re-location of habitation would be identified.

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

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

## **Chapter – 8**

### **Linking with Development Plan**

The Disaster Management Act mandated us to take measures for prevention/mitigation of disasters and to ensure that appropriate preparedness measures for integration of disaster management into development plans and projects are taken and further allocation of funds for prevention, mitigation, preparedness for disaster and capacity building are also made available. Since disaster management is not a function of DM department alone but of all departments hence mitigation concern must be addressed by the respective departments in all aspects of development. The issue of DRR integration is also contained in the National Policy on Disaster Management, 2009.

### **A. Introduction – Disaster and Development**

Natural disaster risk is intimately connected to processes of human development. Disasters put development at risk. At the same time, the development choices made by individuals, communities and nations can generate new disaster risk. But this need not be the case. Human development can also contribute to a serious reduction in disaster risk. The destruction of infrastructure and the erosion of livelihoods are direct outcomes of disaster. But disaster losses interact with and can also aggravate other financial, political, health and environmental shocks. Such disaster losses may setback social investments aiming to ameliorate poverty and hunger, provide access to education, health services, safe housing, drinking water and sanitation or to protect the environment as well as the economic investments that provide employment and income.

#### **How can development increase disaster risk?**

There are many examples of the drive for economic growth and social improvement generating new disaster risks. Rapid and unplanned urbanisation is an example. The growth of informal settlements and inner city slums, whether fuelled by international migration or internal migration from smaller urban settlements or the countryside, has led to the growth of unstable living environments. These settlements are often located in ravines, or steep slopes, along flood plains, sinking areas or adjacent to noxious or dangerous industrial or transport facilities. Rural livelihoods are put at risk by the local impacts of global climate change or environmental degradation. Coping capacity for some people has been undermined by the need to compete in a globalising economy, which at present rewards productive specialisation and intensification over diversity and sustainability.

#### **Can development planning incorporate disaster risk?**

The frequency with which our country and state experience natural disaster should certainly place disaster risk at the forefront of development planners' minds. This agenda differentiates from two types of disaster risk management. *Prospective disaster risk management* should be integrated into sustainable development planning. Development programmes and projects need to be reviewed for their potential to reduce or aggravate vulnerability and hazard. *Compensatory disaster*

*risk management* (such as disaster preparedness and response) stands alongside development planning and is focused on the amelioration of existing vulnerability and reduction of natural hazard that has accumulated through past development pathways. Compensatory policy is necessary to reduce contemporary risk, but prospective policy is required for medium –to long-term disaster risk reduction.

### **B. The Legal Context**

The DM Act mandated the DDMA to “lay down guidelines to be followed by the departments of the Government of the State for the purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance therefore” and to “review the development plans of the different departments of the State and ensure that prevention and mitigation measures are integrated therein”. Under Section 38 (2) (e) of the Act the State Government is to ensure that the integration of measures for prevention of disaster or mitigation have been incorporated by the departments of the Government of the State in their development plans and projects. The State Government is further to ensure integration of measures to reduce or mitigate the vulnerability of different parts of the State to different disasters in the state development plan {38 (2) (f)}.

The Act also prescribes for preparation of District Plan and for incorporation of measures suggesting as to how mitigation shall be integrated into development plans and projects. The Act states that the DMPs shall prescribe “the manner in which the mitigation measures shall be integrated with the development plans and projects”. The DMPs of departments at State and district level shall also have provisions for prevention of disaster and mitigation of its effects or both in the development plans and programmes as provided for in the State DMP and as is assigned to the department or agency concerned.

### **C. Mainstreaming DRR into Development**

**Mainstreaming has three purposes:-**

- To make certain that all the development programmes and projects that originate from or funded by Government are designated with evident consideration for potential disaster risks to resist hazard impact
- To make certain that all the development programmes and projects that originate from or are funded by Government do not inadvertently increase vulnerability to disaster in all sectors: social, physical, economic and environment.
- To make certain that all the disaster relief and rehabilitation programmes and projects that originate or are funded by Government are designed to contribute to development aims and to reduce future disaster risk.

### **Mainstreaming DRR into Development Sectors**

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

- Ongoing schemes and projects of the Ministries and Departments of GoI and State Governments, as well as of all Government agencies and Institutions, including Public Sector Undertakings, will be selectively audited by designated government agencies for ensuring that they have addressed the disaster risk and vulnerability profiles of the local areas where such schemes and activities are being undertaken.
- At conceptualization or funding stage itself, the development schemes will be designed with consideration of any potential hazardous impact associated with it and incorporate measures for mitigation of the same.
- All the development schemes will be pragmatic, incorporating the awareness of local disaster risk and vulnerability, and ensuring that the schemes have addressed these concerns and included specific provisions for mitigating such disaster concerns; and

- DDMA's will ensure that all the disaster relief and recovery programmes and projects that originate from or are funded by any agency satisfy developmental aims and reduce future disaster risks.

#### **D. Approaches for mainstreaming**

There are three suggested approaches of mainstreaming disaster management into the development process and disaster management plans-

1. Structural Measures
2. Non Structural Measures
3. Disaster Mitigation Projects

Based on the suggested approaches the specific action would involve:-

- a. Adopting a Sectoral approach and identification of Key sectors for mainstreaming.
- b. Within each sector, key programmes/projects would have to be identified.
- c. This has to be followed by indentifying the entry points within the programmes/projects for integration.
- d. It would also involve work at the policy and planning level be it national, state and district level.
- e. It would also need a close coordination with State Planning Commission and Finance Department for promoting DRR into all development programmes and involve working with different departments to mainstream DRR into the Departmental Plans and policies.
- f. Advocacy would have to be done for allocation of dedicated budget for DRR within the Departmental plans.
- g. Further appropriate guidelines for different sectors would have to be development and for it to be effective and sustainable it has DRR would have to be ultimately integrated to the development plans of various departments at the district and sub-district levels.

#### **E. Illustrations of Mainstreaming DRR into ongoing Flagship Programmes**

## District Disaster Management Plan 2012, Sirmaur (H. P.)

More specifically, as mentioned in the agenda some of the following flagship programmes for Government of India could be used as an entry point for mainstreaming the DRR in development plans and the following steps may be undertaken:-

Sl. No.	Name of The Programme	Department/ Sector	Proposed Strategies for DRR Integration into the Flagship Programmes
1.	Indira Awas Yojana	Rural Development	<ul style="list-style-type: none"> <li>i. Inclusion of such measures like application of Hazard resistant design in construction of IAY houses, appropriate sitting of IAY housing in guideline of IAY</li> <li>ii. Development of model design for IAY houses which could be easily referred to by DRDAs at district level and used for community awareness depending on the geographical location.</li> <li>iii. Capacity Building of Rural masons on safe construction.</li> <li>iv. Capacity Building of PRIs.</li> <li>v. Community Awareness.</li> <li>vi. Capacity Building Programmes for DRDA officials on Disaster Risk Reduction issues.</li> </ul>
2.	Mahatma Gandhi National Employment Guarantee scheme	Rural Development	<ul style="list-style-type: none"> <li>i. Utilisation of MGNREGS funds to reduce the vulnerability of Panchayat vis a vis natural hazards such as landslide, drought, forest fire, cloud burst, flash floods, earthquake etc.</li> <li>ii. Giving priority to those works which reduce the vulnerability of area over the works which enhances the vulnerability of the area to natural hazards.</li> <li>iii. Identified works are available which take into account the hazard profile and offer continuous employment opportunities in the event of disasters to ensure livelihood security in the event of disasters.</li> <li>iv. Works which reduce disaster risk are given priority in plans-such as local mitigation works etc.</li> <li>v. Any other implement able suggestion within the ambit of the scheme.</li> </ul>
3.	Pradhan Mantri Gram Sadak Yojana	PWD	<ul style="list-style-type: none"> <li>i. The Master Plan for rural roads, the district rural road plan and identification of core network under the planning process of this scheme should, which the overall guidelines of its preparation, explicitly address the disaster risk reduction concerns and accord priority to connect the vulnerable habitations.</li> <li>ii. The technical guidelines should explicitly provide for suitable protection and inclusion of disaster risk concerns explicitly - while</li> </ul>

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			<p>provision of cross drainage, slope stabilization, protection works are already included, in multi-hazard and especially flood and landslide prone areas fair weather roads need to be upgraded on a priority basis.</p> <p>iii. The maintenance guidelines are modified to ensure that in case of disasters these roads get provision for restoration to ensure all weather connectivity.</p>
4.	Sarva Siksha Abhiyaan	Education	<p>i. Development of a Policy paper of school safety.</p> <p>ii. Introducing school safety as a part of the guidelines of SSA which is currently focusing on inclusive development.</p> <p>iii. Developing model structurally safe designs for schools.</p> <p>iv. Introducing School Safety in the Teacher's Training Curriculum.</p> <p>v. Training of Rural Engineers appointed under SSA Scheme as well as the SSA State Coordinators.</p> <p>vi. Training of masons in rural areas.</p> <p>vii. Construction of Technology Demonstration Units.</p> <p>viii. Community Awareness.</p>
5.	Jawahar Lal Nehru Urban Renewal Mission	Urban Development	<p>i. Strengthening of the compliance mechanism at the detail project report submission and appraisal stage in case of infrastructure projects as well as housing scheme to ensure structural safety.</p> <p>ii. Emphasis on disaster risk audit at the stage of preparation of detail project reports.</p> <p>iii. Inclusion of amending of building byelaws to ensure structural safety as a mandatory reform in the Mission cities to ensure safe habitat development. (Both structural safety and fire safety norms).</p> <p>iv. Inclusion of disaster management as a function of the Urban Local Bodies and allocate resources.</p> <p>v. Inclusion of Disaster Resistant features in the houses being constructed under the BSUP component as well as promote development of safe habitat.</p> <p>vi. Inclusion of strategies for disaster management in the City Development Plans.</p> <p>vii. Training and Capacity Building Programmes for municipal officers on disaster risk reduction.</p>
6.	Rajiv Awas Yojana	Urban Development	<p>i. Since Rajiv Awas Yojana is focusing on developing slum free cities and Capacity Building and Community Mobilization is also an important component of RAY, through this programme attempts</p>

			<p>can be made towards community level disaster preparedness as slum dwellers often become the most vulnerable community during such disasters as floods, fire and high wind speed. The 30 cities selected on a plot basis can be targeted to initiate community based disaster preparedness activities.</p> <p>ii. Also the Housing Programmes to be implemented in these selected cities can ensure incorporation of hazard resistant features and safe sitting.</p>
7.	National Rural Health Mission	Health and family welfare	<p>i. Ensure that the village Health Plan and the District health plan explicitly address the disaster risk reduction concerns in the vulnerable habitations and the vulnerable districts and the disaster management plan as per DM Act 2005 takes links itself to the District and village Health plans.</p> <p>ii. Provide training to the ASHA workers on disaster health preparedness and response.</p> <p>iii. Strengthening of Disease Health Surveillance System in rural areas.</p> <p>iv. Ensuring structural safety of the CHC/PHC and other health care service delivery centers in rural areas.</p> <p>v. Training of doctors and hospital staffs on mass casualty management and emergency medicine.</p> <p>vi. Community awareness on disaster management.</p>

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

### **F. Mainstreaming DRR into Development Planning – Approaches**

Disasters are basically unresolved problem of development. Development can increase vulnerability. Development can reduce vulnerability. The outcome rests on developmental choices. The seeds of disasters are often sown in development patterns: poor land use planning, environmental management and lack of regulatory mechanisms. It is due to this reason that despite having almost similar exposures disaster has greater impact on humans in developing or low developed countries than the developed countries. Therefore, disaster risk can best be addressed through integrating into the developmental planning, programmes and processes.

Mapping of hazards, identification of elements at risk and exposure data assist in quantifying risk. Thereafter risk reduction initiatives can be taken. Mainstreaming DRR is a prerequisite for safe and sustainable development. Mainstreaming as a term is used to describe the consideration of DRR elements in national and regional decision making process (Policy, planning and budgeting etc.). DRR integration leads to addition of specific measures to the development plans, programmes and strategies. Some of the key sector where mainstreaming/integration of DRR can be done with illustrations is as under:-

### **a) Public Infrastructure:-**

- i) Incorporate disaster risk impact assessment as a part of the planning process before the construction starts.
- ii) Site analysis and risk sensitive land-use planning (either avoid development in hazard prone areas or adopt treatment and mitigation measures)
- iii) Strengthen compliance to the various provisions of the codes – set up hazard safety cell for advice and monitoring
- iv) Disaster resistant technologies mandatory in case of all construction using public/corporate funds.
- v) Training and capacity building of the department and functionaries.

### **b) Housing – Rural and Urban**

- i) Application of hazard resistant designs
- ii) Prepare construction guidelines for rural areas, Nagar Panchayats and Municipal Councils.
- iii) Amendment of Building bye-laws, Zoning regulations and Development Control Regulations.
- iv) Strengthening the enforcement of techno-legal and managerial regime.
- v) Training of masons, engineers, architects, contractors, promoter and builders.
- vi) Sensitization of the banking and financial institutions.
- vii) Promotion of disaster insurance in housing sector.
- viii) Having a housing reconstruction policy.

### **c) Health Sector**

- i) Ensure hospitals and health facilities are not located in hazard-prone areas.

- ii) Analyze the internal and external vulnerabilities of existing health care facilities during emergencies.
- iii) Retrofitting of the critical hospitals.
- iv) Prepare and implement hospital preparedness plan.
- v) Training of doctors on mass casualty management, trauma care and emergency medicine.
- vi) Training of health workers on emergency preparedness and response.
- vii) Strengthening of disease surveillance system.

**d) MGNREGS – Scope of work – Some illustrations**

- i) Water conservation and water harvesting;
- ii) Drought proofing, including forestation and tree plantation;
- iii) Irrigation canals, including micro and minor irrigation works;
- iv) Plantation and horticulture;
- v) Renovation of traditional water bodies, including de-silting of tanks;
- vi) Land development;
- vii) Flood-control and protection works, including drainage in water logged areas; and
- viii) Rural connectivity to provide all weather access.

**e) Indira Awas Yojna**

- i) Study IAY housing typology and develop hazard resistant model design (taking into consideration of available local materials and culture).
- ii) Training of DRDA officials and engineers.
- iii) Awareness generation among villagers and PRIs members and community mobilization campaign.
- iv) Construction of sample IAY units for promoting the technology.
- v) Training of Masons and community members on hazard resistant technology.

## Chapter - 9

## Government Organisations-NGO and IAG Coordination

### Institutional and Legal Framework

The DM Act 2005 recognises that sometimes the development patterns that do not recognise disaster risk and vulnerability in the specific geographic areas may induce disasters. The proactive approach in the DM Act 2005 to address disaster risk and vulnerability through pre-disaster preparedness and mitigation activities also envisions accountability and multi stakeholder participation, including coordination of the activities of the NGOs at various levels. Sections 30 (2) (xix) of the Act mandate the DDMA for collaboration with stakeholder agencies including NGOs for the purpose of improving the effectiveness of DM. Similarly the Act mandates NGOs to act in an equitable and non-discriminatory manner for the purpose of assisting or protecting the disaster affected communities or for providing relief to the affected communities or while dealing with any effects of threatening disaster situations and has fixed the responsibility to monitor this on DDMA's side vide section 34 (1). The above provisions ensure that the concerned DM interventions being addressed are supported and facilitated by the civil society organisations working at the grass roots and also takes care of the ground realities.

Section 30 (2) (xix) of the Act stipulates that the DDMA shall “advise, assist and coordinate the activities of the Departments of the Government at the district level, statutory bodies and other governmental and non-governmental organisations in the district engaged in the disaster management” and Section 24 (1) lays down that the DDMA shall “ensure that the non-governmental organisations carry out their activities in an equitable and non-discriminatory manner”. The Act also directs the State Government under Section 38 (2) (a) to coordinate “actions of different departments of the Government of the State, the State Authority, District Authorities, local authority and other non-governmental organisations”.

Sections 35 and 38 specifically emphasise the coordination of actions with NGOs. The National Policy on Disaster Management (NPDM) also states the national vision for community mobilisation and participation in DM and aims to provide momentum and sustenance through the collective efforts of all government agencies and NGOs. There is emphasis on community based disaster management, including last mile integration of the policy, plans and execution and early warning dissemination. Promoting a productive partnership with NGOs is a prominent thrust area in the NPDM.

There is a large scope for improving the engagement of NGOs in DM and on efficiently utilising their unique advantages and core competencies by strengthening humanitarian coalitions, alliances and NGO networks. There is also need to strengthen public awareness, capacity building

and knowledge management through CBOs and NGOs. Institutional mechanisms for the advocacy and engagement of NGOs with government agencies on DM concerns require to be strengthened. Replication and scaling up of community level good practices has to be promoted.

### **Advantages of Involving NGOs**

- i. NGOs can play a very important role in mobilising communities and in linking PRIs/ULBs with corporate sector entities for initiating DRR related activities.
- ii. The strong linkages which NGOs 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.
- iii. 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.
- iv. 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 programmes, schemes and projects to create the required synergy in transforming the lives of at-risk communities.

### **Actions to be taken by the DDMA**

- i. Developing a database of NGOs, CBOs and Faith Based Organisations at all levels working in the field of disaster management and emergency response and other others focusing on geographic outreach and thematic capacities of the organisations.
- ii. Developing the capacity of identified NGOs, CBOs and organisations in disaster management and emergency response.
- iii. Constitution of Inter-Agency Group (IAG) for the district with an objective to:-
  - Promote and institutionalise unified response strategy in humanitarian crisis.
  - Mainstreaming the emergency preparedness as in integrated development strategy.
  - Systematise the emergency response mechanism.
  - Bringing in the culture of “working together” in emergencies and normalcy.
  - Engagement in activities that will build the capacities of stakeholders and local communities to cope with calamities.

iv. Development of Criteria for membership of IAG: Any of the following criteria is proposed to become a member of the District IAG:-

- District Level agencies working in emergency response and preparedness for minimum of five years.
- International and national funding agencies supporting emergency preparedness and community led risk reduction initiatives for a minimum period of three years.
- Academic and /or research institutions actively involved on disaster related knowledge management and practices.

Membership claim may be scrutinised by a committee of the District IAG for authentication of the prospective member organisation.

### Action Points

No.	Issues	Action Points
1.	Geographic spread of NGOs	Develop a database of NGOs at all levels working on disaster management focusing on geographic outreach and thematic capacities of the organisations. <b>(Action: DDMA with the help of NGOs)</b>
2.	Volume of support provided by NGOs	Compile statistics on quantum of support provided by NGOs at all levels, both international and national. <b>(Action: DDMA)</b>
4.	Coordination	Establishing inter agency mechanisms for coordination and networking activities (information and knowledge management, training and capacity building, collaborative advocacy, quality and accountability) at all levels. <b>(Action: DDMA)</b>
5.	Accessibility	Establish protocols for cooperation and ensure access to the affected areas with support from government agencies at respective levels like NDRF and SDRF that have good logistics base to reach inaccessible areas. <b>(Action: DDMA, NGOs, CBOs)</b>
6.	Hazard and vulnerability based planning	Conduct community centric hazard and vulnerability analysis at all levels, and develop disaster management plans in accordance. <b>(Action: DDMA, NGOs)</b>
7.	Community participation	Ensure community participation in assessment, planning, implementation and monitoring of activities at all levels.

		(Action: DDMA, NGOs, CBOs)
8.	Mainstreaming of Disability Issues in DM	Support the most vulnerable groups through mitigation activities as well as disaster preparedness and response, with a particular focus on the special needs of the Persons with Disabilities (PWDs). (Action: DDMA, NGOs)
9.	Gender Mainstreaming	Make women's as well as men's concerns and experiences an integral dimension in the design, implementation, monitoring and evaluation of policies and programs such that inequalities between men and women are not perpetuated through the routine operations of DM. (Action: DDMA)
10.	Focus on most vulnerable rather than only on epicentre	National level: Advocate with all actors to reach out to gap areas State level: Coordinate among actors to identify gap Areas District and Local level: Ensure targeting with equity and outreach to all excluded areas. (Action: District NGO Task Forces in DM)
11.	Rural-urban diversity	Develop the capacities of NGOs or specialised civil society agencies at all levels to manage urban as well as rural disasters and accordingly make investments. (Action: DDMA)
12.	Adherence to standards	National level: Develop minimum standards for India State level: Develop minimum standards for the state District and Local level: Develop capacities for adherence to minimum standards through collective and coordinated efforts of all stakeholders (Action: DDMA, NGOs, CBOs)
13.	Transparency and accountability	Develop an agreed framework of accountability for all levels and mechanisms to bring in transparency. (Action: DDMA)
14.	Do No Harm	Advocacy at all levels on Do No Harm through disaster response and development interventions. (Action: District NGO Task Forces in DM)
15.	Exit strategy	Ensure that the NGO programmes have an exit strategy to link with long term recovery/rehab/development programs of other NGOs or the government. (Action: District NGO Task Forces in DM)

(Source: NDMA Guidelines on the Role of NGOs in Disaster Management)

### Coordination of Actions of Other Actors

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, organisation and agencies. In short, it involves all departments of the State Government, Central Government, Armed Forces, civil society and commercial organisation (NGOS, CBOs, Faith Based Organisation, Traders Organisations, Corporate Sector), international organisations 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. It is must that regular meetings with all the stakeholders is held at least once in six months or a year. And all stakeholders are also associated in the mock drills to test their preparedness and clarity of roles and responsibility.

## Chapter – 10

### Financial Mechanism

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

### Disaster Response and Mitigation Funds

District Disaster Response Funds and District Disaster Mitigation funds would be created at the District Level as mandated in the Act (Section 48). The disaster response funds at the district level would be applied 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. The mitigation funds shall be applied by the DDMA for the purpose of mitigation as per the HP DM Rules, 2011.

### Responsibilities of the State Departments and Agencies

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

## **Techno-Financial Regime**

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.

## KNOWLEDGE MANAGEMENT

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

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

### 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.

## CHAPTER - 12

### Monitoring and Evaluation

The following monitoring and evaluation procedure would be followed to make the plan functional and a living document:-

- a) The DDMA shall regularly review the implementation of the plan.
- b) In order to improve the plan the DDMA would check the efficacy of the plan after any major disaster/emergency in the district and see what did work and what did not work and make amendments to the plan accordingly.
- c) As per Sub Section (4) of Section 31 of the Disaster Management Act, 2005 the plan would be reviewed and updated annually and the year in which the plan has been reviewed would be clearly mentioned in shape of header in each page of the plan.
- d) Resource inventory of the district fed into the IDRN would be regularly updated and appended to the plan.
- e) Names and contact details of the officers/officials who are the nodal officers or the incharge of resources to be updated on regular basis.
- f) A soft copy of the plan would always be kept in the DDMA website for reference by all concerned.
- g) A Copy of the plan would be sent to all the stakeholder departments, agencies and organisations so that they know their role and responsibilities and they are also prepare their own plans.
- h) Regular Mock Drills should be conducted to test the efficacy of the plan and check the level of preparedness of various departments and other stakeholders.
- i) Regular training and orientation of the officers/officials responsible to implement the plan should be done so that it becomes and useful document to the district administration.
- j) Regular interaction and meetings with the CPMFs and Army or any other central government agency would be done by the DDMA should that there is no problem of coordination during disasters. The representatives of these organisations should be invited as expert for the DDMA meeting. A copy of the DDMP should also be shared with them.
- k) The DEOC would assist the DDMA in keeping the plan in updated form and collecting, collating and processing the information.
- l) The DDMP would be comprehensively reviewed in the year 2013 latest by March and incorporating feedback from the departments and field officers.

## **ANNEXURES**

**IMPORTANT TELEPHONE NUMBERS (DISTRICT ADMINISTRATION)**

**STD code No**

Nahan: 01702/ Paonta: 01704/ Rajgarh: 01799/ Shimla: 0177

Sr.No.	Name of Officer	Designation	Telephone No. (Office)	Telephone No. (Residence)	Mobile No.
1.	Shri Vikas Labroo	Deputy Commissioner, Sirmaur	01702-225025	01702-225026	94189-00032
2.	Shri Manmohan Sharma	ADC, Sirmaur	01702-222410	01702-222481	94180-74123
3.	Ms. Deepti Kapoor	AC To DC, Sirmaur	01702-222546	01702-222254	94180-86766
4.	Shri Kewal Sharma	AC To DC, Sirmaur (Leave Reserve)	01702-222546	-	94181-82345
5.	Ms. Jyoti Rana	SDM, Nahan	01702-222239	01702-222548	94180-11225
6.	Shri Shrawn Kumar	SDM, Paonta-Sahib	01704-224100	01704-224200	98169-22009
7.	Shri Satish Kumar	SDM, Rajgarh	01799-221034	01799-221234	94184-56640
8.	Shri Harbans Negi	SDM Sangrah	01702-248004	01702-248002	94180-02996
9.	Shri Shrawn Kumar (Addl. Charge)	SDM, Shillai	--	--	98169-22009
10.	Shri R.D. Hernote	DRO (Addl. Charge)	01702-223387	01702-224113	94180-34580
11.	Shri R.D. Hernote	Tehsildar, Nahan	01702-222320	01702-222320	94180-34580
12.	Shri Dev Raj Bhatia	Tehsildar, Paonta-Sahib	01704-222324	01704-222324	94181-03330
13.	Shri Rajiv Sankhyan	Tehsildar, Shillai	01704-278534	01704-278534	98166-62244
14.	Shri Devi Ram Bhagta	Tehsildar, Rajgarh	01799-221128	01799-221128	94180-03496
15.	Shri Prithvi Singh	Tehsildar, Sangrah	01702-248137	01702-248137	98167-44998
16.	Shri Narender Pal	Tehsildar, Pachhad	01799-236728	01799-236721	94181-23415
17.	Shri Khayali Ram	Tehsildar, Election, Nahan	01702-222620	--	94183-89792
18.	Shri Mohinder Thakur	Naib-Tehsildar, Election, Nahan	01702-222620	--	94184-50014
19.	Shri R.D. Hernote	Tehsildar Recovery,	--	--	94180-34580

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

		Nahan (Addl. Charge)			
20.	Shri Mohi Ram	Naib-Tehsildar, Paonta-Sahib	01704- 222324	--	98166-01647
21.	Shri Jasmer Singh	Naib-Tehsildar, Dadahu	01702- 267358	01702-267358	94184-77468
22.	Shri Rakesh Kumar	Naib-Tehsildar, Kamrau	01704- 271217	01704-271217	98055-25792
23.	Shri Hem Raj	Naib-Tehsildar, Pachhad	01799- 236728	--	94185-11255
24.	Shri Narotam Lal	Naib-Tehsildar, Sangrah	01702- 248137	--	98161-10126
25.	Shri Devender Singh	Naib-Tehsildar, Nohra	01702- 240679	01702-240679	94592-82044
26.	Shri Gulat Ram Mokta	Naib-Tehsildar, Shillai	01704- 278534	--	94180-03837
27.	Shri Satish Negi	Naib-Tehsildar, Ronhat	01704- 276503	01704-276503	88941-77724
28.	Shri Besar Dass Himral	Naib-Tehsildar, Rajgarh	01799- 221128	--	97365-57504
29.	Shri Ravi Chand	Naib-Tehsildar, Nahan	01702- 222320	--	94188-85313
30.	Shri Anuj Kumar	District Planning Officer	01702- 223008	--	94180-65192

	<b>NAME OF OFFICER</b>	<b>DESIGNATION</b>	<b>MOBILE NUMBER</b>
REVENUE	Shri Manmohan Sharma	ADM, Sirmaur	94180 – 74123
	Ms. Jyoti Rana	SDM, Nahan	94180 – 11225
	Shri Shrawn Kumar	SDM, Paonta	98169 - 22009
	Shri Pankaj Sharma	SDM, Rajgarh	94188 - 85883
	Shri Harbans Negi	SDM Sangrah	94180 - 02996
R.D.	Shri Ravinder Sharma	Deputy Director (RD)-cum-P.O. DRDA	94181 – 06565
	Shri Raj Kumar	BDO Nahan	98050 - 84676
	Shri Ravi Kumar Bains	BDO Pachhad	98050 – 50466
	Shri Shiv Ram Azad	BDO Rajgarh	94595 - 57400
	Vacant	BDO Shillai	--
	Shri Rajiv Sood	BDO Sangrah	94180 - 31154
	Shri Lalit Dulta	BDO Paonta	98160 - 24480
HPSEB	Shri Anup Kumar Dhiman	SE, HPSEB	94181 – 63980
	Shri Rajesh Kumar Pathania	XEN, Nahan	94184 – 90714

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

	Shri R.K. Dhiman	XEN, Paonta	94180 – 23840
	Shri M.K. Upreti	XEN, Rajgarh	94180 – 55480
	Shri S.N. Upreti	SE, Generation	94180 – 72904
HP PWD	Shri R.K. Kainth	SE, HP PWD	94180 – 33016
	Shri Ajay Verma	XEN, Nahan	94184 – 88859
	Shri R.S. Chandel	XEN, Paonta	94181 – 27844
	Shri P.C. Dharoch	XEN, Rajgarh	94184 – 82600
	Shri Ajay Kumar Sharma	XEN Rajgarh	94180 - 10550
	Shri V.K. Khanna	XEN, Shillai	94184 - 75125
	Shri Yashpal Kaushal	XEN, Sangrah	94184 - 71964
	Shri Mahesh Singal	XEN, NH	94184 – 58404
	Shri Narender Verma	SDO, NH	94181 – 64166
	Shri Surya Kant	JE, NH	98163 – 55314
	Shri Anil Kumar	JE, NH	94598 - 60306
I & PH	Shri B.R. Sharma	SE, IPH	94184 – 51323
	Shri K.K. Kapoor	XEN, Nahan	94180 -- 54445
	Shri Mahesh Sharma	XEN, Paonta	94180 - 86404
	Shri P.R. Chauhan	XEN, Nohra	94184 – 53169
	Shri Pankaj Sisodia	JE, Central Water Commission at Paonta	098829 --12142
FOREST	Shri R.K. Gupta	CF	94184 – 74111
	Ms. Suveena Thakur	DFO (HQ)	94181 - 39654
	Shri Anjani Kumar	DFO, Nahan	94184 - 55485
	Shri R.K. Puri	DFO, Paonta	94184 - 84987
	Shri Y.P. Garneria	DFO, Rajgarh	94184 - 52645
	Shri Abhilash Damodaran	DFO, Renuka	94180 – 20405
MISC.	Shri Rajender Singh	GM, DIC	94180 --71320
	Shri Khem Singh	DFSC	94184 - 63270
	Shri Suresh Bharadwaj	Mining Officer	94186 - 25341
	Smt. Leela Shyam	Town Planner	94180 – 20888
	Shri Rashid Mohammad Sheikh	RM HRTC	94180 – 00551

## District Disaster Management Plan 2012, Sirmaur (H. P.)

### **MOBILE NUMBERS OF DISTRICT OFFICERS OF SIRMAUR DISTRICT.**

<b>Sr.No.</b>	<b>Name of Officer</b>	<b>Designation</b>	<b>Phone No.</b>
1.	Shri Balbir Thakur, IPS	Superintendent of Police	94180-03310 01702225002
2.	Shri R.K. Kainth	S.E. HPPWD	94180-33016 01702222826
3.	Shri B.R. Sharma	S.E. I & PH	94184-51323
4.	Shri Anup Kumar Dhiman	S.E. HPSEB	94181-63980
5.	Shri R.K. Gupta	C.F.	94184-74111
6.	Dr. Harmohinder Singh	CMO	94180-78745 01702222543
7.	Shri Jagdish Chandel	DA	98177-84797
8.	Shri Ramesh Chand Chauhan	Deputy Director Education	94181-63421
9.	Shri Vijay Kumar Awasthi	Deputy Director Elementary	98165-32584
10.	Shri Man Singh Thakur	PO SSA	94182-47400
11.	Shri Baldev Kanwar	Commandant Home Guards	94180-37855 01702222339
12.	Shri Rajender Singh	GM DIC	94180-71320
13.	Shri Satish Kumar	DTO	94181-96111
14.	Ms. Vandana Chauhan	DPO ICDS	94180-30907
15.	Dr. Sushil Kumar Sharma	DD Horticulture	94186-21223
16.	Shri M.L. Kapoor	PO Himurja	94184-61954
17.	Shri Subodh Ramaul	D Sports O	98161-19191
18.	Shri M.S. Negi	D Panchayat O	94180-92805
19.	Shri B.R. Chauhan	DPRO	98057-12219
20.	Shri R.D. Janartha	AETC	94180-23356
21.	Ms. Leela Shyam	Town Planner	94180-20888
22.	Shri Jitender Bindra	Labour Officer	94181-32734
23.	Shri Pradeep Kumar	A.M. Civil Supplies	94180-11892
24.	Shri Khem Singh	DFSC	89882-00620 94184-63270
25.	Shri Kalyan Singh	Deputy Director AH	94184-77464
26.	Shri Rajender Prashad Agnihotri	District Ayurvedic Officer	94181- 83800
27.	Shri Suresh Sharma	DWO (Addl. Charge)	94187-40244
28.	Shri Jagdish Thakur	DDA	94184-94292
29.	Shri Sushil Kumar	Project Director (ATMA)	94591-11417
30.	Shri Virender Kumar	ARCS	94180-29013
31.	Shri Sunil Kumar	D. Statistical O.	94181-02934
32.	Shri Anil Kumar	DLO	98167-56785
33.	Shri Suresh Bharadwaj	D. Mining. O	94186-25341
34.	Ms. Deepti Kapoor	DD Sainik Welfare (Addl. Charge)	94180-86766

## District Disaster Management Plan 2012, Sirmaur (H. P.)

35.	Shri Sunil Sharma	RTO	94184-60211
36.	Shri S.S. Negi	E.O. M.C. Nahan	94180-16613
37.	Shri Mohi Ram Pundir	GM (ICDP)	94184-63399

### Police station and contact number

Station	Contact no
District control room Nahan	01702222223
PS Paonta Sahib	01704222322
PS Shillai	01704278547
PS Renuka Ji	01702267329
PS Pachad	01799236727
PS Rajgarh	01799221057
PS Kala Amb	01702248201
PS Sadar Nahan	01702222233
PS Shillai	01704278547
PP Rajban	01704166211
PP Singpura	01704248701
CP Behral	NIL
CP Khodri mairi	NIL
PS Rajgarh	01799221057
PS Renuka Ji	01702267329
PP Sangrah	01702248201
PP Naura Dhar	01702240685
PA Booth Haripur Dhar	NIL

District Disaster Management Plan 2012, Sirmaur (H. P.)

S. No	Designation	Office	Office No.	Residence No.	Fax No.	Mail ID
1	Superintending Engineer	12 <sup>th</sup> Circle HP, PWD, Nahan	01702222826	01702224007	01702222581	
2	Executive Engineer	As above	01702222370	01702222344		<a href="mailto:ee-de12-hp@nic.in">ee-de12-hp@nic.in</a>
<b>Shillai Division</b>						
3	Executive Engineer	HP,PWD, Division Shillai	01704278524	01704278501	01704278524	<a href="mailto:ee-shi-hp@nic.in">ee-shi-hp@nic.in</a>
4	Assistant Engineer	Satau sub division, HP, PWD, Sataun	01704262515	01704262515	01704278524	
<b>Nahan Division</b>						
5	Executive Engineer	Division Nahan	01702222260	01702222460	01702222260	<a href="mailto:ee-nah-hp@nic.in">ee-nah-hp@nic.in</a>
6	Assistant Engineer	Sub division Nahan	01702222260		01702222260	
<b>Paonta Division</b>						
7	Executive Engineer	Division Paonta	01704222373	01704222390	01704222373	<a href="mailto:ee-pap-hp@nic.in">ee-pap-hp@nic.in</a>
8	Assistant Engineer	Sub division no.1	01704222373		01704222373	
<b>Rajgarh Division</b>						
9	Executive Engineer	Divission rajgarh	01799221023	01799221021	01799221023	<a href="mailto:ee-raj-hp@nic.in">ee-raj-hp@nic.in</a>
10	Assistant Engineer	Sub division Sarahan	01799236726			
<b>Sangarh</b>						

## District Disaster Management Plan 2012, Sirmaur (H. P.)

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Division						
11	Executive Engineer	Division Sangarh	01702248207	01702248008	01702248207	<a href="mailto:ee-san-hp@nic.in">ee-san-hp@nic.in</a>
12	Assistant Engineer	Sub division Renuka Ji	01702267326			

**Hospital and Health Institutions**

Name of Institution
RH Nahan
RH Nahan
DH Rajgarh
DH Rajgarh
RH Dadhau
RH Dadhau
CH Paonta Sahib
CH Paonta Sahib
ESI Disp.M.Cotton
ESI Ramur Ghat
BMO
CHC Sangrah
PHC Haripurdhar
Shillai Block BMO
Block Sarahan BMO
Rajpura Block, BMO
BMO Dhagera

**Constituency wise consolidated information of Health institution in respect of District Sirmaur HP**

S. No	Name of the constituency	Hospital	C.H.C	P.H.C	H.S.C	ESI Disp.	Total
1	Nahan	1	0	6	30	1	38
2	Paonta	1	1	1	16	2	21
3	Shillai	0	1	7	27	0	35
4	Renuka	1	1	12	38	0	52
5	Pachhad	2	0	10	35	0	47
	<b>Grand Total</b>	<b>5</b>	<b>3</b>	<b>36</b>	<b>145</b>	<b>3</b>	<b>193</b>

**Bed strength in different Health Institutions of District Sirmaur**

<b>Name of the institution</b>	<b>Actual bed</b>
RH Nahan	200
CH Paonta	37
CH Sarahan	30
SDH Rajgrah	50
RH Dadahu	42
CHC Shillai	30
CHC Rajpur	6
CHC Sangrah	6
PHC Narag	10
PHC Dhagera	6
PHC K W Bhood	0
PHC Parara	0
PHC Dhamla	0
PHC Koti Padhog	0
PHC Lana Cheta	0
PHC Haripurdhar	6
PHC Koti Dhiman	0
PHC Jhakhna	0
PHC Majra	0
PHC Kamrow	0
PHC Ghinni	0
PHC Chokar	0
PHC Nohradhar	4

**Telephone numbers of District/Block level officials of Elementary Department**

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

<b>S. No.</b>	<b>Name of Office</b>	<b>Telephone No.</b>	<b>Mobile No.</b>
1	Dy. Director (Ele.Edu)	01702224249	9418027532
2	O.S.D DDEE Nahan	01702224249	9418107051
3	Principal cum P.O.SSA, Nahan	01702222609	9459787489
4	BEEO Nahan	01702223349	9418908166
5	BEEO Surla		9816245927
6	BEEO Majra		9418139285
7	BEEO Paonta Sahib	01704222124	9418127921
8	BEEO Sataun	01704262475	8894681623
9	BEEO Kaffota	01704273475	9418482468
10	BEEO Bakras		9816436830
11	BEEO Shillai	01704278717	9816208038
12	BEEO Dadahu	01702267512	9736641243
13	BEEO Norhadhar		9805161491
14	BEEO Rajgrah	01799220153	9816236607
15	BEEO Narag		9418737500
16	BEEO Sarahan	01799236835	9418550039

**Number of resources**

<b>S.No.</b>	<b>Description</b>	<b>Total</b>
1	Truck	3
2	Tata 407	1
3	Bolero Camper	3
4	Bolero Gypsy	2
5	Alto Car	1
6	Maruti 800 car	1
7	Ladder	
8	Rope	
9	PVC wires for temporary light	

**Helipad/Emergency landing fields**

Sl. No.	Tehsil	Place of Halipad
1	Tehsil Rajgarh	Shalama Johari 3 km away from Tehil HQ, Rajgarh Chowki (Dimber) 18 km away from tehsil HQ, Sanoura (Mauja Bhatol Karganoo) 14 km away from tehsil HQ
2	Sub-Tehsil Dadahu	Dadahu town on the bank of Giri river
3	Tehsil Nahan	Kaulawala Bhood Barmapapri in the nearly river bed
4	Tehsil Paonta Sahib	Majra proper (school ground Majra)
5	Tehsil Nahan	Jaitak
6	Tehsil Pachhad	Sarahan proper (school ground Sarahan)
7	Haripur Dhar	Haripur Dhar proper
8	Tehsil Shillai	Kaffota shillai
9	Pashupati Mills	Kala Amb
10	Ranbaxy	Paonta Sahib

**Block wise list of NGOs**

**Nahan**

- 1) Care, VPO Birla, Contact no. 09418223200
- 2) Uthan, Village Nihog, P.O Banethi, contact no. 01702223503
- 3) Yumdha, near Delhi gate, Nahan, contact no 09418023307
- 4) Urvashi, Village Khaddar ka bag, P.O Shambuwala
- 5) Himalayan Awakening Society (HAS), Amarpur Moh, Nahan
- 6) Himachal Gyan-Vigyan Samiti

**Paonta Sahib**

- 1) Shardha, VPO Kafota, contact no. 01704273358
- 2) Adarsh, VPO Sharli Manpur

**Pachhad**

- 1) Parvatiya Jan Sikhsha Avam Vikas Sangathan, VPO Bag Pashog, contact no. 01799236202
- 2) Hilly Welfare, VPO Narag
- 3) Sirmaur Kissan Sangh, VPO Bikrambag, contact no.9418086515

**Shillai**

- 1) Parvatiya gramin Jan Uthan Samiti
- 2) ASRA, VPO Nainidhar

**Sangrah**

- 1) PAPAN, VPO Andheri, contact no. 01702248242

**Rajgarh**

- 1) ARTI, VPO Rajgarh
- 2) Education Society Vidya Niketan, Rodhi, P.O kotla Bangi Rajgarh, contact no.01799220399

**IMPORTANT CONTACT DETAILS FOR DISASTER RESPONSE**

**DISASTER MANAGEMENT DIVISION, MINISTRY OF HOME AFFAIRS**

**(For reporting of grave disaster and for requisitioning of Army, Air force and NDRF)**

<b>Department of Home</b>		
Address : North Block, Central Secretariat, New Delhi, Delhi, 110001		
Website : <a href="http://mha.nic.in/uniquepage.asp?id_Pk=236">http://mha.nic.in/uniquepage.asp?id_Pk=236</a>		
<b>Shri Anil Goswami</b> (IAS, JK..1978 ) <a href="mailto:hshso@nic.in">hshso@nic.in</a>	Secretary	+91 11 23092989, 23093031 ( Off.) +91 11 23093003 (Fax) +91 11 24103058 (Res.)
<b>Ms. Sneh Lata Kumar</b> (IAS, MP..1979 ) <a href="mailto:secybm@nic.in">secybm@nic.in</a>	Secretary (BM)	+91 11 23092440 ( Off.) +91 11 23092717 (Fax)
<b>Shri Suresh Chandra Panda</b> (IAS, AM..1981 ) <a href="mailto:asfah@nic.in">asfah@nic.in</a>	Additional Secretary & Financial Advisor	+91 11 23094709 ( Off.) +91 11 23093002 (Fax) +91 11 25883425 (Res.)
<b>Shri Sanjay Kumar Mishra</b> (IRS, IT..1984 ) <a href="mailto:jsbm@nic.in">jsbm@nic.in</a>	Joint Secretary (Border Management)	+91 11 23438114 ( Off.) +91 11 23438099 (Fax) +91 11 24103700 (Res.)
<b>Dr. Nirmaljeet Singh Kalsi</b> (IAS, PB..1984 ) <a href="mailto:jsp2-mha@nic.in">jsp2-mha@nic.in</a>	Joint Secretary JS (Police-II)	+91 11 23092478 ( Off.) +91 11 23092051 (Fax) +91 11 24108258 (Res.)
<b>Shri M Gopal Reddy</b> ( IAS, MP..1985 ) <a href="mailto:jsp-mha@nic.in">jsp-mha@nic.in</a>	Joint Secretary (Police-1)	+91 11 23092431 ( Off.) +91 11 23092573 (Fax) +91 11 24310592 (Res.)
<b>Shri Sailesh</b> (IAS, AM..1985 ) <a href="mailto:jsp-mha@nic.in">jsp-mha@nic.in</a>	Joint Secretary (PP)	+91 11 23438096 ( Off.) +91 11 23438098 (Fax)
<b>Shri G. V. Venugopala Sarma</b> (IAS, OR..1986 ) <a href="mailto:jsdm@nic.in">jsdm@nic.in</a>	Joint Secretary (Disaster Management)	+91 11 23438087 ( Off.) +91 11 24677927 (Res.)

**NATIONAL DISASTER MANAGEMENT AUTHORITY**

**(For reporting of grave emergencies and request for specialized response)**

<b>Name</b>	<b>Office</b>	<b>Res.</b>	<b>Mob.</b>	<b>E.mail id</b>
Vice Chairman	26701701			<a href="mailto:vc@ndma.gov.in">vc@ndma.gov.in</a> <a href="mailto:vc.sectt@gmail.com">vc.sectt@gmail.com</a>
OSD	26701704			<a href="mailto:vc.sectt@gmail.com">vc.sectt@gmail.com</a>
Shri. Satya. N. Mohanty, IAS, Secretary	26701710			<a href="mailto:secretary@ndma.gov.in">secretary@ndma.gov.in</a>
Smt. Anita Bhatnagar Jain, IAS, JS (Policy & Plan)	26701816			<a href="mailto:anita.bhatnagar@nic.in">anita.bhatnagar@nic.in</a>
Smt Neena, PPS	26701868			
Smt. Neelkamal Darbari, IAS, JS (Admin)	26701817			<a href="mailto:jsadm@ndma.gov.in">jsadm@ndma.gov.in</a>
Sh. Mushtaq Ahmad, PPS	26701867			
Shri A.K.Sanghi, ITS JS (Mitigation)	011-26701718			<a href="mailto:mitigation@ndma.gov.in">mitigation@ndma.gov.in</a>
Smt. Nirmala, PPS	011-26701720			
Smt. Archana G. Gulati, JS & FA	26701709			<a href="mailto:finadv@ndma.gov.in">finadv@ndma.gov.in</a>
Control Room	26701728,730 Fax-26701729		9868891801 9868101885	<a href="mailto:controlroom@ndma.gov.in">controlroom@ndma.gov.in</a> , <a href="mailto:ndmacontrolroom@gmail.com">ndmacontrolroom@gmail.com</a> ,

**National Disaster Response Force (NDRF)**

Name	Designation	Address	Telephone No.	Fax No.	Mobile No.	E-Mail
Dr. Mahboob Alam (IPS)	Director General	Directorate General , NDRF , Sector-1 R K Puram,New Delhi - 66	011-26712851 011-26161442	011-26715303	09911357888	dg.ndrf@nic.in
Shri Sandeep Rai Rathore (IPS)	Inspector General	-- Do --	011-26160252 011-24106667	011-26105912	09540610101	ig.ndrf@nic.in
Shri Venugopal V.	FA NDRF & CD	-- Do --	011-26160366 011-24677533	011-26105912	09868880247	vgv11@rediffmail.com
Shri.J.K.S.Rawat	Deputy Inspector General (ADM)	-- Do --	011-26105910 011-26260369	011-26105912	09968262466	dig.ndrf@nic.in
Shri R K Srivastava	Second in Command (Operation & Training)	-- Do --	011-26181519	011-26105912	09990572600	dc.ops.ndrf@nic.in srivastava_rks19@yahoo.com
Shri Keshav Kumar	Deputy Commandant (Administration)	-- Do --	011-26107934	011-26105912	09015243611	dc.adm.ndrf@nic.in keshavkumar128@rediffmail.com
Sh. Muneesh Kumar	Deputy Commandant (Procurement)	-- Do --	011-26107921	011-26105912	-	dc.proc.ndrf@nic.in
Shri Anil Shekhawat	AC (Head Quarter) Media Coordinator	--Do--	011-26196370	011-26105912	09868442776	ac.hq.ndrf@nic.in anil.shekhawat@gmail.com
Shri Sudhir Thapa	Inspector Control Room	-- Do --	011-26107953	011-26105912	09711448595	-
Sh.Jaideep Singh	Commandant	7th Bn NDRF, Bibiwala Road, Bhatinda (Punjab) Pin 151001	0164-2246193	0164-2246570	09417802032	comdt.27thbn@itbp.gov.in 7thbnnndrfbathinda@gmail.com

**SNOW & AVALANCHE STUDY ESTABLISHMENT (CHANDIGARH) (DRDO) (0172)**

**(For snow avalanche early warning and related issues)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
<b>A.Ganju</b> Jt. Dir.	2699804-806	2705990	09872083177	2699802
<b>Rajesh Chand Thakur, T.O(B)</b>			09417049754	

**GEOLOGICAL SURVEY OF INDIA**

**(For landslide related issues)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
<b>N.L. Sharma, Director</b> Geological Survey of India Plot No 3 Dakshin Marg Sector 33B Chandigarh - 160020	0172- 2622529 0172- 2621945 (Fax)	0172-2661002		gsichd@sancharnet.in

**INDIAN METEROLOGICAL DEPARTMENT (SHIMLA)**

**(for weather related early warning and data)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
Director	0177-2626211	0177-2626490	9816127668	mm_sandhu@yahoo.co.in
Asstt Meteorologist	0177-2624976	0177-2652408	9418277093	
Caretaker (VOR)	0177-2624976		9418119123	harminder.dutta@imd.gov.in

**CENTRAL WATER COMMISSION (SHIMLA)**

**(For floods/flash floods and early warning thereof)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
<b>Director (M&amp;A)</b> CWC, Block 10, First Floor Commercial Complex, Kasumpti Shimla 171009	0177-2624036 0177-2624224 (Fax)	0177-2625307		
<b>Ex, Engineer, Snow Hydrology Divn</b> CWC, Block 9, First Floor Commercial Complex, Kasumpti Shimla 171009	0177-26230260 0177-2623026 (Fax)	0177-2628247		

**ARMY HQR (EXCHANGE NOS-23010131/23018197)**

**(For requisition of army during disasters)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
DGMO	23011506 E-33170 Fax 23011506	23011506 E-33172		
ADGMO (A)	23011611 E-33174 Fax 23011617	24615208 E-35251		
ADGMO (B)	23014891 E-33176 Fax 23011617	26142269 E-39124		
Dir MO – 6	23018034 E-33220 Fax 23011617		9818106439	
GSO-I MO - 6	23019739 E-33221 Fax 23011617		E-39823 9810431696	
DirOL – 2	23335218 23018530 E-35221	23339055		

**ARMY TRAINING COMMAND, SHIMLA**

**(For Army assistance)**

Name	Designation	Contact No.	Address
Army Exchange		0177 2804590 to 2804592	Shimla - 3

**AIR HQR (EXCHANGE NO-23010231)**

**(For requisition of Air force in disasters)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
ACAS (Ops)	23014424 23010231/7528 Fax 23017627	24672974	9871213393	
PD Ops (Off) (T&H)	23110231/7559	24642195	9871097909	

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	23016354 Fax 23016354			
Dir Ops (T)	23010231/7545 2305857	23098030		
Dir Ops (H)	23010231/7551 Fax 23016354	25674906		
JD Ops (LS)	23010231/7546 Fax 23016354		9818220586	
JD Ops (H)	13010231/7552 Fax 23792973		9868468583	

**CIVIL MILITARY LIASON FOR DISASTER RELIEF OPERATION (AIR)**  
**CONTACT DETAILS OF AIR FORCE STATION SARSAWA, SAHARANPUR, UTTAR PRADESH**  
**(For Requisition and Deployment of Helicopters in Disasters)**

Name	Designation	Contact No.	Address
Mr. Bhanu Johri	Group Captain and Station Incharge	Tel No. 01331 244919-207 Fax No. 01331 - 244822	AF Stn, Sarsawa Saharanpur (UP), PIN - 247232
Mr. Vineet Sharma	Wing Commander, Chief Operations Officer	As Above Cell No. + 91 7599342240	As Above

**CENTRAL CRISIS GROUP**

**(National Level)**

**(For industrial and chemical disasters)**

Name of Officer/Designation and Location of Deployment	Tel(Office)	Tel(Residence)	Mobile No.	Email id
<b>Sh. Vijai Sharma,</b> <b>Secretary,</b> Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi-110003.	011-24361896 011-24360721 011-24360721 (Fax)	011- 26883988		Vijay.sharma@nic.in
<b>Sh. Rajiv Gauba,</b> <b>Joint Secretary,</b> Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi-110003.	011-24360634 011-24363577 (Fax)	0177- 26192110	098713746 60	

**All India Radio**

**(For broadcasting services)**

Name	Designation	Contact No.	Address
Mr. T K Tawal	Station Director	0177 2801899 (Office); Residence - 2831281 Fax 0177 2801899; email – <a href="mailto:airshimla@yahoo.com">airshimla@yahoo.com</a>	Ambedkar Chowk, Shimla - 4
Mr. Devinder Mahindru	Programme Executive	0177 2563038 – O; 0177 2831748	As Above

**HQ, CE (P) DEEPAK,**

**(For Boarder Roads)**

Name	Designation	Contact No.	Address
Mr. IR Mathur	Chief Engineer	0177 2830986 (Office); Residence – 2831850	Minto Court, Shimla - 4
Col. SS Pathania	-	0177 2633602 – O; 0177 2831748	As Above

**INDO-TIBETAN BORDER POLICE, TARADEVI, SHIMLA - 10**

**(For Requisition and Deployment in Disasters)**

Name	Designation	Contact No.	Address
Sh. A S Chawla	DIG	0177 2830601 (O); 2830602 (Resi) Email – <a href="mailto:dighpitbp@sancharnet.in">dighpitbp@sancharnet.in</a>	Taradevi, Shimla - 10
	Staff Officer ADM to DIG	0177 2831010 (O), 2830604	As Above

**BHARAT SANCHAR NIGAM LIMITED, HP CIRCLE SHIMLA - 10**

**(For communication related issues)**

Name	Designation	Contact No.	Address
Mr. Rakesh Kapoor	Chief General Manager	0177 2620220 (O); 2625325 (Fax)	SDA Complex, Kasumpti
Mr. A V Chaturvedi	General Manager, Mobiles	0177 2673999 (O), 2673923 (Fax)	As Above
Mr. Prem Singh	General Manager, Telecom	0177 2800666 (O); 2800777 (Fax)	

**INDIAN OIL CORPORATION**

**(For POL and LPG)**

Name	Designation	Contact No.	Address
Mr. Piyush Mittal	Divisional Manager Sales	0177 2625768 (O); 2621706 2623158 (Fax)	Block No. 21, SDA Complex, Shimla.
Mr. Mukesh Kumar	Manager, LPG	0177 2623133 (O), 2671350 (R)	As Above
Mr. Rajan Berry	Deputy Manager Sales	0177 2625363 (O)	As Above

**CENTRAL PUBLIC WORKS DEPARTMENT**

**(For road clearance, machinery and manpower)**

Name	Designation	Contact No.	Address
Mr. Gurba Singh	SE	0177 2657531 (O); 2804696 (R), Cell - 9418004466 2652476 (Fax); email – <a href="mailto:sescshimla@yaoo.com">sescshimla@yaoo.com</a>	CPWD, Kennedy Cottage, Shimla - 4
Mr. J K Goel	XEN Planning	0177 2658131 (O), Cell - 09318050506	As Above
Mr. M P Singh	XEN	0177 2652830 (O), 2652412 (R)	As Above

**Equipment/ Machinery with (Home Guards)**

The Himachal Pradesh home guards too have been putting their concentrated efforts to fight any eventuality in the form of disaster, They too have submitted their inventory list with the administration, which includes searchlights , extension ladders, first aid boxes, crowbars, blankets etc.,

In the event of Disaster, it is to be ascertained that to lives and properties could be kept at minimum by administering the feasible measures and for the very purpose is this Disaster management plan.

**FLOW CHART FOR DISPOSAL OF DEAD BODIES AT DISTRICT LEVEL**

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 Defence, 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. Handing over and transportation of such bodies shall take place through the Ministry of Extern 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.

## **GUIDELINES FOR DISPOSAL OF ANIMAL CARCASSES**

### **1. Guidelines for Burial**

- 1.1. Burial shall be performed in the most remote area possible.
- 1.2. Burial areas shall be located a minimum of 300 feet down gradient from wells, springs and other water sources.
- 1.3. 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.
- 1.4. The bottom of the pit or trench should be minimum 4 to 6 feet above the water table.
- 1.5. 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.
- 1.6. 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.
- 1.7. 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.
- 1.8. Burial areas shall be inspected regularly and any subsidence or cavities filled.

### **2. Guidelines for Composting**

- 2.1 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.
- 2.2 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.
- 2.3 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.

- 2.4 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.
- 2.5 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.
- 2.6 Let it sit for 4 to 6 months, then check to see if carcass is fully degraded.
- 2.7 Reuse the composted material for carcass compost pile, or remove large bones and land apply.
- 2.8 Site cleanliness is the most important aspect of composting; it deters scavengers, and helps control odours and keeps good neighborly relations.

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

**Reference:** USDA Natural Resource Conservation Service, Arkansas Livestock and Poultry Commission, University of Arkansas.

#### **LOW CHRT FOR DISPOSAL OF ANIMAL CARCASSES AT DISTRICT LEVEL**

- a. Activate the DM Plan.
- b. Nodal Officer in the Incident Response System will activate all other stakeholders associated with the disposal of Animal Carcasses.
- c. Establish an Information Centre at the site of Disaster/District HQ.
- d. Inform all other Stake-holders, both in government and Non-Governmental sector, including the elected, Panchayati Raj functionaries and the community.
- e. Activate Animal Carcass Retrieval teams for the recovery and retrieval of the injured livestock and the animal carcasses.
- f. Injured livestock will get the priority for First Aid and evacuation to hospital.
- g. Prepare a record of details of the animal carcasses retrieved.
- h. Associate owners of the livestock, or their relatives and community members for the identification of the animal carcasses.
- i. Hand over the identified animal carcasses to the owners for disposal at the selected site.

- j. All unidentified animal carcasses will be photographed preferably before transportation for disposal.
- k. Unidentified or unclaimed animal carcasses shall be transported to the designated site for disposal by District authorities as per the Disaster Plan.

## **DISTRICT DISASTER MANAGEMENT AUTHORITY SIRMAUR, HP.**

### **Emergency Support Functions (ESFs) Plan at District Level**

In the aftermath of an emergency situation wherein District Administration's overall coordination is needed the command, control and coordination will be carried out under the ESFs Plan. District EOC shall activate the ESFs and the concerned Department/Agency of each ESFs shall identify requirements in consultation with their counterparts in affected districts, mobilize and deploy resources to the affected areas of the district. The District EOC shall maintain a close link with the State EOC.

#### **ESFs shall be responsible for the following:**

1. The designated authorities for each of ESF shall constitute quick response teams and assign the specific task to each of the member.
2. The designated authorities for each of the ESF shall identify and earmark the resources i.e. Manpower and materials to be mobilized during the crisis.
3. An inventory of all the resources with details shall be maintained by each of the designated authority for each of the ESF.
4. The designated authority for each of the ESF will also enter into pre-contracts for supply of resources, both goods and services to meet the emergency requirements.
5. The designated authority for each of the ESF will be delegated with adequate administrative, legal and financial powers for undertaking the tasks assigned to them.

#### **Primary and Secondary Agencies**

The designated primary agency, acting as the State agency shall be assisted by one or more support agencies (secondary agencies) and shall be responsible for managing the activities

of the ESF and assisting the district in the rescue and relief activities and ensuring that the mission is accomplished. The primary and secondary agencies have the authority to execute response operations to directly support the needs of the affected districts.

**Agency for each Emergency Support Functions & Roles to be performed**

ESF No.	ESF	Primary Agency	Secondary Agency	Responsibilities of Primary Agency	Activities for Response	Role of Secondary Agency
1.	Communication	BSNL	Police  Units of Armed Forces in the area	Coordination of national actions to assure the provision of telecommunication support the state and district;  Coordinate the requirement of temporary telecommunication in the affected areas.	Responsible for coordination of national actions to assure the provision of telecommunication support the state and district response elements;  Coordinate the requirement of temporary telecommunication in the affected areas.	Make available police wireless network at the affected locations;  Coordinate for the other networks available such as Ham Radios or HPSEB network etc.;;  The units of armed forces in the area would provide communication network on the request of the competent authority.
2	Public Health	Department of Health and Family Welfare (CMO/MS ZH)	Department of Ayurveda (DAMO)	To coordinate, direct and integrate State level response;  Direct activation of medical personnel, supplies and equipment;  Coordinate the evacuation of patients;  Provide human services under the Dept of health;  To prepare and keep ready Mobile Hospitals and stock;  To network with private health service providers;	Provide systematic approach to patient care;  Perform medical evaluation and treatment as needed;  Maintain patient tracking system to keep record of all patients treated;  Mobilization of the private health services providers for emergency response.  In the event of CNBR disaster to provide for mass decontamination of the	To perform the same functions as assigned to the primary agency;  Provide manpower to the primary agency wherever available and needed;  Make available its resources to the primary agency wherever needed and available.

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				<p>To provide for mass decontamination;</p> <p>Check stocks of equipment and drugs.</p>	<p>affected population;</p> <p>Maintain record of dead and arrange for their post mortem.</p>	
3.	Sanitation/ Sewerage Disposal	Urban Development and Rural Development	Irrigation and Public Health	<p>Make arrangement for proposal disposal of waste in their respective areas;</p> <p>Arrange adequate material and manpower to maintain cleanliness and hygiene.</p>	<p>Ensure cleanliness and hygiene in their respective areas;</p> <p>To arrange for the disposal of unclaimed bodies and keeping record thereof;</p> <p>Hygiene promotion with the availability of mobile toilets;</p> <p>To dispose off the carcass.</p>	<p>Repair the sewer leakages immediately;</p> <p>Provide bleaching powder to the primary agencies to check maintain sanitation.</p>
4.	Power	HPSEB Ltd. (SE/XEN)	Himurja	<p>Provide and coordinate State support until the local authorities are prepared to handle all power related problems;</p> <p>Identify requirements of external equipment required such as DG sets etc;</p> <p>Assess damage for national assistance.</p>	<p>Support to Local Administration;</p> <p>Review the total extent of damage to the power supply installations by a reconnaissance survey;</p> <p>To provide alternative means of power supply for emergency purposes;</p> <p>Dispatch emergency repair teams equipped with tools,</p>	<p>Make arrangement for and to provide the alternativesources of lighting and heating to the affected populations and for the relief camps.</p>

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					tents and food; Hire casual labour for the clearing of damaged poles etc.	
5.	Transport	Department of Transport (RTO)	HRTC, Civil Aviation. (RM, HRTC, DTDO)	Overall coordination of the requirement of transport; Make an inventory of vehicles available for various purposes; Coordinate and implement emergency related response and recovery functions, search and rescue and damage assessment.	Coordinate arrangement of vehicles for transportation of relief supplies from helipads/airports to the designated places; Coordinate arrangement of vehicles for transportation of SAR related activities.	Make available its fleet for the purpose of SAR, transportation of supplies, victims etc; Act as stocking place for fuel for emergency operations; Making available cranes to the Distt. Administration; To coordinate for helicopter services etc. required for transportation of injured, SAR team, relief and emergency supplies.
6.	Search and Rescue	Civil Defence, Home Guards, Fire and Emergency Services (Commandant HG)	SDRF, Armed and Para military forces, Police, Red Cross, VOs, Volunteers and 108.	Establish, maintain and manage state search and rescue response system; Coordinate search and rescue logistics during field operations; Provide status reports of SAR updates throughout the affected areas.	GIS is used to make an estimate of the damage area and the deployment of the SAR team in the area according to the priority; Discharge all ambulatory patients for the first aid which has the least danger to health and others transported to safer areas.	108 and Red Cross to make available ambulances as per requirement; SDRF, VOs and Volunteers to assist the primary agency in SAR; Armed and para military forces to provide assistance to civil authorities on demand; Police to arrange for the transportation and postmortem

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						of the dead.
7.	Public Works and Engineering	HP PWD (SE/XEN)	CPWD, National Highways Authority of India, MES, BRO	<p>Emergency clearing of debris to enable reconnaissance;</p> <p>Clearing of roads;</p> <p>Assemble casual labour;</p> <p>Provide a work team carrying emergency tool kits, depending on the nature of disaster, essential equipment such as</p> <ul style="list-style-type: none"> <li>• Towing vehicles</li> <li>• Earth moving equipments</li> <li>• Cranes etc.</li> </ul> <p>Construct temporary roads;</p> <p>Keep national and other main highways clear from disaster effects such as debris etc.;</p> <p>Networking with private services providers for supply of earth moving equipments etc.</p>	<p>Establish a priority list of roads which will be opened first;</p> <p>Constructing major temporary shelters;</p> <p>Connecting locations of transit/relief camps;</p> <p>Adequate road signs should be installed to guide and assist the relief work;</p> <p>Clearing the roads connecting helipads and airports;</p> <p>Restoring the helipads and making them functional;</p> <p>Rope in the services of private service providers and secondary services if the department is unable to bear the load of work.</p>	<p>Making machinery and manpower available to the PWD and to keep national highways and other facilities in functional state.</p>

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8.	Information and Communication	District Collectorate (AC/ADM)	Department of IT/NIC  (DIO, NIC)	<p>Operate a Disaster Welfare Information (DWI) System to collect, receive, and report and status of victims and assist family reunification;</p> <p>Apply GIS to speed other facilities of relief and search and rescue;</p> <p>Enable local authorities to establish contact with the state authorities;</p> <p>Coordinate planning procedures between district, the state and the centre;</p> <p>Provide ready formats for all reporting procedures as a standby.</p>	<p>Documentation of response/ relief and recovery measures;</p> <p>Situation reports to be prepared and completed every 3-4 hours.</p>	Render necessary assistance in terms of resources, expertise to the primary agency in performing the assigned task.
9.	Relief Supplies	Collectorate (AC/ADM)	Department of Food and Civil Supplies  (DFSC, AM CSC)	<p>To collect, process and disseminate information about an actual or potential disaster situation to facilitate the overall activities of all responders in providing assistance to an affected area in consultation;</p> <p>Coordinate activities involved with the emergency</p>	<p>Support to Local Administration;</p> <p>Allocate and specify type of requirements depending on need;</p> <p>Organize donation (material) for easy distribution before entering disaster site.</p>	<p>To assist the primary agency in arranging and supplying relief supplies;</p> <p>To assist the primary agency in running the relief camps.</p>

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				<p>provisions;</p> <p>Temporary shelters;</p> <p>Emergency mass feeding;</p> <p>To coordinate bulk distribution of emergency supplies;</p> <p>To provide logistical and resource support to local entities;</p> <p>In some instances, services also may be provided to disaster workers;</p> <p>To coordinate damage assessment and post disaster needs assessment.</p>		
10.	Food & Supplies	Department of Food and Public Distribution (DFSC)	Department of Cooperation (ARCS)	<p>Requirement of food and clothing for affected population;</p> <p>Control the quality and quantity of food, clothing and basic medicines;</p> <p>Ensure the timely distribution of food and clothing to the people;</p>	<p>Make emergency food and clothing supplies available to population;</p> <p>Ensure the provision of specific nutrients and supplementary diet for the lactating, pregnant women and infants.</p>	<p>Ensuring the distribution of food supplies to the affected population through the PDS network etc.</p>

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				Ensure that all food that is distributed is fit for human consumption.		
11.	Drinking water	Department of I & PH (SE/XEN)	Department of Urban Development (Secretary SADA)	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.	Support to local Administration;  Water purification installation with halogen tablets etc.	To assist the primary agency wherever ULB is associated in the distribution of potable water.
12.	Shelter	Collectorate (AC/ADM)	HIMUDA, HP PWD, UD and Panchayati Raj	Provide adequate and appropriate shelter to all population;  Quick assessment and identifying the area for the establishment of the relief camps;  Identification of public buildings as possible shelters;  Identifying the population which can be provided with support in their own place and need not be shifted	Support to Local Administration;  Locate adequate relief camps based on survey of damaged houses;  Develop alternative arrangements for population living in structures that might be affected even after the disaster.	HIMUDA and HP PWD would assist the primary agency in establishing temporary shelters of larger dimensions;  Department of Panchayati Raj through local Panchayats would assist the primary agency in establishing shelters of smaller dimensions.

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				<p>reallocated;</p> <p>Locate relief camps close to open traffic and transport links.</p>		
13.	Media	Department of Public Relations (DPRO)	Local DD and AIR	<p>To Provide and collect reliable information on the status of the disaster and disaster victims for effective coordination of relief work at state level;</p> <p>Not to intrude on the privacy of individuals and families while collecting information;</p> <p>Coordinate with DOCs at the airport and railways for required information for international and national relief workers;</p> <p>Acquire accurate scientific information from the ministry of Science and Technology;</p> <p>Coordinate with all TV and radio networks to send news flashes for specific needs of Donation;</p> <p>Respect the socio-cultural and</p>	<p>Use and place geographical Information to guide people towards relief operation;</p> <p>Use appropriate means of disseminating information to victims of affected area;</p> <p>Curb the spread of rumours;</p> <p>Disseminate instructions to all stakeholders.</p>	To assist the primary agency in discharge of its role.

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				emotional state of the disaster victims while collecting information for dissemination.		
14.	Help lines	Collectorate (AC/ADM)	Department of Public Relations	<p>To receive distress calls from the affected people and coordinate with the control room;</p> <p>To facilitate the optimization of donations received in kind;</p> <p>Co-ordinate, collect, process, report and display essential elements of information and to facilitate support for planning efforts in response operations;</p> <p>Co-ordinate pre-planned and event-specific aerial reconnaissance operations to assess the overall disaster situation;</p> <p>Pre-positioning assessment teams headed by the State coordinating officer and deployment of other advance elements;</p> <p>Emergency clearing of debris to enable reconnaissance of</p>	<p>One of the most critical needs will be having a simplified way of identifying and tracking victims and providing assistance;</p> <p>Identify locations for setting up transit and relief camps, feeding centres and setting up of the Help lines at the nodal points in the state and providing the people the information about the numbers.</p>	To assist the primary agency in performing its job effectively and provide its manpower and resources for the purpose.

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				the damaged areas and passage of emergency personnel and equipment for life saving property protection and health and safety.		
15.	Animal Care	Department of Animal Husbandry (ADAH)	Department of Panchayati Raj (DPO)	Treatment of animals; Provision of vaccination; Disposal of dead animals.	To arrange for timely care and treatment of animals in distress; Removal of dead animals to avoid outbreak of epidemics.	To assist the primary agency in performing its role.
16.	Law and Order	Police (SP)	Home Guards (Commandant Home Guards)	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.	To maintain law and order; To take measure against looting and rioting;  To ensure the safety and security of relief workers and material; To take specific measure for the protection of weaker and vulnerable sections of the society;  To provide safety and security at relief camps and temporary shelters.	To assist the primary agency by making available manpower.
17.	Removal of trees and fuel wood	Forest (DFO)	Forest Corporation (AMFC)	Removal of fallen trees;  To provide fuel wood for the relief camps and public;	Arrange for timely removal of trees obstructing the movement of traffic; Arrange for timely removal of	To support and supplement the efforts of the primary agency.

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				<p>Have adequate storage of fuel wood and make arrangement for distribution thereof;</p> <p>To provide fuel wood for cremation.</p>	<p>tress which have become dangerous;</p> <p>Make arrangement for fuel wood for the relief camps and for general public;</p> <p>Provide fuel wood for mass cremation etc.</p>	
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# **STANDARD OPERATING PROCEDURES**

**FOR PERFORMING ESF**

**BY**

**VARIOUS DEPARTMENTS**

**OPERATING PROCEDURE GUIDELINES  
FOR  
FOREST DEPARTMENT**

**Planning Assumptions**

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- The department is required adopt appropriate measures to ensure that community participates substantially.
- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – FOREST” at district level.

***Action Plan Objective in a Disaster Situation***

- Forest protection

***Activities on Receipt of Warning or Activation of District DMAP (DDMAP)***

- Within the affected district all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officer or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager.
- Establish communications with District control room and your departmental offices within the division.
- Appoint one officer as “NODAL OFFICER – Forest” at district level.

- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Fill departmental vehicles with fuel and park them in a protected area.
- Check available stocks of equipments and materials which are likely to be most needed after disaster.
- Provide information to all concerned, about disasters, likely damages, and information about ways to protect the same.
- All valuable equipments and instruments should be packed in protective covering and stored in room the most damage-proof.
- Establish work schedules to ensure that the adequate staff are available

### ***Relief and Rehabilitation***

- Assess the extent of damage to forests, nurseries and storage facilities and the requirements to salvage or replantation
- Establish contact with remote sensing department to assess damage
- Afforestation measures should be coordinated with DRDA to ensure employment assurance to disaster hit people, with Soil Conservation Officer to ensure stabilization of slopes and district control room.
- Ensure that the adequate conditions through cleaning operations are maintained to avoid water-logging and salinity in low lying areas.
- A pests and disease monitoring system should be developed to ensure that a full picture of risks is maintained.
- Plan for emergency accommodations for forest staff from outside the area.
- Information formats and monitoring checklists should be used for programme monitoring and development and for reporting to DCR. This is in addition to existing reporting system in the department.
- Establishment of a public information center with a means of communication, to assist in providing an organized source of information. The department is responsible for keeping the community informed of its potential and limitations in disaster situations.
- The NGOs and other relief organizations should be aware of the resources of the department.
- Ensure availability of fuel and fodder for disaster effected people.

**OPERATING PROCEDURE GUIDELINES**

**FOR POLICE DEPARTMENT**

***Planning Assumptions***

- For effective preparedness the need is for the disaster response procedures to be clearly defined.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercises will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – Police” at the district level.

***NORMAL TIME ACTIVITY***

- Assess preparedness level and report the same as per the format to District Control Room every six months
- Maintain a list of disaster prone areas in the district
- Organise training on hazardous chemicals for police officers to facilitate handling of road accidents involving hazardous materials
- Designate an area, within police station to be used as public information center

***Action Plan Objective in a Disaster Situation***

- Maintain Law and order

***Activities On Receipt of Warning or Activation of DDMAP***

- Within the district, all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officers or those on leave may be recalled.
- All personnel required for disaster management should work under the overall supervision and guidance of District Disaster Manager.
- Establish radio communications (and assist in precautionary evacuation activities) with
  - State Emergency Operations Center
  - District control room
  - Departmental offices
- All district level officials of the department would be asked to report to the DDM.

- Appoint one officer as “Officer-in-Charge – Police” at the district level
- The DDM shall provide “Officer-in-Charge - Police” or the field staff as the need be, with all needed authorizations with respect to
  - Recruiting casual labourers.
  - Procuring locally needed emergency tools and equipment and needed materials.
  - Expending funds for emergency needs.
- The “Officer-in-Charge - Police” will ensure that all field staff and other officers submit the necessary reports and statement of expenditure in a format as required by DDM
- Provide guards as needed for supply depots such as cooperative food stores and distribution centers.
- Identify anti-social elements and take necessary precautionary measures for confidence building.

#### ***Evacuation***

- All evacuations will be ordered only by the DC, SP, Fire Brigade.
- For appropriate security and law and order, evacuation should be undertaken with assistance from community leaders.
- All evacuations should be reported to DC or District Superintendent of Police immediately.

#### ***Relief and Rehabilitation***

- Immediately after the disaster, dispatch officers to systematically identify and assist people and communities in life threatening situations.
- Help identify the seriously injured people, and assist the community in organizing emergency transport of seriously injured to medical treatment centers.
- Ensure that the police stations are functioning immediately after the disaster at all required locations, as may be requested by the district control room, and that staff are available for the variety of needs that will be presented.
- Assist and encourage the community in road-clearing operations.
- Identify roads to be made one-way, to be blocked, alternate routes, overall traffic management and patrolling on all highways, and other access roads to disaster site.

- Provide Security in transit and relief camps, affected villages, hospitals and medical centers and identify areas to be cordoned off.
- Transport carrying transit passengers (that is, passengers traveling through buses and passing through the district), should be diverted away from the disaster area.
- Provide security arrangements for visiting VVIPs and VIPs.
- Assist district authorities to take necessary action against hoarders, black marketers and those found manipulating relief material.
- In conjunction with other government offices, activate a public information center to:
  - Respond to personal inquiries about the safety of relatives in the affected areas
  - Compile statistics about affected communities, deaths, complaints and needs
  - Respond to the many specific needs that will be presented
  - Serve as a rumor control center
  - Reassure the public
- Make officers available to inquire into and record deaths, as there is not likely to be time nor personnel available, to carry out standard postmortem procedures.
- Monitor the needs and welfare of people sheltered in relief camps.
- Coordinate with military service personnel in the area.

**OPERATING PROCEDURE GUIDELINES  
FOR HEALTH DEPARTMENT**

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- For effective preparedness, the department must have disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures, accompanied by simulated exercises, will keep the department prepared for such eventualities. Special skills required during disaster situations need to be imparted to the officials and the staff.
- Select personnel can be deputed for training as “NODAL OFFICER”.

***ACTION PLAN OBJECTIVE IN A DISASTER SITUATION***

- Providing efficient and quick treatment
- Preventing outbreak of epidemics.

***ACTIVITIES ON RECEIPT OF WARNING OR ACTIVATION OF DDMAP***

- Within the affected district all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officers or those on leave may be recalled.
- All personnel required for disaster management should work under the overall supervision and guidance of District Disaster Manager.
- Ensure that personnel working within the district come under the direction and control of the DDM.
- Appoint one person as “NODAL OFFICER”.
- Review and update precautionary measures and procedures, and review with staff, the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Stock emergency medical equipment which may be required after a disaster.
- Determine type of injuries/illnesses expected and drugs and other medical items required, and accordingly ensure that extra supplies of medical items be obtained quickly.
- Provide information to all hospital staff about the disasters, likely damages and effects, and information about ways to protect life, equipment and property.
- Discharge all ambulatory patients whose release does not pose a health risk to them. If possible, they should be transported to their home areas.
- Non-ambulatory patients should be relocated to the safest areas within the hospital. The safest rooms are likely to be:
  - On Ground Floor
  - Rooms in the center of the building away from windows
  - Rooms with concrete ceilings.
- Equipment supplies such as candles, matches, lanterns and extra clothing should be provide for the comfort of the patients.
- Surgical packs should be assembled and sterilized. A large enough number should be sterilized to last four to five days. The sterilized surgical packs must be stored in protective cabinets to ensure that they do not get wet. Covering the stock with polythene is recommended as an added safety measure.

- All valuable instruments, such as surgical tools, ophthalmoscopes, portable sterilizers, CGS, dental equipments, etc., should be packed in protective coverings and store rooms considered to be the most damage-proof.
- Protect all immovable equipment, such as x-ray machines, by covering them with tarpaulins or polythene.
- All electrical equipments should be unplugged when disaster warning is received.
- Check the emergency electrical generator to ensure that it is operational and that a buffer stock of fuel exists. If an emergency generator is not available at the hospital, arrange for one on loan.
- All fracture equipment should be readied.
- If surgery is to be performed following the disaster, arrange for emergency supplies of anesthetic gases.
- Check stocks of equipments and drugs which are likely to be most needed after the disaster. These can be categorized generally as:
  - Drug used in treatment of cuts and fractures, such as tetanus toxoid, analgesics and antibiotics.
  - Drugs used for the treatment of diarrhea, water-borne diseases and flu (including oral rehydrating supplies).
  - Drugs required to treat burns and fight infections.
  - Drugs needed for detoxication including breathing equipments.
- Assess the level of medical supplies in stock, including :
  - Fissure materials
  - Surgical dressings
  - Splints
  - Plaster rolls
  - Disposable needles and syringes
  - Local antiseptics.
- Prepare an area of the hospital for receiving large number of casualties.
- Develop emergency admission procedures (With adequate record keeping).
- Orient field staff with DDMAP, standards of services, procedures including tagging.
- Hospital administrators should
  - Establish work schedules to ensure that adequate staff are available for in-patient needs.

- Organise in-house emergency medical teams to ensure that adequate staff are available at all times to handle emergency casualties.
- Set up teams of doctors, nurses and dressers for visiting disaster sites.

#### **RELIEF AND REHABILITATION**

- Transport should be arranged for the transfer of seriously injured patients from villages and peripheral hospitals to general hospitals. If roads are blocked, a method should be established to request helicopter transport.
- Establish health facility and treatment centres at disaster sites.
- The provision of medical services should be coordinated by the CMO with district control room.
- Procedures should be clarified between
  - Peripheral hospitals
  - Private hospitals
  - Blood banks
  - General hospitals and
  - Health services established at transit camps, relief camps and affected villages.
- Maintain checkpoints and surveillance at Transport depots and all entry and exit points from the affected area, especially during the threat or existence of an epidemic.
- An injury and disease monitoring system should be developed to ensure that a full picture of health risks is maintained.
- Monitoring should be carried out for epidemics, water and food quality and disposal of waste in transit and relief camps, feedings centers and affected villages.
- Plan for emergency accommodations for auxiliary staff from outside the area.
- Information formats and monitoring checklists should be used for programme monitoring and development and for reporting to Emergency Operations Center. This is in addition to existing reporting system in the department.
- Seek security arrangements from district police authorities to keep curious persons from entering hospital area and to protect staff from hostile actions.
- Establishment of a public information center with a means of communication to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations in disaster situations.
- The Local Police, rescue groups, and ambulance teams should be aware of the resources of each hospital.

### **STANDARDS OF SERVICE**

#### **Tagging**

Tagging is the process of prioritizing transfer of injured, based on first hand assessment of the medical officer on the disaster site. It is based on the medical criterion of chance of survival. Decision is made regarding cases which can wait for treatment, these which should be taken to more appropriate medical units, and these which have no chances of surviving. The grouping is based on the benefit that the casualties can expect to derive from medical care, not on the seriousness of the injuries.

Whenever possible, the identification of patients should be accomplished concurrently with triage. This is done by attaching a tag to each patient, usually color-coded to indicate a given degree of injury and the priority for evacuation.

#### **Red Tag**

This tag signifies that the patient has a first priority for evacuation. Red-tagged patients need immediate care and fall into one of the following categories:

- 1 Breathing problems that cannot be treated at the site.
- 2 Cardiac arrest (witnessed).
- 3 Appreciable loss of blood (more than a litre).
- 4 Loss of consciousness.
- 5 Thoracic perforations or deep abdominal injuries.
- 6 Certain serious fractures:
  - a. Pelvis
  - b. Thorax
  - c. Fractures of cervical vertebrae
  - d. Fractures or dislocations in which no pulse can be detected below the site of the fracture or dislocation
  - e. Severe concussion.
  - f. Burns (Complicated by injury to the air passages)

#### **Green Tag**

This tag identifies those patients who receive second priority for evacuation. Such patients need care, but the injuries are not life-threatening. They fall into the following categories:

1. Second-degree burns covering more than 30 percent of the body.
2. Third-degree burns covering 10 percent of the body.
3. Burns complicated by major lesions to soft tissue or minor fractures.
4. Third –degree burns involving such critical areas as hands, factor face but with no breathing problems present.
5. Moderate loss of blood \*(500-1000cc)
6. Dorsal lesions, with or without injury to the spinal column.
7. Conscious patients with significant craniocerebral damage (serious enough to cause a subdural hematoma or mental confusion). Such patients will show one of the following signs:
  - a. Secretion of spinal fluid through ear or nose
  - b. Rapid increase in systolic pressure
  - c. Projective vomiting
  - d. Change in respiratory frequency
  - e. Pulse below 60ppm
  - f. Swelling or bruising beneath the eyes
  - g. Anisocoric pupils
  - h. Collapse
  - i. Weak or no motor response
  - j. Weak reaction to sensory stimulation (Profound stupor)

### **Yellow Tag**

Used on patients who are given third priority for evacuation and who fall into the following categories:

1. Minor Lesions
2. Minor fractures (fingers, teeth, etc).
3. Other minor lesions, abrasions, contusions.
4. Minor burns:
  - Second-degree burns covering less than 15% of the body
  - Third degree burns covering less than 2% of the body surface
  - First-degree burns covering less than 20% of the body, excluding hands, feet, and face.
5. Fatal Injuries

- Second and third-degree with burns over more than 40 percent of the body with death seeming reasonably certain.
- Second and third-degree burns over more than 40% of the body with other major lesions, as well as major cranio-cerebral lesions etc.
- Cranial lesions with brain tissue exposed and the patient unconscious.
  - Cranio-cerebral lesions where the patient unconscious and has major fractures.
  - Lesions of the spinal column with absence of sensitivity and movement.
  - Patients over 60 years old with major lesions.

It should be noted that the line separating these patients from red-tag casualties is very tenuous. If there are any red-tag patients, this system will have to be followed. If there are none, the yellow-tag patients with apparently fatal injuries become red-tag candidates. The reason is simple: If there are many red-tag patients who apparently cannot be saved because of their injuries, the time spent on the dying wounded could be better spent on the patients with chance to survive.

#### **Black Tag**

Black tags are placed on the dead, i.e. casualties without a pulse or respiration who have remained in that condition for over 20 minutes, or whose injuries render resuscitation procedures impossible.

#### **Evacuation Procedure under the following conditions**

- 1) Casualties not trapped or buried. Evacuate in the following order:
  - a. Red-tag casualties.
  - b. Green-Tag casualties.
  - c. Yellow-Tag casualties.
  
- 2) Casualties not trapped or buried. Evacuate in the following order:
  - a. Red-tag casualties.
  - b. Green-Tag casualties.
  - c. Yellow-Tag casualties.
  - d. Black-tag casualties not trapped or buried.
  - e. Trapped black-tag casualties.

### **Vector Control Standards**

Vector control programmes should be planned so as to cope with two distinct situations:

- The initial phase immediately following the disaster, when control work should concentrate on the destruction, by a physical or chemical process, of vermin on persons, their clothing, bedding and other belongings and on domestic animals. An emergency sanitation team should be available from the beginning for carrying out these disinfestations.
- The period after the disaster subsided, control work should be directed towards proper food, sanitation, safe disposals of wastes, including drainage, and general personal cleanliness.

### **Suggested Vector Surveillance Equipment and Supplies**

- Collecting Bags
- Collecting forms
- Mouth or battery powered aspirations
- Tea strainer
- Flashlight and spare batteries
- Grease pencil
- Memo pad
- Sweep net
- Pencil
- Tweezers
- White enameled dipper
- Keys and other references
- Labels
- CDC light traps (Optional)
- Collecting vials
- Aedes aegypti Ovitrap (Optional)
- Bulb syringe or medicine dropper
- Fly grill
- Mirror

### **Suggested Rodent Surveillance Equipment and Supplies**

- Teaching aids
- Transfer bags
- Plastic bags
- Vials
- Plastic cups
- Alcohol
- Rubber bands
- Forceps
- Scissors
- Insecticide dusting pan
- Snap traps
- Formaldehyde
- Live Traps
- Acute rodenticides
- Gloves
- Anti Coagulant rodenticides
- Flashlights and batteries.

### **Materials and equipment**

In the absence of clear indication from field, a minimum kit comprising of the following materials and equipments should be carried by the advance party to the disaster site

1. Equipment for pediatric intravenous use	36
2. Tensiometers for children and adults	12
3. Assorted ferrules Boxes	2
4. Tracheal cannulae	36
5. Set of laryngoscopes for infants, children And adults	1 each
6. Endotracheal tubes, No. 7 Murphy	36
7. Endotracheal tubes, No. 8	36
8. Nasogastric probes	36
9. Oxygen masks, for adults and children	2
10. Large scissors for cutting bandages	3
11. Plastic linings	60
12. Phonendoscopes	15

**Sterilization Unit Supplies**

1. Tracheotomy set	6
2. Thorachotomy set	6
3. Venous dissection set	6
4. Set for small sutures	12
5. Bottles for drainage of thorax	10
6. Hand scissors No. 4	6
7. Syringes (disposables) x 2cc	60
8. Syringes (disposables) x 10cc	90
9. Syringes (disposables) x 50cc	60

**Ambulance Fleet**

The ambulances will carry the following equipment:

1. Oxygen, Oxygen Mask, and manometer.
2. Stretchers and blankets
3. Emergency first aid kit
4. Suction equipment
5. Supplies for immobilizing fractures
6. Venoclysis equipment
7. Drugs for emergency use
8. Minimal equipment for resuscitation maneuvers

Each ambulance should be staffed by at least a physician, a nurse, a stretcher-bearer and a driver. The medical and paramedical personnel should be experienced in procedures for the management of patients in intensive care units.

*Equipments and Supplies required for Vermin control for a population of 10,000*

Power sprayers	2
Hand-pressured sprayers, capacity 20-30 litres	50
Dusters (hand-operated, plunger type)	50
Dusters (power-operated)	2
Space sprayer	1
Adequate supply of accessories and spare parts for the above equipment	
○ Insecticides:	
DDT, technical powder	0.5 tons
DDT, 75% water wetttable	1-2 tons

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DDT, 10% powder	1 ton
Dieldrin, 0.625 – 1.25% emulsifiable concentrate or wettable power	100 Kg
Lindane, 0.5% emulsifiable concentrate or wettable power	100 Kg
Chlordane, 2% emulsifiable concentrate or wettable power	100 Kg
Malathion, 1% emulsifiable concentrate or wettable power	100 Kg
Dichlorvos emulsion	100 litres
Rodenticides, anticoagulant type (warfarin, etc.)	1-2 Kg
Rodent traps	100
Screen for fly control	10 rolls
Garbage cans, capacity 50-100 litres	300-500

*a\* Quantity depends on availability and on distribution points*

**OPERATING PROCEDURE GUIDELINES FOR IRRIGATION AND PUBLIC HEALTH DEPARTMENT**

***Planning Assumptions***

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- Operating procedures for mobilizing community participation during various stages of disaster management. The department is required to adopt appropriate measures to ensure that community participates substantially.
- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – Water supply” and “Officer-in-Charge – Water supply” at state and district level respectively.
- To the extent possible, preventive measures as recommended in the preparedness and mitigation document of DDMAP should be undertaken to improve departmental capacity to respond to a disaster.

***Normal Time Activity***

- Assess preparedness level and report the same as per the format to the District Control Room every six months.
- Identify flood prone rivers and areas and activate flood monitoring mechanisms.
- Mark water level gauges on rivers, dams, and reservoirs.
- Establish disaster management tool kits with at sub-divisional levels consisting of ropes, pulley blocks, jungle knives, shovels, cement in bags, concrete pans, gunny bags, cane baskets.

**Action Plan Objective in a Disaster Situation**

- Restoration of water supply to the affected area
- Monitor flood situation
- Monitor and protect irrigation infrastructure

- Restore damaged infrastructure

***Activities on Receipt of Warning or Activation of DDMAP***

- Within the affected district/sub-division all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officer or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager.
- Establish communications with Emergency operations Centre at State HQ, District Control Room and your departmental and field offices within the division.
- Appoint one officer as “Officer-in-Charge – Water Supply and Irrigation” at district level.
- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Fill departmental vehicles with fuel and park them in protected area.
- Make sure that the hospital storage tank is full and hospital is conserving water.
- Inform people to store an emergency supply of drinking water.
- Organize on the receipt of disaster warning continuous monitoring of
  - Wells
  - Intake structures
  - Pumping stations
  - Buildings above ground
  - Pumping mains
  - The treatment plant
  - Bunds of Dams
  - Irrigation Channels
- The inlet and outlet to tanks should be inspected to ensure that waterways are unobstructed by trees and vegetation.
- Any repairs/under construction activity should be well secured with sandbags, rockfalls, etc.

**Relief and Rehabilitation**

- Carry out emergency repair of all damages to water supply system.
- Assist health authorities to identify appropriate source of potable water.
- Identify unacceptable water sources and take necessary precautions to ensure that no water is accessed from such sources, either by sealing such arrangements or by posting department guards.
- Arrange for alternate water supply and storage in all transit camps, feeding centers, relief camps, cattle camps, and also the affected areas, till normal water supply is restored.
- Ensure that potable water supply is restored as per the standards and procedures laid down in “Standards of Potable Water”.
- Continue round the clock inspection and repair of bunds of dams, irrigation channels, control gates and overflow channels.
- Continue round the clock inspection and repair of pumps, generators, motor equipment and station building.
- Plan for emergency accommodations from staff from outside the area.
- Report all activities to the head office.

On the recommendations of “NODAL OFFICER – “Water Supply”/ Deputy Commissioner/District

**Control Room**

- Provide for sending additional support along with food, bedding, tents
- Send vehicles and any additional tools and equipments needed.
- Standby diesel pumps or generators should be installed in damage proof buildings.
- A standby water supply should be available in the event of damage.
- Establish procedures for emergency distribution of water if existing supply is disrupted.
- Make provisions to acquire tankers and establish other temporary means of distributing water on an emergency basis.
- Make provisions to acquire containers and storage tanks required for storing water on an emergency basis.
- Prepare plan for water distribution to all transit and relief camps, affected villages and cattle camps and ensure proper execution of these plans.
- A minimum level of stock should be maintained for emergencies, and should include extra lengths of pipe, connections, joints, hydrants and bleaching powder. Adequate tools should be on hand to carry out emergency repair.

- Make sure auxiliary generators and standby engines are in good working order.
- Acquire a buffer stock of fuel for the motors and store in a protected place.
- Establish emergency work gangs for immediate post-disaster repair.

## **Standards of Services**

### **Water Supply**

#### Piped Water

- After any repair on the distribution system, the repaired main should be flushed and disinfected with a chlorine solution of 50mg/litre for contact period of 24 hours, after which the main is emptied and flushed again with potable water.
- If the demand for water is urgent, or the repaired main cannot be isolated, the concentration of the disinfecting solution may be increased to 100mg/litre and the contact period reduced to 1 hour.
- At the end of disinfection operations, but before the main is put back into service, samples should be taken for bacteriological analysis and determination of chlorine residue.
- When a water treatment plant, pumping station, or distribution system is so badly damaged that operation cannot be restored for some time, other methods described in the following paragraphs must be used.

#### Private System (open well or tube)

- Water from these sources, with adequate chlorination as necessary, can be connected to a distribution system or hauled to points of consumption.

#### Springs and wells (non-private)

- Ground water originating from deep aquifers (such as is obtained from deep wells and certain springs) will be free from contamination if certain simple protective measures are taken.
- When springs are used as a source of water supply for disaster area, careful attention must be paid to geological formations. Limestone and certain rocks are liable to have holes and cracks, especially after earthquake that may lead to the contamination of ground water.
- A sanitary survey of the area surrounding a well site or spring is of utmost importance. This survey, which should be carried out by a qualified professional environmental health worker, should provide information on source of contamination, geological structures (with particular reference to overlying soil and rock formations) quality and quantity of ground water, direction of flow etc.

- The well selected as a source of water, should be at least 30m away from any potential source of contamination, and should be located higher than all such sources. The upper portion of the well must be protected by an external impervious casing, extending at least 3m below and 30cm above ground level. The casing should be surrounded by a concrete platform at least 1m wide, that slope to allow drainage away from the well; it should connect to the drain that will carry the spilled water away. The opening for drop pipes should be sealed to prevent outside water from entering the well. The rim of manholes should project at least 8cm above the surrounding surface, and the manhole cover must overlap this rim.
- Immediately after construction or repair, the well should be disinfected. First the casing and lining should be washed, and scrubbed with strong chlorine solution containing, 100mg of available chlorine per litre. A strong solution is then added to produce concentration of 50-100 mg/litre in the water stored in the well. After adequate agitation, the well water is left to stand for at least hours, and then pumped out. The well is then allowed to refill. When the residual chlorine of the water drops below 1 mg/litre the water may be used.
- Most of water is stated above applies also to the location and protection of springs. The following points may be added:
  - The collection installation should be so built as to prevent the entrance of light.
  - The overflow should be so located as to prevent the entrance of surface water at times of heavy rainfall.
  - The manhole cover and gates should be locked.
  - Before using the water, the collection chamber should be disinfected with a chlorine solution.
  - An area within a radius of 50m around the spring should be fenced off to prevent ground surface contamination.

#### Surface water

- Surface water should be used as source of water supply only as a last resort.
- Measures should be taken to protect the watershed from pollution by animals and people. As it is usually difficult to enforce control regulations, the point of intake for water supply should be located above any tributary carrying grossly contaminated water. The pump intake should be screened and placed so that it will not take in mud from the stream bed or floating debris. The device can be something extremely simple, such as perforated drum fixed in the middle of the stream.

#### Treatment

- Water should be tested for the presence of Escherichia coli and unsafe concentrations of nitrate as soon as possible. Detection of E. coli indicates contamination by human waste and therefore requires immediate protective and corrective measures.
- Monitoring of water quality should be restored or initiated immediately. During the disaster, daily determination of the chlorine residual in public water supply is sufficient.

#### Disinfection

- Chlorine and chlorine-librating compounds are the most common disinfectants. Chlorine compounds for water disinfection are usually available in three forms:
  - Chlorinated lime or bleaching powder, which has 20% by weight of available chlorine when fresh. Its strength should always be checked before use.
  - Calcium hypochlorite, a more stable compound sold under various proprietary names. This compound contains 70% by weight of available chlorine. If properly stored in tight container and in dark cool place, it preserves its chlorine contents for considerable period.
  - Sodium hypochlorite, usually sold as solution of approximately 5% strength under a variety of proprietary names. Its use in water disinfection is limited to small quantities and special circumstances.

#### Methods of chlorination

##### Gas chlorinator

- These machines draw chlorine gas from a cylinder containing liquid chlorine, mix it in water and inject into supply pipe. Mobile gas chlorinators are made for field use.

##### Hypochlorinators

- These are less heavy than gas chlorinator and more adaptable to emergency disinfection. Generally, they use a solution of calcium hypochlorite or chlorinated lime in water and discharge it into a water pipe or reservoir. They can be driven by electric motors or petrol engines and their output can be adjusted.
- Hypochlorinators are small and easy to install. They consists usually of a diaphragm pump and standard accessories, including one or more rubber-lined, solution tanks and a chlorine residual testing set. The usual strength of solution is 0.1% and it seldom rises above 0.5%

### The Batch Method

- In the absence of the chlorinators, water is disinfected by batch method. This method is more likely to be used in emergencies. It involves applying a predetermined volume of chlorine solution of known strength to a fixed volume of water by means of some gravity arrangements. The strength of the batch solution should not be more than 0.65% of chlorine by weight as this is about the limit of solubility of chlorine at ordinary temperatures. For example 10g of ordinary bleaching powder (25% strength) dissolved in 5 litres of water gives a stock solution of 500mg/litre. For disinfection of drinking water, one volume of the stock solution added to 100 volumes of water gives a concentration of 5mg/litre. If after 30 minutes contact the chlorine residual is more than 0.5mg/litre this dosages could be reduced.
- After the necessary contact period, excess chlorine can removed to improve the taste by such chemicals as sulphur dioxide, activated carbon, or sodium thiosulphate. The first two are suitable for permanent installations, whereas sodium thiosulphate is more suitable for use in emergency chlorination. One tablet containing 0.5g of anhydrous sodium thiosulphate will remove 1mg/litre of chlorine from 500 litres of water.

### Continuous Chlorination

- This method, in which porous containers of calcium hypochlorite or bleaching powder are immersed in water, in use mainly for wells and springs but is also applicable to other types of water supply. A free residual chlorine level of 0.7 mg/litre should be maintained in water, treated for emergency distribution. A slight taste and odor of chlorine after half an hour gives an indication that chlorination is adequate. In flooded areas where the water distribution system is still operating, higher chlorine residual should be maintained. Occasionally, an unpleasant taste develops from the reaction of chlorine with phenolic or the other organic compounds. This taste should be accepted, as it is an indication of safe disinfection.

### Filtration-Disinfection

- In this method water is mixed with diatomaceous earth, then passed through the filter unit in which filtering partitions (septa) are installed. Mobile purification units using this process have been produced with capacities up to 50,000 litres per hour. They consist essentially of :
  - A centrifugal pump driven by a rope-started gasoline engine.
  - A filter (diatomic)
  - A hypochlorinator

- A slurry feeder and an air compressor.
- A precoat and recirculation tank.
- A chlorine solution tank.
- Hose adapters
- Valves (pump suction, inlet, drain, outlet, flow control air release, etc) and
- A tool box. Instructions in the manuals supplied with such units must be followed.

#### Physical Protection

- In disaster situation, physical protection of water supplies for use, is a major consideration. In addition to such barriers as walls and fences, guards may be necessary to prevent mobs from overrunning and damaging treatment units, pumping stations, tankers, distribution stations, and temporary collection facilities. Intake structures, wells and springs should also be protected against misuse. The character and extent of such protection will depend on the local situation.

#### Ice Supply

- Required ice should be supplied from a commercial manufacturing plant where it is made from safe water and where sanitary regulations are observed.
- It should be distributed in trucks designed for the purpose, equipped with tools for the safe handling of ice.
- After drinking water is secured within stricken areas, making water available for domestic use (such as leaning and washing) should be considered.

#### Coagulation-Disinfection

- Removal of the organic matter greatly lessens the amount of chlorine needed for disinfection. There are many factors that govern the coagulation process. These include:
  1. Hydrogen-ion concentration. The optimum pH value for coagulation is the value that the best floc formation and setting. The pH value of water changes when coagulants are used and has to be adjusted to its optimum value by addition of alkali or acids.
  2. Mixing. Coagulants must be thoroughly mixed with the water to give satisfactory results. This may be accomplished by (a) pump action, whereby the coagulant solution is added to the suction pipe of the pump and pump does the mixing; (b) the drip bottle method i.e. hanging a drip-bottle over the discharge pipe or hose of raw water that feeds the

tank and letting the coagulant solution drip on to the water jet; or (c) dissolution, i.e. allowing the discharge of raw water to splash on to a basket containing solid coagulant.

3. Coagulant dosage. The amount of the coagulant and chemicals required to adjust the pH value of water may be calculated when the pH and the type of alkalinity are known. However the optimum dosage for given water may be determined approximately using the jar test.

#### Coagulation-Filtration-Disinfection

- In this method filtration is added to the procedures described above. If temporary reservoir can be arranged, it is preferable to let the water settle before filtering it. In mobile purification units, however the water is filtered through a pressure filter without setting. They usually have a capacity of 4000-7000 litres per hour, and consist essentially of:
  - A centrifugal pump directly coupled to a gasoline engine.
  - A filter (pressure, rapid and filter)
  - A hypochlorinator
  - A chemical solution tank  
(One for alum and one for soda ash)
  - A chlorine solution tank.
  - Hose adapters
  - Valves (pump suction, inlet, drain, outlet, flow control air release, etc) and
  - A tool box. Instructions in the manuals supplied with such units must be followed.

### **OPERATING PROCEDURE GUIDELINES FOR ANIMAL HUSBANDRY DEPARTMENT**

#### ***Planning Assumptions***

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- Operating procedures for mobilizing community participation during various stages of disaster management have been given in section on "Areas of Community Participation". The department is required to study these and adopt appropriate measures to ensure that community participates substantially.

- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – Veterinary Services” at district level respectively.
- To the extent possible, preventive measures as recommended in the preparedness and mitigation document of DDMAP should be undertaken to improve departmental capacity to respond to a disaster.
- Hospital staff be aware of damage – proof hospital rooms/buildings.
- A standby generator be made available for every hospital
- At least one kerosene –powered refrigeration unit be made available for storage of drugs.
- Orientation and training for disaster response plan and procedures, accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during disaster situation need to be imparted to the officials and the staff.
- To the extent possible, preventive measures as recommended in the preparedness and mitigation document of DMAP should be communicated to the community to prevent extensive loss of livestock.

#### **Action Plan Objective in a Disaster Situation**

- Treatment of injured cattle.
- Protection and care of abandoned/lost cattle.

#### **Activities on Receipt of Warning or Activation of DDMAP**

- Within the affected district all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officer or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager.
- Establish communications with

- District control room
- Veterinary aid centres and hospitals (including private practitioners) within the district.
- The Deputy Director, Veterinary Dept. will act as “Nodal Officer – Veterinary Services”.
- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipments and the post-disaster procedures to be followed.
- Fill departmental vehicles with fuel and park them in protected area.
- Stock emergency medical equipments, which may required after disaster.
- Determine what injuries/illnesses may be expected, and what drugs and other medical items will be required, in addition to the requirements of setting up cattle camps, and accordingly ensure that extra supplies of medical items and materials be obtained quickly.
- Provide information to all staff of veterinary hospitals and centers about the disasters, likely damages and effects, and information about ways to protect life, equipment and property.
- Surgical packs should be assembled and sterilized.
- Arrange for emergency supply of anesthetic drugs.
- Prepare an area of the hospital for receiving large number of injured livestock.
- Establish work schedules to ensure adequate staff are available round the clock.
- Set up teams for visiting disaster site.

### ***Relief and Rehabilitation***

- Organise transfer of injured livestock from village to veterinary aid centres wherever possible
- The provision of medical services should be coordinated by Nodal Officer-Veterinary Services with District Control Room, and cattle camps.
- Establish cattle camps and additional veterinary aid centres at disaster sites and designate an Officer-in-Charge for the camp.
- Estimate the requirement of water, fodder and animal feed, for cattle camps and organise the same.
- Ensure the adequate sanitary conditions though cleaning operations are maintained in order to avoid outbreak of any epidemic.

- An injury and disease monitoring system should be developed, to ensure that a full picture of risks is maintained.
- Plan for emergency accommodations for veterinary staff from outside the area.
- Information formats and monitoring checklists as given in Annexure should be used for programme monitoring and development and for reporting to Emergency Operations Centre. This is in addition to existing reporting system in the department.
- Establishment of public information centre with a means of communication, to assist in providing an organized source of information. The hospital is responsible for keeping the community informed of its potential and limitations, in disaster situations.
- The local police and rescue group should be aware of the resources of each veterinary aid centre and hospital.
- Provide information to all staff of veterinary hospital and centres about the disaster likely damages and effects, and information about ways to protect life, equipment and property.
- Surgical packs should be assembled and sterilized.
- Enough stock of surgical packs should be sterilized to last for four to five days.
- The sterilized packs must be stored in protective cabinets to ensure that they do not get wet. Covering the stock with polythene is recommended as an added safety measure.
- All valuable equipments and instruments should be packed in protective coverings and stored in room the most damage-proof.
- Check the emergency electrical generators, to ensure that it is operational, and that a buffer stock of fuel exists. If an emergency generator is not available at the hospital, arrange for one on loan.
- Arrange for emergency supplies anesthetic drugs.
- Check stocks of equipment and drugs, which are likely to be most needed after disaster.
- Fill hospital storage tanks and encourage water savings. If no storage tank exists, water for drinking should be drawn in clean container and protected.
- Prepare an area of hospital for receiving large number of injured livestock.
- Develop emergency admission procedure (with adequate record keeping).
- Cattle camps and hospital administrator should
  - Establish work schedules to ensure that adequate staff are available
  - Set up teams of veterinary doctors, and assistants for visiting disaster sites.

### **Standards for Cattle Camps**

1. The minimum number of cattle in the cattle camp should be about 100 and the maximum 500.
2. The cattle camp should be located at suitable sites, bearing in mind, the adequate supply of water and shade are most essential for well being of the cattle.
3. Cattle sheds constructed should not exceed 20 sq. feet per animal. Suitable arrangements for water trough and manger(s) should be made.
4. The feeding centres for cattle should be located in such a manner that
  - There is adequate supply of drinking water
  - There is sufficient shade for cattle to rest during the afternoon
  - They are located as near the rail head as possible
  - They are conveniently located, not beyond a radius of 8 Km from the affected villages.

The cattle will require 6 Kg per cattle head per day of fodder, and 1 to 1½ Kg per cattle head per day, of the concentrate like Bago molasses.

Each cattle camp will have a minimum of one camp manager, two labourers and two sweepers.

### **Operating procedure guidelines for PWD department**

#### ***Planning Assumptions***

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- The department is required to adopt appropriate measures to ensure that the community participates substantially.
- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – PWD” at district level respectively.

- To the extent possible, preventive measures as recommended in the preparedness and mitigation document of DDMAP should be undertaken to improve departmental capacity to respond to a disaster.

**Action Plan Objective in a Disaster Situation**

- Restoration of roads to their normal condition.
- Repair/reconstruction of public utilities and buildings.

***Activities on Receipt of Warning or Activation of DDMAP***

- Within the affected district all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officer or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager.
- Establish communications with District control room and your departmental offices within the division.
- All district level officials of the department would be asked to report to the Deputy Commissioner/DDM.
- Appoint one officer as “Nodal Officer - PWD” at district level.
- The “Nodal Officer - PWD” will be responsible for mobilizing staff and volunteers to clear the roads in his section, should a disaster strike.
- The “NODAL OFFICER – PWD” should be familiar with pre-disaster precautions and post disaster procedures for road clearing and for defining safe evacuation routes where necessary.
- All officers<sup>3</sup> should be notified and should meet the staff to review emergency procedures.
- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Vehicles should be inspected, fuel tanks filled and batteries and electrical wiring covered as necessary.
- Extra transport vehicles should be dispatched from HQ and stationed at safe and strategic spots along routes likely to be effected.
- Heavy vehicles should be moved to areas likely to be damaged and secured in a safe place.

- Inspection of all roads, bridges, government buildings and structures must be done and structures which are endangered by the impending disaster identified.
- Emergency tool kits must be made available and should include
  - Crosscut saws
  - Axes
  - Power chain saw
  - Sharpening Files
  - Chains and tightening wrenches
  - Pulley block with chain and rope
- The designation of routes strategic to evacuation and relief should be identified and marked in close coordination with the DCR.
- Establish a priority listing of roads which will be opened first, the most important being roads to hospitals and main trunk routes.
- Give priority attention to urgent repair works in disaster affected areas.
- Identify locations for setting up transit and relief camps, feeding centers and quantity of construction materials required and inform the DCR accordingly.

### **Relief and Rehabilitation**

- All works teams should be issued two-way communication **link**.
- Provide a work team carrying emergency tool kits, depending on the nature of the disaster, essential equipments such as
  - Towing vehicles
  - Earth moving equipments
  - Cranes etc.
- Each unit should mobilize a farm tractor with chain, cables and a buffer stock of fuel.
- Adequate road signs should be installed to guide and assists the drivers.
- Begin clearing roads. Assemble casual labor to work with experienced staff and divide into work gangs.
- Mobilise community assistance for road clearing by contacting community organizations.
- Undertake clearing of ditches, grass cutting, burning, removal of debris and the cutting of dangerous trees along the roadside in the affected area through maintenance engineer's staff.

- Undertake repair of all paved and unpaved road surfaces including edge metalling, potholes patching and any failure of surface, foundations in the affected areas by maintenance engineer's staff and keep monitoring their conditions.
- Undertake construction of temporary roads to serve as access to temporary transit and relief camps and medical facilities for disaster victims.
- As per the decision of the district control room, undertake construction of relief camps, feeding centres, medical facilities, cattle camps.
- An up-to-date report of all damages and repairs should be kept in the district office report book and communicate the same to the district control room.
- If possible, review of the extent of damage (by helicopter) should be arranged for the field Officer-in-Charge, in order to dispatch most efficiently road clearing crews, and determine the equipments needed.

#### **STANDARDS FOR RELIEF CAMPS**

##### **Tent Camps**

- The layout of the site should meet the following specifications.
  1. 3-4 hectares of land/1000 peoples
  2. Roads of 10 meters width
  3. Minimum distance between edge of roads and tents of 2 mtrs.
  4. Minimum distance between tents of 8 mtrs.
  5. Minimum floor area/tent of 3 square meters per person.
- Water distribution in camp sites consists of
  1. Minimum capacity of tanks of 200 litres
  2. Minimum capacity per capita of 15 liters/day
  3. Maximum distance of tanks from farthest tent of 100 meters.
- Solid waste disposal containers in tent camps should be
  1. Waterproof
  2. Insect-proof and
  3. Rodent-proof
  4. The waste should be covered tightly with a plastic or metallic lid
  5. The final disposal should be by incineration or by burial.
- The capacities of solid waste units should be, 1 litre/4-8 tents; or 50-100 litres/25-50 persons.
- Excreta and liquid waste should be disposed in bore-holed or deep trench latrines in tent camps. Specifications for these are:

1. 30-50 meters from tents.
2. 1 seat provided/10 persons
3. Modified soakage pits should be used for waste water by replacing layers of earth and small pebbles with layers of straw, grass or small twigs. These needs to be removed on a daily basis and burned.

### **Buildings**

Buildings used for accommodating disaster victims should provide the following:

1. Minimum floor area of 3.5 sq. meters/person
2. Minimum air space of 10 sq. meters/person
3. Minimum air space circulation of 30 cubic meters/person/hour and
4. There should be separate washing blocks for men and women.
5. Washing facilities to be provided are:
  - 1 hand basin/10 persons
  - 1 wash bench of 4-5 meters/100 persons and 1 shower head/50 persons in temperate climates
6. Toilet accommodation in buildings housing displaced persons, should meet these requirements:
  - 1 seat/25 women
  - 1 seat plus 1 urinal/35 men
  - Maximum distance from building of 50 meters.
7. Refuse containers are to be plastic or metallic and should have closed lids. To be provided are:
  - 1 container of 50-100 liters capacity/25-50 persons.

## **Operating procedure guidelines for HPSEB**

### ***Planning Assumptions***

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- The department is required to adopt appropriate measures to ensure that community participates substantially.

- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – Power Supply” at district level.
- To the extent possible, preventive measures as recommended in the preparedness and mitigation document of DDMAP, should be undertaken to improve departmental capacity to respond to a disaster.

#### ***Normal Time Activities***

- Assess preparedness level and report the same as per format to District Control Room every six months.
- Establish at each sub-station a disaster management tool kit comprising cable cutters, pulley blocks, jungle knives, axes, crowbars, ropes, hacksaws and spanners. Tents for work crews should also be storage.

#### **Action Plan Objective in a Disaster Situation**

- Restore the power supply and ensure uninterrupted power to all vital installation, facilities and site.

#### ***Activities on Receipt of Warning or Activation of DDMAP***

- Within the affected district all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officer or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager.
- Establish communications with District control room and your departmental offices within the division.
- All district level officials of the department would be asked to report to the Deputy Commissioner/DDM.

- Appoint one officer as “NODAL OFFICER – Power Supply” at district level.
- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Assist the state authorities to make arrangements for standby generators in the following public service offices from the time of receipt of alert warning
  - Hospitals
  - Water Supply Stations
  - Collectorate
  - Police stations
  - Telecommunications buildings
- Fill departmental vehicles with fuel and park them in a protected area.
- Check emergency tool kits, assembling any additional equipment needed.
- Immediately undertake inspection from the time of receipt of alert warning of
  - High tension lines
  - Towers
  - Substations
  - Transformers
  - Insulators
  - Poles and
  - Other equipments
- Review the total extent of the damage to power supply installations by reconnaissance flight, if possible.

On the recommendations of the Deputy Commissioner/District Control Room/ “Nodal Officer– Power Supply” of the department in the district

- Instruct district staff to disconnect the main electricity supply for the affected area.
- Dispatch emergency repair gangs equipped with food, bedding, tents, and tools.

***Relief and Rehabilitation***

- Hire casual labourers on an emergency basis for clearing of damaged poles and salvage of conductors and insulators.
- Begin repair/reconstruction
- Assist hospital in establishing emergency supply by assembling generators and other emergency equipments, if necessary.

- Establish temporary electricity supplies for other key public facilities, public water systems, etc.
- Establish temporary electricity supplies for transit camps, feeding centres, relief camps, district control room and on access roads to the same.
- Establish temporary electricity supplies for relief material godowns.
- Compile an itemized assessment of damage, from reports made by various electrical receiving centres and sub-centres.
- Report all activities to the head office.
- Plan for emergency accommodations for staff from outside the area.

On the recommendation of the Nodal Officer – Power Supply/Deputy Commissioner/District Control Room, at state level, HPSEB shall

- Send cables, poles, transformers and other needed equipment
- Send vehicles and any additional tools needed.
- Provide additional support as required.

## **OPERATING PROCEDURE GUIDELINES FOR AGRICULTURE DEPARTMENT**

### ***Planning Assumptions***

- There is no substitute for maintaining standards of services and regular maintenance during normal times. This affects the response of the department to any disaster situation.
- The department is required to adopt appropriate measures to ensure that community participates substantially.
- For effective preparedness, the department must have a disaster response plan or disaster response procedures clearly defined in order to avoid confusion, improve efficiency in cost and time.
- Orientation and training for disaster response plan and procedures accompanied by simulated exercise will keep the department prepared for such eventualities. Special skills required during emergency operations need to be imparted to the officials and the staff. Select personnel can be deputed for training as “NODAL OFFICER – Agriculture” at district level.
- To the extent possible, preventive measures as recommended in the preparedness and mitigation document of DDMAP should be communicated to the community to prevent extensive loss of crops and plantations.

**Action Plan Objective in a Disaster Situation**

- Restore the agricultural operations (including soil conditions)
- Crop protection
- Restore agriculture produce market.

***Activities on Receipt of Warning or Activation of DDMAP***

- Within the affected district all available personnel will be made available to the District Disaster Manager. If more personnel are required, then out of station officer or those on leave may be recalled.
- All personnel required for Disaster Management should work under the overall supervision and guidance of District Disaster Manager.
- Establish communications with District control room and your departmental offices within the division.
- Appoint one officer as “NODAL OFFICER – Agriculture” at district level.
- Review and update precautionary measures and procedures and review with staff the precautions that have been taken to protect equipment and the post-disaster procedures to be followed.
- Fill departmental vehicles with fuel and park them in a protected area.
- Check available stocks of equipments and materials which are likely to be most needed after disaster.
- Stock agricultural equipments which may be required after disaster
- Determine what damage, pests of diseases may be expected, and what drugs and other insecticides items will be required, in addition to requirement of setting up extension terms for crop protection, and accordingly ensure that extra supplies and materials, be obtained quickly.
- Provide information to all concerned, about disasters, likely damages to crops and plantations, and information about ways to protect the same.
- All valuable equipments and instruments should be packed in protective covering and stored in room the most damage-proof.
- All electrical equipments should be unplugged when disaster warning is received.
- Extension officers should be assisted to
  - Establish work schedules to ensure that the adequate staff are available
  - Set up the teams of extension personnel and assistants for disaster sites.

***Relief and Rehabilitation***

- Assess the extent of damage to soil, crop, plantation, micro-irrigation systems and storage facilities and the requirements for replantation or salvaging
- Make extensive use of soil and water testing laboratories
- Provision of agricultural services should be coordinated with irrigation department, DRDA, District Control Room
- Estimate the requirement of
  1. Seeds
  2. Fertilizers
  3. Pesticides and labour
- Organise transport, storage and distribution of the above with adequate record keeping procedures
- Ensure that the adequate conditions through cleaning operations are maintained to avoid water-logging and salinity in the low lying areas.
- A pests and disease monitoring system should be developed to ensure that a full picture of risks is maintained.
- Plan for emergency accommodations for agriculture staff from outside the area.
- Information formats and monitoring checklists as given in section on “Information and Monitoring Tools” should be used for programme monitoring and development and for reporting to DCR. This is in addition to existing reporting system in the department.
- Establishment of a public information center with a means of communication, to assist in providing an organized source of information. The department is responsible for keeping the community informed of its potential and limitations in disaster situations.
- The NGOs and other relief organizations should be aware of the resources of the department.
- Assist farmers to re-establish their contacts with agriculture produce market and ensure that appropriate prices to offer to them.

**First Information Report**

Name of the District

Date of Report

1. Nature of Calamity
2. Date and Time of Occurrence
3. Number and Names of the areas affected
4. Population Affected
5. Number of Persons
  - a) Died
  - b) Missing
  - c) Injured
6. Animals
  - a) Affected
  - b) Lost
7. Crops Affected
8. Number of houses damaged
9. Damage to Public Property

**Rapid Assessment Format for Disaster Management Team**

**[Aim to determine immediate response of the locality]**

Type of Disaster \_\_\_\_\_; Date \_\_\_\_\_;

Time \_\_\_\_\_;

**Team**

**Member** \_\_\_\_\_

<b>1. Name of the location</b>	
<b>2. Administrative Unit and Division</b>	
<b>3. Geographical location</b>	
<b>4. Local Authorities interview(with name, address, designation)</b>	
<b>5. Estimated total population</b>	
<b>6. Worst affected areas/population</b> - No of Blocks - G.P - Village	
<b>7. Areas currently inaccessible</b>	
<b>8. Type of areas affected</b>	
<b>9. Distance from the District Head Quarters(Km)</b>	
<b>Accessibility of the areas</b>	
<b>10. Effect on population</b>  (a) Primary affected population - Children below 1 year - Children between 1 and 5 years old - Women - Pregnant and lactating women - Elderly (above 60) - Disabled	Number

<ul style="list-style-type: none"> <li>(b) Death/Reports of starvation</li> <li>(c) Orphans</li> <li>(d) Injured</li> <li>(e) Missing</li> <li>(f) Homeless             <ul style="list-style-type: none"> <li>- Number of people</li> <li>- Number of families</li> </ul> </li> <li>(g) Displaced/Migrated</li> <li>(h) Evacuated</li> <li>(i) Destitute</li> <li><b>(j) Need of counseling for traumatized population</b></li> </ul>	<p align="center">Yes/No</p>
<p><b>11. Building</b></p> <ul style="list-style-type: none"> <li>(a) Building collapsed/wasted away</li> <li>(b) Building partially collapsed/wasted away</li> <li>(c) Buildings with minor damages (buildings that can be retrofitted)</li> <li>(d) Number of schools affected             <ul style="list-style-type: none"> <li>- Gravity of the damages</li> </ul> </li> <li>(e) Number of hospitals and Health Centers affected             <ul style="list-style-type: none"> <li>- Gravity of the damages</li> </ul> </li> <li>(f) Number of Government buildings affected             <ul style="list-style-type: none"> <li>- Gravity of the damages</li> </ul> </li> <li>(g) Any other building affected             <ul style="list-style-type: none"> <li>- Gravity of the damages</li> </ul> </li> </ul>	<p align="center">Number</p> <p align="center">Scale 1 to 5 where 1 is no damages and 5 is completely destroyed</p>
<p><b>12. Infrastructure</b></p> <ul style="list-style-type: none"> <li>(a) Road Damaged/destroyed             <ul style="list-style-type: none"> <li>- Scale of the damage</li> <li>- Location</li> <li>- Km</li> </ul> </li> <li>(b) Railways damaged             <ul style="list-style-type: none"> <li>- Location</li> <li>- Km</li> <li>- Is the railway still working</li> </ul> </li> <li>(c) Bridges damaged/collapsed             <ul style="list-style-type: none"> <li>- Locality</li> <li>- Villages isolated</li> </ul> </li> <li>(d) Damages to the Communication Network</li> <li>(e) Damages to the Electricity Network</li> <li>(f) Damages to the Telecommunication Network</li> </ul>	<p align="center">Scale 1 to 5 where 1 is normal and 5 is completely destroyed/washed away</p> <p align="center">Yes/No</p> <p align="center">Yes/No</p> <p align="center">Yes/No and scale of the damages</p> <p align="center">Scale 1 to 5 where 1 is no damages and 5 is completely destroyed</p>
<p><b>13. Health Facilities</b></p> <ul style="list-style-type: none"> <li>(a) Infrastructure damaged             <ul style="list-style-type: none"> <li>- Hospitals</li> <li>- Health Centers</li> <li>- Vaccination Centers</li> </ul> </li> </ul>	<p align="center">Number</p> <p align="center">Scale 1 to 5 where 1 is no damages and 5 is completely destroyed</p> <p align="center">Number</p>

<p>(b) Availability of Doctors</p> <ul style="list-style-type: none"> <li>- In the area</li> <li>- In the district</li> </ul> <p>(c) Availability of Paramedical staff</p> <ul style="list-style-type: none"> <li>- In the area</li> <li>- In the district</li> </ul> <p>(d) Local Staff affected</p> <ul style="list-style-type: none"> <li>- Doctors</li> <li>- Paramedical Staff</li> </ul> <p>(e) Conditions of equipments Specify which equipments</p> <p>(f) Availability of medicines/drugs</p> <ul style="list-style-type: none"> <li>- Typology</li> </ul> <p>(g) Availability of Vaccinations</p> <ul style="list-style-type: none"> <li>- Typology</li> </ul> <p>(h) Any immunization campaign was undertaken before the disaster</p> <p>(i) Possibility of diseases outbreak</p> <p>(j) Other health problems</p>	<p>Number</p> <p>Number</p> <p>Scale 1 to 5 where 1 is no damages and 5 is completely destroyed</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>List</p>
<p><b>14. Water Sanitation</b></p> <p>(a) Availability of safe drinking water</p> <p>(b) Availability of sanitation facilities</p> <p>(c) Availability of Disinfectant</p> <ul style="list-style-type: none"> <li>- Typology</li> </ul> <p>(d) Damages to the Water/Sewage systems</p> <p>(e) Damages to the water supply system</p> <p>(f) Availability of portable water system</p> <p>(g) Agencies participating in WATSAN</p>	<p>Yes/No</p> <p>Yes/No</p> <p>Yes/No</p> <p>Scale 1 to 5 where 1 is no damages and 5 is completely destroyed</p> <p>Yes/No</p> <p>List</p>
<p><b>15. Crops/Agriculture Damage</b></p> <p>(a) Crop Damaged</p> <ul style="list-style-type: none"> <li>- Typology</li> <li>- % Of Hectare damaged</li> <li>- In Upland/medium/low</li> <li>- Paddy or Non paddy</li> <li>- Irrigated or non-irrigated</li> </ul> <p>(b) Normal and actual rainfall assessment</p> <p>(c) Livestock loss</p> <p>(d) Availability of Health services for livestock</p> <p>(e) Cattle feed/folder availability</p> <p>(f) Damage to agriculture infrastructure</p>	<p>Mm</p> <p>Number</p> <p>Yes/No</p> <p>Number</p> <p>Tonnes</p>

	Scale 1 to 5 where 1 is no damages and 5 is completely destroyed
<p><b>16. Food/Nutrition</b></p> <p>(a) Availability of food/stocks          (1) Family          (2) Relief          (3) PDS          (4) Community Kitchen</p> <p>(b) Expected duration of the food stock</p> <p>(c) Most affected groups          - Infant          - Children          - Pregnant and lactating mothers          - Elderly</p> <p>(d) Where are the different groups located?</p> <p>(e) Levels of malnutrition?</p> <p>(f) Type of food required</p> <p>(g) Total quantity/ration levels required</p> <p>(h) How is the food supply and nutrition situation likely to evolve in coming weeks/months?</p>	<p>Yes/No</p> <p>Kg</p> <p>Tonnes</p> <p>Tonnes</p> <p>Kg</p> <p>Days</p> <p>To be ticked</p> <p>Days</p> <p>To be ticked</p>
<p>1. <b>15.Secondary Threats</b></p> <p>(a) Potentially hazardous sites          (b) Existence of epidemics          (c) Scarcity of Food          (d) Scarcity of Water          (e) Scarcity of Shelter          (f) Scarcity of Clothes          (g) Any other problem</p>	<p>List</p>
<p><b>16. Response</b></p> <p>(a) <u>Local</u>: Govt./NGOs/CSOs/Individuals          Type of assistance</p> <p>(b) <u>National</u>: Govt./NGOs/CSOs          Type of assistance</p> <p>(c) <u>International</u>: Govt./NGOs/CSOs          Type of assistance</p>	<p>To be ticked          Description</p> <p>To be ticked          Description</p> <p>To be ticked          Description</p>
<p><b>17. Logistic and Distribution system</b></p> <p>(a) Availability of Storage facilities          (b) Means of transport available          (c) Availability of Fuel          (d) Are there any distribution criteria already in place</p>	<p>Yes/No</p> <p>List</p> <p>Yes/No</p> <p>Yes/No</p>



<p>(h) Cold chain system</p> <p><b>1.3 Education:</b></p> <p>(a) Infrastructure temporary / permanent</p> <p>(b) Teachers</p> <p>(c) Teachers kits</p> <p>(d) Reading materials</p> <p>(e) Availability of mid-day meal</p> <p>Crop/Agriculture</p> <p>(a) Need of seeds</p> <p>(b) Fertilizer , Pesticide</p> <p>(c) Type of Seed required</p> <p>(d) Availability of local variety</p> <p>(e) Availability of resources</p> <p>Infrastructure:</p> <p>(a) Repair of roads</p> <p>(b) Repair of railways and bridges</p> <p>(c) Power Supply</p> <p>(d) Telecommunication</p> <p>(e) Equipments required for restoration</p> <p>(f) Manpower required</p>	<p>List</p> <p>Yes/No and specify location</p> <p>Yes/No and specify location</p> <p>List</p> <p>Number of Man days</p>
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- **Observation:**
- **Source of information:**
- **Site Visit:**
- **Interaction with affected population:**
- **Assessment Carried By:**

## **Guidelines for Requisitioning of Armed Forces in Aid of Civil Administration**

### **Procedure for Provision of Aid**

1. The Armed Forces are conscious of not only their constitutional responsibility in-aid to civil authority, but also, more importantly, the aspirations and the hopes of the people. Although such assistance is part of their secondary role, once the Army steps in, personnel in uniform wholeheartedly immerse themselves in the tasks in accordance with the Army's credo - **SERVICE BEFORE SELF.**

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

### **Requisition Procedure**

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

## Coordination

4. The responsibility for coordination of disaster relief operations at various levels is as follows:

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

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

- a) Infrastructure for command and control for providing relief. This would entail provision of communications and technical manpower.
- b) Search rescue and relief operations at disaster sites.
- c) Provision of medical care at the incident site and evacuation of casualties.
- d) Logistics support for transportation of relief materials
- e) Setting up and running of relief camps
- f) Construction and repair of roads and bridges to enable relief teams/ material to reach affected areas.
- g) Repair, maintenance and running of essential services especially in the initial stages of disaster relief.
- h) Assist in evacuation of people to safer places before and after the disaster
- i) Coordinate provisioning of escorts for men, material and security of installations,

- j) Stage management and handling of International relief, if requested by the civil administration.

### **Disaster Relief Operation**

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

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

### **Procedure to Requisition Army, and Air Force**

- 7. It will be ensured by the local administration that all local resources including Home Guards, Police and others are fully utilised before assistance is sought from outside. The District Collector will assess the situation and project his requirements to the State Government. District Control Room will ensure that updated information is regularly communicated to the State Control Room, Defence Service establishments and other concerned agencies.
- 8. District Collector will apprise the State Government of additional requirements through State Control Room and Relief Commissioner of the State.
- 9. Additional assistance required for relief operations will be released to the District Collector from the state resources. If it is felt that the situation is beyond the control of state administration, the Relief commissioner will approach the Chief Secretary to get the aid from the Defence Services. Based on the final assessment, the Chief Secretary will project the requirement as under while approaching the Ministry of Defence, Government of India simultaneously for clearance of the aid:

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

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

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

10. Co-Ordination between Civil and Army: For deployment of the Army along with civil agencies on disaster relief, co-ordination should be carried out by the district civil authorities and not by the departmental heads of the line departments like Police, Health & Family Welfare, PWD and PHED etc.
11. Overall Responsibility When Navy and Air Force are also being Employed: When Navy and Air Force are also involved in disaster relief along with the Army, the Army will remain overall responsible for the tasks unless specified otherwise.
13. Principles of Employment of Armed Forces
  - a) **Judicious Use of Armed Forces:** Assistance by Armed Forces should be requisitioned only when it becomes absolutely necessary and when the situation cannot be handled by the civil administration from within its resources. However, this does not imply that the response must be graduated. If the scale of disaster so dictates, all available resources must be requisitioned simultaneously.
  - b) **Immediate Response:** When natural and other calamities occur, the speed for rendering aid is of paramount importance. It is clear that, under such circumstances, prior sanction for assistance may not always be forthcoming. In such cases, when approached for assistance, the Army should provide the same without delay. No separate Government approval for aid rendered in connection with assistance during natural disasters and other calamities is necessary.
  - c) **Command of Troops:** Army units while operating under these circumstances continue to be under command of their own commanders, and assistance rendered is based on task basis.

- d) **No Menial Tasks:** While assigning tasks to troops, it must be rendered that they are not employed for menial tasks e.g. troops must not be utilised for disposal of dead bodies.
- e) **Requisition of Aid on Task Basis:** While requisitioning the Army, the assistance should not be asked for in terms of number of columns, engineers and medical teams. Instead, the- civil administration should spell out tasks, and leave it to army authorities to decide on the force level, equipment and methodologies to tackle the situation.
- f) **Regular Liaison and Co-ordination:** In order to ensure that optimum benefit is derived out of Armed Forces employment, regular liaison and coordination needs to be done at all levels and contingency plans made and disseminated to the lowest level of civil administration and the Army.
- g) **Advance Planning and Training:** Army formations located in areas prone to disaster must have detailed plans worked out to cater for all possible contingencies. Troops should be well briefed and kept ready to meet any contingency. Use of the Vulnerability Atlas where available must be made.
- h) **Integration of all Available Resources:** All available resources, equipment, accommodation and medical resources with civil administration, civil firms and NGOs need to be taken into account while evolving disaster relief plans. All the resources should be integrated to achieve optimum results. Assistance from outside agencies can be superimposed on the available resources.
- i) **Early De-requisitioning:** Soon after the situation in a disaster-affected area has been brought under control of the civil administration, Armed Forces should be de-requisitioned.

**REQUISITION FOR ARMY AID BY CIVIL AUTHORITIES**

**(NATURAL CALAMITIES)**

Reference No. : Calamities

1. From :
2. To :
3. For Information -
4. Date and time origination of demand -
5. Situation as at area \_\_\_\_\_ an  
Heavy flood in area \_\_\_\_\_ due rising of rigor  
\_\_\_\_\_ civilians marooned. Own evacuation resources  
insufficient meet requirement. In view continuous heavy, rains in upper regions, more areas  
may be affected marooning another \_\_\_\_\_ civilians of \_\_\_\_\_ region.
6. **Type of extent of aid required for**
  - (i) Equipment and personal, to evacuate marooned civil.
  - (ii) Medical assistance for approximately \_\_\_\_\_ civilians.
  - (iii) Tentage for \_\_\_\_\_ families if available.
7. **Likely duration and period of aid required**  
for \_\_\_\_\_ days with effect from \_\_\_\_\_  
(present situation permitting)
8. **Officer in charge Army aid to contact.**
9. **Name of civil Liaison Officer detailed.**  
Mr. \_\_\_\_\_ (Telephone No.) \_\_\_\_\_
10. **Arrangement made by civil authorities to guide Army aid to place of operations.**  
Mr. \_\_\_\_\_ will meet Army aid part at \_\_\_\_\_ on receipt of  
information from Army authorities)

11. **Special Instructions.**

- (i) School building at \_\_\_\_\_ being made available to house personnel and also for medical arrangements.
- (ii) Sufficient stocks of required medicines in the present contingency being made available to treat effected civilians population.
- (iii) Road Bridge at \_\_\_\_\_ is unserviceable.

12. Please acknowledge.

**Signature**

**Office Seal**

**DE-REQUISITION OF ARMY AID (NATUAL CALAMITIES)**

1. **Reference No.** \_\_\_\_\_ **Date:** \_\_\_\_\_
2. **From** \_\_\_\_\_ - \_\_\_\_\_
3. **To** \_\_\_\_\_ - \_\_\_\_\_
4. **Information** - \_\_\_\_\_
5. Army aid requisitioned vide our reference No. \_\_\_\_\_ of \_\_\_\_\_ is hereby de-requisitioned with effect from \_\_\_\_\_ hrs on \_\_\_\_\_.
6. Please acknowledge.

**Signature**

**Office Seal**

Appointment

**Annexure-J**

**A list of Local Inhabitants who are well conversant with the local short routes and local conditions in case of blockade of roads.**

Sl. No.	Panchayat Committee	Panchayat Name	Designation	Name of Representative	Postal Address	Phone Number
1	Nahan	Aamwala Sainwala	Panchayat Head	Smt. Premlata	71/2, Sainwala Sainwala Nahan-173001	9805431977
2		Kathah Sheetla	Panchayat Head	Shri Prem Singh	46/1C, Khairi Chaingan Kangata Felag Nahan-173022	9816740755
3		Kyari	Panchayat Head	Shri Pratap Singh	13/1, Kyari, (Block No. 17) Chakli Nahan-173001	9816354617
4		Kaala Aam	Panchayat Head	Shri Rajesh	61/4, Moginand (Salani) Moginand Nahan-173030	9882809334
5		Kotla Molar	Panchayat Head	Smt. Indra	56/2A, Kotla Molar, Kotla Molar Nahan-173001	8894143782
6		Kolawala Bhood	Panchayat Head	Shri Prem Pal	67, Kolawala Bhood, (Block No.21) Kolawada Bhood Nahan-173001	9816308493
7		Chakli	Panchayat Head	Shri Jai Prakash	19/1, Dheerath Banethi Nahan-173001	9418283901
8		Trilokpur	Panchayat Head	Shri Krishan Lal	66, Kyarwala Trilokpur Nahan-173001	9882295599
9		Thana Kasoga	Panchayat Head	Smt. Minka Devi	12/1, Luhli Thana Kasoga Nahan-173001	9805496877
10		Dadahu	Panchayat Head	Shri Mahesh Kumar	124, Chuli Dadahu (Block No. 53) Dadahu Nahan-173022	9418993280

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
11		Devka Pudla	Panchayat Head	Shri Naresh Kumar	4/1, Devka Pudla Nahan Nahan-173001	9418227010
12		Devni	Panchayat Head	Shri Rashid Mohamad	83/1, Kontharo Vikram Bagh Nahan-173001	9816923014
13		Dhadheda	Panchayat Head	Shri Virendra Singh	6/4, Koon Panjahal Nahan-173001	9736136026
14		Neharswar	Panchayat Head	Smt. Namneeta Devi	3/1, Roonjachanadh Chalana Nahan-173001	9817145326
15		Nehli Dheedha	Panchayat Head	Smt. Shalini Sharma	27, Nehali Jamta Nahan-173001	9817925728
16		Naavni	Panchayat Head	Smt. Kamla Devi	46/1, Naavni Jamta Nahan-173001	9129226826
17		Nahan	Panchayat Head	Shri Sanjeev Kumar	69, Majholi Nahan Nahan-173001	9418127337
18		Panjahal	Panchayat Head	Shri Rajesh Kumar	38, Oan Khadri, Panjahal Nahan-173001	9816756766
19		Panaar	Panchayat Head	Shri Ram Swaroop	34/1, Panaar Kalyan Panar Nahan-173022	9459024934
20		Parada	Panchayat Head	Smt. Sunita Devi	13/1, Parada Parada Nahan-173001	9459114010
21		Palio	Panchayat Head	Smt. Shakuntla Devi	15/1, Bhogpur Simbalwala (Block No. 31) Palio Nahan-173030	8894137988
22		Bagad	Panchayat Head	Smt. Reena Devi	59/1, Jaincha Majhai (Block No. 67) Jaincha Majhai Nahan-173022	9805167975

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<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
23		Bankala	Panchayat Head	Smt. Vimla	1/1, Bankala Shambhuwala Nahan-173001	9805433822
24		Banethi	Panchayat Head	Shri Om Prakash	21, Kangar Ghood Banethi Nahan-173001	9816703089
25		Burma Papdi	Panchayat Head	Smt. Poonam Kumari	74/1B, Jangla Bhood Barma Papdi Nahan-173030	9816483824
26		Birla	Panchayat Head	Shri Ram Dutt	12/1A, Dagyon (Block No. 46) Thana Kasoga Nahan-173022	9736244464
27		Mahipur	Panchayat Head	Smt. Suma Devi	49/1, Mahipur Mahipur Nahan-173001	9817416698
28		Maatar	Panchayat Head	Smt. Kanta Devi	35/1, Sambhalka Maatar Nahan-173001	9805977120
29		Ramadhon	Panchayat Head	Shri Kuldeep	104/1, Dhon Rama Nahan-173001	8091481387
30		Vikrambagh	Panchayat Head	Smt. Promila Devi	40/1A, Veer Vikram Aabad (Block No. 51) Vikram Bagh Nahan-173001	9816433395
31		Satiwala	Panchayat Head	Smt. Ramesh Kaur	17, Jogiban (Block No. 71) Shambhuwala Nahan-173001	9736623025
32		Sain ki Sair	Panchayat Head	Smt. Leela Devi	11/1, Talon (Block No. 106) Nahan Nahan-173001	9816643026
33		Surla	Panchayat Head	Shri Satya Ram	14/1, Surla Charjan Surla Nahan-173001	9805349779

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<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
34		Salani Katola	Panchayat Head	Smt. Anita Devi	95, Mohliya Katola Sainwala Nahan-173030	9857513612
35	Pachad	Kathar	Panchayat Head	Smt. Rajni	14/1 A, Kanrari Tikkari Kuthar Pachad -173024	9816348459
36		Kaatli	Panchayat Head	Smt. Sita Devi	28, Thakur Dwara Thakur Dwara Pachad -173024	8894270348
37		Kotla Panjola	Panchayat Head	Smt. Kamla Devi	75 A, Urfadh Kotla Panjola Pachad -173024	9625002226
38		Chamenji	Panchayat Head	Smt. Indira Devi	48, Sarol Basech Jayhar Pachad -173024	9129474953
39		Jayhar	Panchayat Head	Smt. Kusum Lata	40, Jehar Jaihar Pachad -173024	9805984144
40		Jaman ki Sair	Panchayat Head	Shri Baldev Singh	45/1, Durang Jaman ki Sair Pachad -173024	9816048582
41		Tikri Kathad	Panchayat Head	Smt. Sandhya Devi	132, Tikri Kathad Tikri Kuthad Pachad -173024	9625494510
42		Diggar Kinnar	Panchayat Head	Smt. Asha Devi	50/1, Diggar Kinnar Diggar Kinnar Pachad -173001	9817271725
43		Dilman	Panchayat Head	Smt. Kinori Devi	13/1, Chanduli Kujji Pachad -173229	9817280403
44		Drabali	Panchayat Head	Smt. Ranjana	19/1, Lana Kasar Sarsu Pachad -173024	9816591940
45		Dado Devirai	Panchayat Head	Shri Sadanand	22, Baryuri Dado Devariya Pachad -173024	9817157282
46		Dhar Tikkari	Panchayat Head	Shri Jai Pal Singh	29, Kot Dadol Jayhar Pachad -173024	9817414335

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<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
47		Naina Tikkar	Panchayat Head	Shri Shiv Kumar	49A, Naina Chadyar Naina Tikkar Pachad - 173229	9418078072
48		Neri Nawan	Panchayat Head	Shri Jaswant Singh	48/1, Soda Dhyadi Thodh Niwar Pachad - 173024	9418148204
49		Naarag	Panchayat Head	Shri Nirmal Kumar	59/1, Narag Narag Pachad -173024	9816343775
50		Bajga	Panchayat Head	Smt. Pratibha Rani	62/3, Gaagal Shikor Gaagal Shikor Pachad - 173001	9816751633
51		Bannahghin ni	Panchayat Head	Shri Anup Kumar	16, Kahan Banah ki Sair Pachad -173024	9816670454
52		Banni Bakholi	Panchayat Head	Smt. Khema Devi	37, Ghirarh Sandrol Dhangyar Pachad - 173024	9625250691
53		Bagthan	Panchayat Head	Shri Mohinder Singh	14/1, Kanyo Shirla Bagthan Pachad - 173024	9816344913
54		Baghpashog	Panchayat Head	Shri Vijay Kant	2, Nichla Panwa Panwa Pachad -173024	9418396955
55		Mahlog Lal Tikkar	Panchayat Head	Smt. Romila Devi	23/1, Kathed Jhadola Malhoti Pachad - 173024	9817084282
56		Mangarh	Panchayat Head	Shri Lekh Raj	103, Mangarh Mangarh Pachad - 173024	9817389613
57		Lana Banka	Panchayat Head	Shri Balmukund	15, Katyana Sareta Baghthan Pachad - 173001	9418616785

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<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
58		Lana Bhalta	Panchayat Head	Shri Jagjit Singh	11, Badu Sarera Chapang Pachad - 173101	9816400502
59		Vaasni	Panchayat Head	Smt. Meena Devi	11/1, Gandal Vaasni Pachad -173024	8894906765
60		Shariya	Panchayat Head	Shri Kuldeep Singh	96/1, Shadiya Pajoga Shadiya Pachad - 173024	9817554535
61		Surla Janot	Panchayat Head	Shri Satpal Singh	26, Banalag Janot Pachad -173024	9816387221
62		Sarahan	Panchayat Head	Shri Vinod Kant	62, Tikkar Sarahan Pachad -173024	9816076893
63		Sadhna Ghat	Panchayat Head	Smt. Seema Devi	12/1, Lajhogarhi Naina Tikkar Pachad -173229	8894991097
64		Sirmori Mandir	Panchayat Head	Smt. Tripta Devi	62/1, Bhailan Bhelan Pachad -173024	9418666853
65	Paonta Sahib	Ajoli	Panchayat Head	Shri Ashok Kumar	4/2, Narayangarh (Block No.120) Nihalgarh Paonta Sahib-173025	9418028894
66		Amboya	Panchayat Head	Smt. Satya Devi	99/1, Amboa (Block No.172) Rajpura Paonta Sahib-173025	9816233503
67		Amarkot	Panchayat Head	Shri Dhani Ram	78/1, Behdewala Paonta Sahib Paonta Sahib-173025	9218877650
68		Kunja	Panchayat Head	Shri Akbar Ali	102/1, Kunja (Block No. 134) Paonta Sahib Paonta Sahib-173025	9816293658
<b>Sl.</b>	<b>Panchayat</b>	<b>Panchayat</b>	<b>Designatio</b>	<b>Name of Representa</b>	<b>Postal Address</b>	<b>Phone</b>

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

<b>No.</b>	<b>Committee</b>	<b>Name</b>	<b>n</b>	<b>tive</b>		<b>Number</b>
69		Kathwad	Panchayat Head	Shri Shurish Kumar	0, Chamala Udena Paonta Sahib-173029	8894428389
70		Kundio	Panchayat Head	Smt. Sunita Choudhary	16/1, Ajeeyawala Jamniwala Paonta Sahib-173025	9318594609
71		Kamrau	Panchayat Head	Shri Tota Ram	83/1, Kamrau (Block No. 32) Kamrau Paonta Sahib-173029	9805229293
72		Kanti Mashwa	Panchayat Head	Smt. Vidya Devi	16B, Mashwa Kanti (Pati Rathore Bhoradh ko chodkar Paonta Sahib-173029	9882210976
73		Kando Kansar	Panchayat Head	Smt. Rita Devi	88A, Kansar Kando Kansar Paonta Sahib-173022	9418478342
74		Kando Chyog	Panchayat Head	Smt. Kanta Devi	0, Kando Jamana Shilai-173029	9816598155
75		Kodga	Panchayat Head	Shri Joginder Singh	0, Kodga Kodga Paonta Sahib-173029	9805763005
76		Kolar	Panchayat Head	Smt. Rimpi Devi	0, Kolar Kolar Paonta Sahib-173001	9805078848
77		Khodri	Panchayat Head	Smt. Bimla Devi	140, Gojar Agyan (Block No. 197) Khodri Paonta Sahib-173025	8979731176
78		Gorkhuwala	Panchayat Head	Smt. Surekha Choudhary	0, Gorkhuwala Gorkhuwala Paonta Sahib-173025	9418648049
79		Chandni	Panchayat Head	Shri Mahendra Singh	0, Chandni Bharog Baneri Paonta Sahib-173025	9805914122
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representa</b>	<b>Postal Address</b>	<b>Phone Number</b>

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

Sl. No.	Panchayat Committee	Panchayat Name	Designation	Name of Representative	Postal Address	Phone Number
80		Chacheti	Panchayat Head	Smt. Saroj Devi	1/1, Gatu Navi Chacheti Paonta Sahib-173029	9805954419
81		Jamna	Panchayat Head	Smt. Rajo Devi	173/(A), Jamna Jamna Paonta Sahib-173029	9805715177
82		Jamniwala	Panchayat Head	Smt. Neeta Devi	0, Bayekua Jamniwala Paonta Sahib-173025	9418108584
83		Tatiyana	Panchayat Head	Smt. Mitra Devi	237/1, Tatiyana (Block No. 19) Paonta Sahib-173029	9805940148
84		Danda	Panchayat Head	Shri Kalyan Singh	29/1, Danda (Block No. 169) Rajpur Paonta Sahib-173025	9816859845
85		Danda Kala Aamb	Panchayat Head	Shri Santram Tomar	0, Toru Danda Aanj Paonta Sahib-173025	9418431051
86		Dobri Salwala	Panchayat Head	Shri Prem Singh	28/1, Dobri (Block No. 150) Gorkhuwala Paonta Sahib-173025	9418210536
87		Thontha Zhakhal	Panchayat Head	Smt. Gangi Devi	63/1, Thontha Jhakhal Tatiyana Paonta Sahib-173029	9805979313
88		Dugana	Panchayat Head	Smt. Indu Pundir	0, Dugna, Dugana Paonta Sahib-173029	9805342987
89		Dhaura Kuan	Panchayat Head	Shri Malkit Singh	8/2, Bharapur (Block No. 49) Dhaura Kuan Paonta Sahib-173001	9816178242
90		Nadheta	Panchayat Head	Smt. Lata Devi	0, Nageta Nageta Paonta Sahib-173025	8894178750
91		Nawada	Panchayat Head	Smt. Samjida Begum	0, Nawada Shivpur Paonta Sahib-173025	9816483318

**District Disaster Management Plan 2012, Sirmaur (H. P.)**

92		Nihalgarh	Panchayat Head	Shri Ramprakash	0, Jwalapur Nihalgarh Paonta Sahib-173025	9418227125
93		Padduni	Panchayat Head	Smt. Anita Devi	0, Giri Nagar Giri Nagar Paonta Sahib-173020	9805022702
94		Puruwala	Panchayat Head	Shri Baljeet Singh Nagra	0, Puruwala Puruwala Paonta Sahib-173001	9318886139
95		Palhodi	Panchayat Head	Shri Barkat Ali	0, Palhori Dhaharpur Paonta Sahib-173001	9466445798
96		Patlio	Panchayat Head	Shri Pritpal Singh	165, Surajpur (Block No. 93) Puruwala Paonta Sahib-173001	9418331979
97		Pipliwala	Panchayat Head	Shri Upendra Sharma	0, Pipliwala Puruwala Paonta Sahib-173025	9418477286
98		Poka	Panchayat Head	Smt. Satya Devi	12/1, Kaner Dhamon (Block No. 60) Gorkhuwala Paonta Sahib-173025	9816157166
99		Fulpur	Panchayat Head	Smt. Taro Devi	44/1, Fulpur Shamshegarh Shivpura Paonta Sahib-173025	8091480474
100		Badwas	Panchayat Head	Shri Ram Lal	0, Barwas Kamrau Kamrau-173020	9805276695
101		Badhana	Panchayat Head	Shri Rangi Lal	9/3, Killodh Bhadhana Paonta Sahib-173025	9837713881
102		Badripur	Panchayat Head	Shri Jasbir Singh	10, Shubhkhera (Block No. 113) Badripur Paonta Sahib-173025	9418618529
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
103		Banod	Panchayat Head	Shri Chatar Singh	0, Banor Banor Paonta Sahib-173025	8894682542

District Disaster Management Plan 2012, Sirmaur (H. P.)

				Chouhan		
104		Byas	Panchayat Head	Smt. Usha Devi	0, Byas Byas Paonta Sahib-173025	9882372754
105		Bahral	Panchayat Head	Smt. Geeta Devi	172/1, Bahral Bahral Paonta Sahib-173029	9882418857
106		Bokalpaw	Panchayat Head	Shri Tota Ram	150/1, Bokala Paw Shila Shilai-173029	8894427053
107		Bhangani	Panchayat Head	Shri Anjana Sharma	0, Bhagani Bhagani Paonta Sahib-173025	9805231319
108		Bhajon	Panchayat Head	Smt. Surmi Devi	0, Bhajon Koiga Shilai-173025	9805448850
109		Bhanhet Haldwadi	Panchayat Head	Shri Joginder Singh	0, Kudla Bharog Baneri Paonta Sahib-173001	8894899923
110		Bharod Bhanedi	Panchayat Head	Smt. Beena Thakur	0, Pudli Bharog Baneri Paonta Sahib-173022	9816099427
111		Bhatawali	Panchayat Head	Shri Ajmer Singh	23/1, Bhatawali (Block No. 101) Paonta Sahib Paonta Sahib-173025	9418822289
112		Munglawal a Kartarpur	Panchayat Head	Smt. Prema Devi	25, Taal Sirmor (Block No. 148) Saton Paonta Sahib-173028	9418173935
113		Madhana	Panchayat Head	Smt. Maneesha Devi	0, Madhana Birla Paonta Sahib-173022	9418175700
114		Maajra	Panchayat Head	Smt. Manju Agarwal	0, Maajra Maajra Paonta Sahib-173001	9318742741
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
115		Manpur Devda	Panchayat Head	Shri Narendra Pal	0, Manpur Devda Manpur Devda Paonta Sahib-173025	9318075537

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116		Maalgi	Panchayat Head	Shri Joginder Singh	0, Naadi Satoun Paonta Sahib-173025	9816376531
117		Misharwala	Panchayat Head	Shri Kamil	83/1 Misharwala (Block No. 78) Misharwala Paonta Sahib-173022	9318708609
118		Rajpur	Panchayat Head	Smt. Bala Devi	43, Kangra Gudasa (Block No. 175) Rajpur Paonta Sahib-173025	9805353983
119		Rampur Banjaran	Panchayat Head	Shri Shashi Kala	0, Majri Girinagar Paonta Sahib-173020	9418284106
120		Shakholi	Panchayat Head	Shri Hukmi Ram	74, Sakholi Koiga Paonta Sahib-173029	9882702055
121		Sharli Manpur	Panchayat Head	Smt. Asha Devi	58/2, Sharli Manpur (Block No. 46) Sharli Shilai-173029	9805327229
122		Shawga	Panchayat Head	Smt. Raksha Devi	25/3 B, Chitli Shawga Paonta Sahib-173029	9816129319
123		Shilla	Panchayat Head	Shri Ranjeet Singh	15/1, Shilla Shilla Shillai-173029	9816356814
124		Shivpur	Panchayat Head	Shri Manjit Singh	22, Bhungrani Shivpur Paonta Sahib-173025	9418060952
125		Shiva	Panchayat Head	Shri Ramesh Chandra	0, Shiva Shiva Paonta Sahib-173025	9816820481
126		Satoun	Panchayat Head	Shri Rajnish Chouhan	0, Satoun Satoun Paonta Sahib-173025	9816820281
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
127		Sainwala	Panchayat Head	Shri Ram Murti	0, Sainwala Sainwala Paonta Sahib-173021	8894640955
128		Haripur	Panchayat	Smt. Nirmala	33/2, Haripur Khol Haripur Khol Paonta	9418174061

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		Khol	Head	Jung	Sahib-173001	
129	Rajgarh	Karganu	Panchayat Head	Shri Ratan Chand	9, Lanaro Karganu Rajgarh-173223	9817166271
130		Kathli Bharan	Panchayat Head	Shri Madan Singh	60, Kotla Mangan Kathli Bharan Rajgarh-173101	9816415650
131		Kotla Bangi	Panchayat Head	Smt. Usha Devi	7, Salech Darabala Kotla Bangi Rajgarh-173223	9817084643
132		Koti Padog	Panchayat Head	Shri Arun Kumar	49/3, Kufar Mod Bharoli Rajgarh-171226	9418054870
133		Kothia Jhajhar	Panchayat Head	Shri Kushal Singh	35/1, Kothia Jhajhar Rajgarh Rajgarh-173101	9805420074
134		Chagtoli	Panchayat Head	Shri Asha Prakash	43/1, Shamoga Chogtali Rajgarh-173101	9816395245
135		Jadol Taproli	Panchayat Head	Shri Shishupal	Pen Kuffar Pen Kuffar Taproli Rajgarh-173223	9805449503
136		Tali Bhujal	Panchayat Head	Shri Durga Singh	137/4, Tali Bhujal Bhujal Rajgarh-171226	9816332057
137		Tikkar	Panchayat Head	Smt. Suman	2/1, Mandeda Kawga Rajgarh Rajgarh-173101	9816453001
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
138		Dibbar	Panchayat Head	Smt. Sarita Devi	41/1, Kufar Matlori Leulana Rajgarh-173223	9816548768
139		Dimbar	Panchayat Head	Kumari Neelam	37, Dimbar Dimbar Rajgarh-173101	9805919502

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140		Thana Basotri	Panchayat Head	Smt. Soma Devi	2/1, Fatehpur Sadhodi Radu Ghati Rajgarh-173101	9882328475
141		Thod Niwad	Panchayat Head	Smt. Shakuntla Devi	45C, Reddy Gusan Thod Niwad Rajgarh-173101	9816562929
142		Devthi Majhgaon	Panchayat Head	Shri Om Prakash	32/1, Majhgaon Devthi Maghgaon Rajgarh-173101	9817320956
143		Dahan	Panchayat Head	Shri Jagat Singh	9, Thada Bhudra Rajgarh-173101	9129971314
144		Didag	Panchayat Head	Shri Ramesh Kumar	69/1, Didag Khanotiya Didag Rajgarh-173101	9805288465
145		Naineti	Panchayat Head	Smt. Upasna	47/1, Naineti Shargaon Rajgarh-173223	9817193533
146		Nebrati Bhaghot	Panchayat Head	Shri Om Prakash	9/1 C, Teer Ganoh Haban Rajgarh-173101	9816361718
147		Neri Kotli	Panchayat Head	Smt. Meera Devi	4/1, Darena Shaya Chabron Rajgarh-173101	9625287005
148		Neharpab	Panchayat Head	Smt. Kiran Bala	Bhayana Ghat Bhayana Ghat Churwadhar Rajgarh-173101	9805944333
149		Bohal Talia	Panchayat Head	Shri Nand Ram	37/1, Jol Dahan Rajgarh-173101	8894261740
150		Bhuriya	Panchayat Head	Shri Ram Gopal	28/1, Thanoga Bhaira Rajgarh-173101	9817445027
151		Bhanat	Panchayat Head	Shri Vinod Kumar	163, Sair Manon Shaya Shanora Rajgarh-173101	9817181953
152		Mathal Bhagog	Panchayat Head	Smt. Meera Devi	70, Mathal Bhagog Bhujal Rajgarh-171226	9418384094
153		Ranaghat	Panchayat Head	Smt. Santosh Sharma	103/2, Shargaon Shargaon Rajgarh-173223	9418269347

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154		Shalana	Panchayat Head	Smt. Seema Devi	56/1, Rajgarh (Block No. 23) 2 Rajgarh Rajgarh-173101	9817110549
155		Shaya Sanora	Panchayat Head	Smt. Nisha	6/1, Shimliya Sanora Rajgarh-173223	9816351717
156		Shilanji	Panchayat Head	Shri Kapoor Singh	51, Devthi Panchar Radu Ghati Rajgarh-173101	9418462646
157		Ser Jagas	Panchayat Head	Smt. Kaushalya	5/2, Dheel Pabiyana Pabiyana Rajgarh-173101	9816148210
158		Habban	Panchayat Head	Smt. Sarita	15/A, Dudhadiya Harech Habban Rajgarh-173101	9817687234
159	Shilai	Ajroli	Panchayat Head	Shri Suresh	Ajoli, Rahat Shillai-173027	9805878701
160		Ashyadi	Panchayat Head	Smt. Tara Devi	94, Ashyadi (Block No. 69) Timbi Shillai-173027	9805427288
161		Kyari Gundah	Panchayat Head	Shri Baldev Singh	171, Gundaha (B N 79) House No.140 to 233/2 Kyari Gundah Shillai-173027	9805943163
162		Kunhat	Panchayat Head	Shri Lal Singh	40, Kuhant (Block No. 65) Shillai Shillai-173027	9805852919
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
163		Kando Bhatnol	Panchayat Head	Shri Banshi Ram	Bhatrol, Kando Bhatrol Shillai-173027	9816338195
164		Kota Pab	Panchayat Head	Shri Tulsi Ram	207/1, Kota (Pati Kando, Harlog, Bonch, Bagan) Harlog Shillai-173029	9805983883
165		Koti Utrau	Panchayat Head	Smt. Neera Rana	Dhar, Koti Uttro Shillai-173029	9816496817

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166		Koti Baunch	Panchayat Head	Smt. Urmila Devi	55/1, Bonch Koti Bonch Shillai-173027	9805357787
167		Gwali	Panchayat Head	Shri Baldev Singh	Pashmi, Gwali Shillai-173027	9805367810
168		Jarwa Junaili	Panchayat Head	Shri Ran Singh	Jarwa Jarwa Shillai-173027	8894851016
169		Jhakando	Panchayat Head	Smt. Indira Devi	Dharwa, Jhakando Shillai-173027	9805135438
170		Drabal	Panchayat Head	Smt. Sheela Devi	Drabil, Jhakando Shillai-173027	9816361459
171		Nainidhar	Panchayat Head	Shri Suresh Kumar	Nainidhar, Shillai-173027	9816779659
172		Naya	Panchayat Head	Smt. Narda	91/1, Shillai (Block No. 62) Shillai-173027	9816053661
173		Naya Panjod	Panchayat Head	Shri Bharat Bhushan	Naya, Timbi Shillai-173027	9816576285
174		Panog	Panchayat Head	Shri Divdu Ram	Kinnu, Panog Shillai-173027	9805120108
175		Pab Manal	Panchayat Head	Smt. Bhavano Devi	Pab, Manal Shillai-173027	9805329452
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
176		Bakras	Panchayat Head	Smt. Sheela Devi	Kiyarika, Bakras Shillai-173027	9816125907
177		Bandoli	Panchayat Head	Shri Kalyan Singh	15/1, Bandali (Block No. 40) House No. 1 to 99 Kando Bhatrol Shillai-173027	9816076307
178		Bela	Panchayat Head	Smt. Sunita Devi	48/1, Bela (Block No. 43) Bela Shillai-173027	9805580043
179		Bali Koti	Panchayat	Shri	Erna, Bali Koti Shillai-	9805333979

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			Head	Dharam Singh	173027	
180		Manal	Panchayat Head	Smt. Shanti Devi	Demana, Gwali Shillai-173027	9805320121
181		Milla	Panchayat Head	Smt. Janki Rana	Millah Millah Shillai-173029	8894956555
182		Raast	Panchayat Head	Smt. Sumitra Devi	Bawta, Rohat Shillai-173027	9805807922
183		Loja Manal	Panchayat Head	Shri Jagat Singh	104/2, Loja Manal Shillai-173027	9816216880
184		Shakhaili	Panchayat Head	Smt. Asha Devi	Shakholi Khankah Shillai-173027	9805466294
185		Shiri Kyari	Panchayat Head	Smt. Mamtesh	Pawri, Shiri Kyari Shillai-173027	9816926333
186		Shilai	Panchayat Head	Shri Ramesh	Shillai Shillai-173027	9816311278
187		Halanh	Panchayat Head	Smt. Mamta Devi	Khadech Hallan Shillai-173027	8894992129
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
188	Sangdah	Andheri	Panchayat Head	Shri Daulat Ram	20, Mandoli Andheri Sangdah-173023	9805183676
189		Koti Dhiman	Panchayat Head	Shri Veer Singh	6/1, Koti Dhaman Sangdah-173023	9816261282
190		Khud Drabil	Panchayat Head	Smt. Deepo Devi	100/1, Jar Drabil Jarag Sangdah-173023	8894539713
191		Khala Kyar	Panchayat Head	Shri Rajendra	81/1, Dhartaran (Block No. 33) Dadahu	9816226106

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				Singh	Sangdah-173022	
192		Ganog	Panchayat Head	Shri Ramesh Kumar	90/1, Lavali Badang Sangdah-173023	8894205103
193		Gawahi	Panchayat Head	Smt. Kamlesh Devi	14, Gawahi Kuffar Sangdah-173023	9817358760
194		Gaihal	Panchayat Head	Shri Ved Prakash	10/1, Gaihal (Block No. 83) Korag Sangdah-173023	9816642015
195		Ghandoori	Panchayat Head	Smt. Anjana	2, Ghanduri Nohra Dhar	9857762492
196		Chadna	Panchayat Head	Smt. Rekha Devi	1/1 Chadna Sangdah-173104	9816897770
197		Chokar	Panchayat Head	Smt. Suman Chouhan	64/1 B, Chokar (Block No. 39) Chokar Nohadhar-173104	9418112524
198		Jarag	Panchayat Head	Smt. Satya Devi	84/1, jarag Sangdah-173023	8894812002
199		Jamu Koti	Panchayat Head	Smt. Sumoti	14/1 A. Kyarta Pipalti Jamu Koti Sangdah-173023	9816964305
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
200		Tikari Dakasana	Panchayat Head	Smt. Tota Devi	57/36, Tikari Daskana Sangdah-173023	9816643544
201		Devna	Panchayat Head	Shri Mohan Lal	77/1, Choras Tarna Devna Nohradhar-173023	9816192959
202		Deva Manal	Panchayat Head	Smt. Anita Pundir	21, Devamanal Sangdah-173023	9805767245
203		Dana Ghato	Panchayat Head	Smt. Sheela Devi	42/1, Dana Barag Sangdah-173023	9805130596
204		Divri	Panchayat	Shri Balbir	57/35, Haripurdhar	9805287166

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		Khandah	Head	Singh	Sangdah-173023	
205		Nohradhar	Panchayat Head	Smt. Narda Devi	36/1, Nohra (Block No. 10) Nohradhar -173023	9816031441
206		Badhol	Panchayat Head	Shri Jagat Ram	56/1, Badol Sangdah-173023	9459024891
207		Byog Tatwa	Panchayat Head	Shri Rikhi Ram	38/1, Byong-Tatwa (Block No. 82) Korag Sangdah-173023	9816330921
208		Baunal Kakog	Panchayat Head	Smt. Kyando Devi	1, Baunal Rajana Sangdah-173023	9418437406
209		Bhutli Manal	Panchayat Head	Smt. Suman Devi	27, Bhutli Bogdhar Sangdah-173023	9816563988
210		Bharadi	Panchayat Head	Shri Mohan Lal	82/1, Bharari (Block No. 7) Punnardhar Sangdah-173023	9816610384
211		Bhalona	Panchayat Head	Shri Kundan Singh	114/1, Bhaladh (Block No. 95) Bhalona Sangdah-173023	8894852264
212		Bhawai	Panchayat Head	Shri Jagmohan	7/7, Bhawai Sangdah-173023	9816960004
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
213		Bhatgarh	Panchayat Head	Smt. Kiran Devi	27/1A, Bhatgarh Sangdah-173023	9816170401
214		Bhatan Bhajodh	Panchayat Head	Shri Daulat Ram	5/1, Gatlog Sangdah-173023	9805776477
215		Mayina Ghadel	Panchayat Head	Smt. Dinesh Sharma	69, Mayina Ghadel Rajana Sangdah-173023	9816769218
216		Rajana	Panchayat Head	Smt. Chandra Kala	97/1, Rajana (Block No. 27) Rajana Sangdah-173023	9805545696

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217		Redly	Panchayat Head	Smt. Seema Devi	11/1, Bohrali (Block No. 15) Redly Sangdah-173023	8894991230
218		Ranfua Jabdog	Panchayat Head	Smt. Meera Devi	106/1, Ranfua (Block No. 62) Andheri Sangdah-173023	9806166495
219		Ludhiana	Panchayat Head	Smt. Amra Devi	179, Bhaun Kadyana Lana Palar Sangdah-173023	9816240503
220		Lana Palar	Panchayat Head	Smt. Santosh	93, Lana Palar Sangdah-173023	9736250555
221		Lanachaita	Panchayat Head	Shri Prithvi Singh	1, Rampur Lanacheta Sangdah-173023	9816959364
222		Shamra	Panchayat Head	Smt. Bhagwanti Devi	1, Garari Bog Dhar Sangdah-173023	9805880606
223		Shilabada (Shivpur)	Panchayat Head	Shri Sunder Singh	26/1, Shilabada, Shivpur Sangdah-173023	9805343703
224		Sangdah	Panchayat Head	Shri Tapendra Singh Chouhan	2/1, Sangdah Sangdah-173023	9418086389
<b>Sl. No.</b>	<b>Panchayat Committee</b>	<b>Panchayat Name</b>	<b>Designation</b>	<b>Name of Representative</b>	<b>Postal Address</b>	<b>Phone Number</b>
225		Sainj	Panchayat Head	Shri Jagat Singh	69/1, Sainj (Block No. 66) Sainj Sangdah-173023	9857804392
226		Satahan	Panchayat Head	Shri Ram Lal	95/1B, Kajwa Bhalona Sangdah-173023	9805194919
227		Sair Tandoola	Panchayat Head	Shri Madan	1, Barari Sair Tandoola Sangdah-173023	9805211024
228		Sangna	Panchayat Head	Shri Ramesh Kumar	36/2, Gata Mandwach (Block No. 95) Sangna Sangdah-173023	9816262330

**Rehabilitation Centers in Sirmaur-**

1. A-AASTHA SPECIAL SCHOOL,  
OPP. GENERAL POST OFFICE  
NEAR PUCCA TANK, NAHAN, DISTRICT SIRMAUR  
District-SIRMAUR (173001)  
HIMACHAL PRADESH, Ph: 01702-223945

2.

Sl no	Address	District
1	RH Nahan Sirmaur, Distt Sirmaur,(H.P), PIN-173001	Sirmaur
2	CH Paonta Sahib, Distt Sirmaur,(H.P), PIN- 173025	Sirmaur
3	SDH Rajgarh, Distt Sirmaur,(H.P), PIN- 173101	Sirmaur
4	Nahan Jail, Distt Sirmaur,(H.P.)	Sirmaur

3.

Chairperson  
Department of Psychology,  
Himachal Pradesh University,  
Summer Hill, Shimla, PIN 171 005  
Tel. No. 91-177- Extn. 5980

	Name	Designation
1	Dr. S.N. Ghosh	Professor
2	Dr. Roshan Lal Jinta	Associate Professor & Chairperson
3	Dr. Sunil Sharma	Assistant Professor
4	Dr. Anita Sharma	Assistant Professor

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