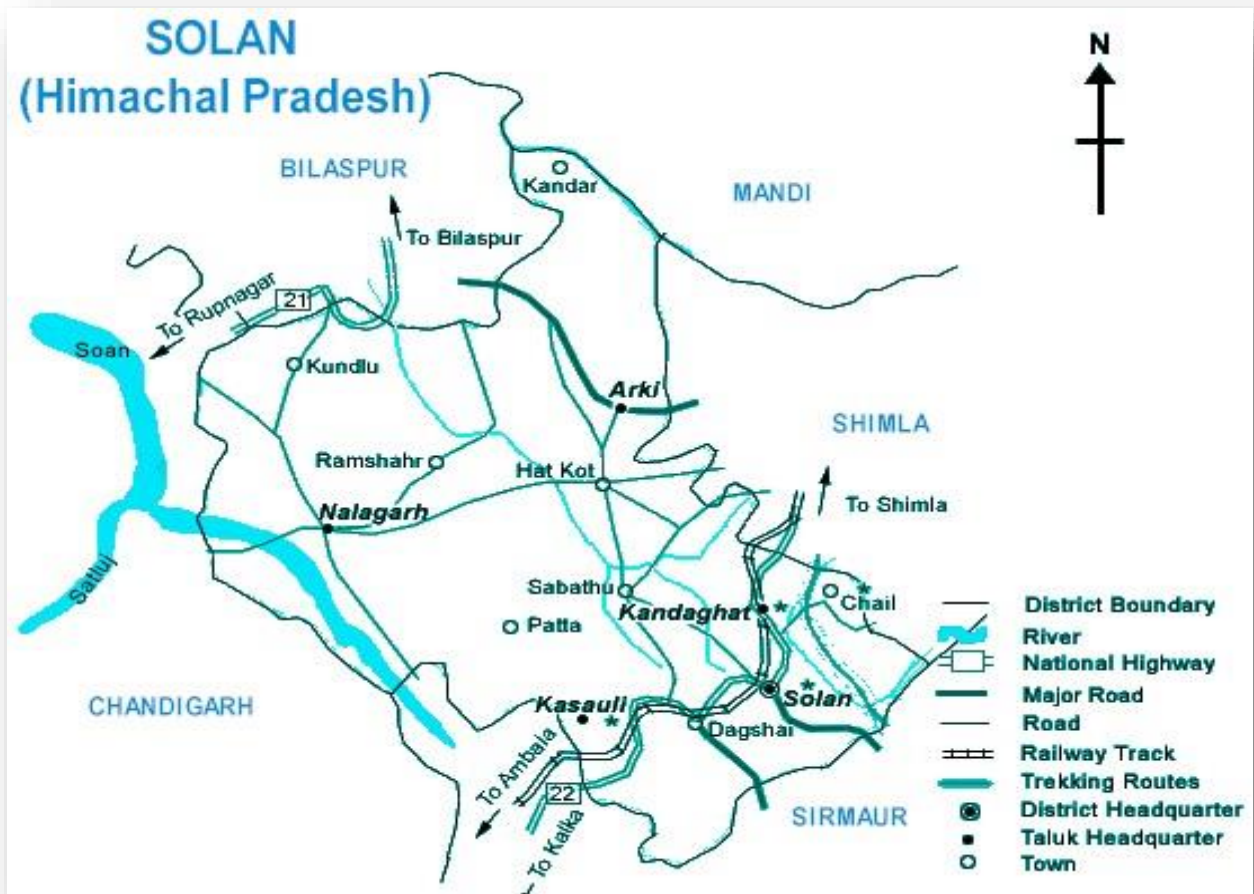


DISTRICT DISASTER MANAGEMENT PLAN



DISTRICT SOLAN -2013-14

Prepared and compiled by:-
Deputy Commissioner, Solan.

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).



Important Telephone/mobile numbers of District Administration :

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
Sh.Madan Chauhan, IAS, Deputy Commissioner, Solan	01792-220656	01792-220555	01792-220086 & 223704.	94182-00013
Sh.C.P.Verma, HAS ADM Solan	01792-223705	01792-220076	-do-	94184-92888
Subhash Saklani, HAS, AC to DC Solan.	01792-223706	01792-220610	-do-	94181-64050
Sh.Manoj Kumar Chauhan, HAS, AC to DC (Protocol) Parwanoo	01792-233165	01792-233165	-do-	94183-44337
Sh.Narender Chauhan, District Revenue Officer, Solan.	01792-224033	--	-do-	94598-78383
Sh.Bimla Devi, Tehsildar (Recovery)	01792-223702	--	01792-223704	--

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

Solan.

Information of SDMs :

Sr. No.	District	Name of Sub-Division	Name of SDM	Office Phone number	Mobile number
1.	Solan	Solan	Sh.Tashi Sandup, HAS	01792-223707	94182-48336
2.	Solan	Nalagarh	Sh. Yunush, IAS	01795-223024	88940-35375
3.	Solan	Arki	Sh.L.R.Verma, HAS.	01796-220666	94180-63777
4.	Solan	Kandaghat	Sh. Surender Mohan Sani, HAS	01792-256100	94183-41989

Information of Tehsildars and Naib-Tehsildars :

Sr. No.	District	Name of Sub-Division	Name of Tehsil or Sub-Tehsil	Name of Tehsildar and Naib-Tehsildar	Office phone number	Mobile number
1.	Solan	Solan	Solan	Sh.Kavita Thakur, Tehsildar Solan	01792-223708	94184-51110
2.	Solan	Solan	Solan	Sh.Rajinder Zinta	01792-223708	94184-77855
3.	Solan	Solan	Kasauli	Sh.Narayan Singh Chauhan, Tehsildar Kasauli.	01792-272037	94180-73572
4.	Solan	Solan	Kasauli	Sh.Sunder Sain Negi	01792-272037	94181-19316
5.	Solan	Solan	Krishangarh	Sh.Govind Singh Bali Naib-Tehsildar Krishangarh	01792-284556	98165-81585
6.	Solan	Nalagarh	Nalagarh	Sh.K.S.Lalta, Tehsildar Nalagarh	01795-223044	98163-21954
7.	Solan	Nalagarh	Nalagarh	Sh.T.L.Negi, Naib-Tehsildar, Nalagarh.	01795-223044	98051-87617
8.	Solan	Nalagarh	Ramshahar	Sh.Dharam Singh, Naib-Tehsildar, Ramshahar.	01795-258533	94185-72480
9.	Solan	Kandaghat	Kandaghat	Sh.Prem Singh Dulta, Tehsildar Kandaghat	01792-256143	94180-76633
10.	Solan	Kandaghat	Kandaghat	Sh.Yogender Sain, Naib-Tehsildar Kandaghat	01792-256143	89881-96088
11.	Solan	Arki	Arki	Sh.Girish Saklani, Tehsildar Arki	01796-220888	94180-16600
12.	Solan	Arki	Arki	vacant, Naib-Tehsildar Arki	01796-220888	--

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13.	Solan	Nalagarh	Baddi	Sh.Keshav Ram, Tehsildar Baddi.	01795- 244620	94181-63780
14.	Solan	Arki	Darlaghat	Sh.Joginder Sambra NT Darlaghat.	01796- 248101	94188-13299
15.	Solan	Kandaghat`	Mamlig	Sh.Yogender Sain, Naib-Tehsildar Kandaghat (officiating)	--	89881-96088

Telephone Numbers of Adjacent States/Districts DCs :

A. Adjacent District of Himachal Pradesh :

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
1. Dr.Ajay Sharma, IAS, Deputy Commissioner, Bilaspur.	01978- 224155	01978- 224150	01978- 223065	094180- 68206
2. Sh.Vikas Labroo, IAS, Deputy Commissioner,Sirmour	01702- 225025	01702- 225026	01702- 223175	94189- 00032
3. Sh.Dinesh Malhotra, IAS, Deputy Commissioner, Shimla	0177- 2655988	0177- 2803400	0177- 2653535	094184- 00454
4. Sh.Devesh Kumar, IAS, Deputy Commissioner, Mandi.	01905- 225201	01905- 236202	01905- 225213	098055- 00005

B. Adjacent Districts of other States :

Name of & Designation of the Deputy Commissioner.	Phone number Office	Mobile Number.
1. Sh.Mohammad Shayin, IAS, Deputy Commissioner, Chandigarh, Bridge Market, Sector 17, Chandigarh-17 (UT).	0172-2700109 (O). 0172-2784222 (R).	087250- 00786
2. Dr.S.S.Phulia, IAS, Deputy Commissioner, Panchkula, Sector-1 Panchkula (Haryana State)	0172-2585000	095011- 15566
3. Sh.Pradeep Kumar Aggarwal, IAS, Deputy Commissioner, Roopnagar (Punjab State).	01881- 221150 (O) 01881-221250 (R)	094638- 37820
4. Sh.Tejenter Pal Singh Sidhu, IAS, Deputy Commissioner, SAS Nagar, Mohali (Punjab State)	0172-2270761	098889- 87867.

Road Map with renowned areas location of District Solan :

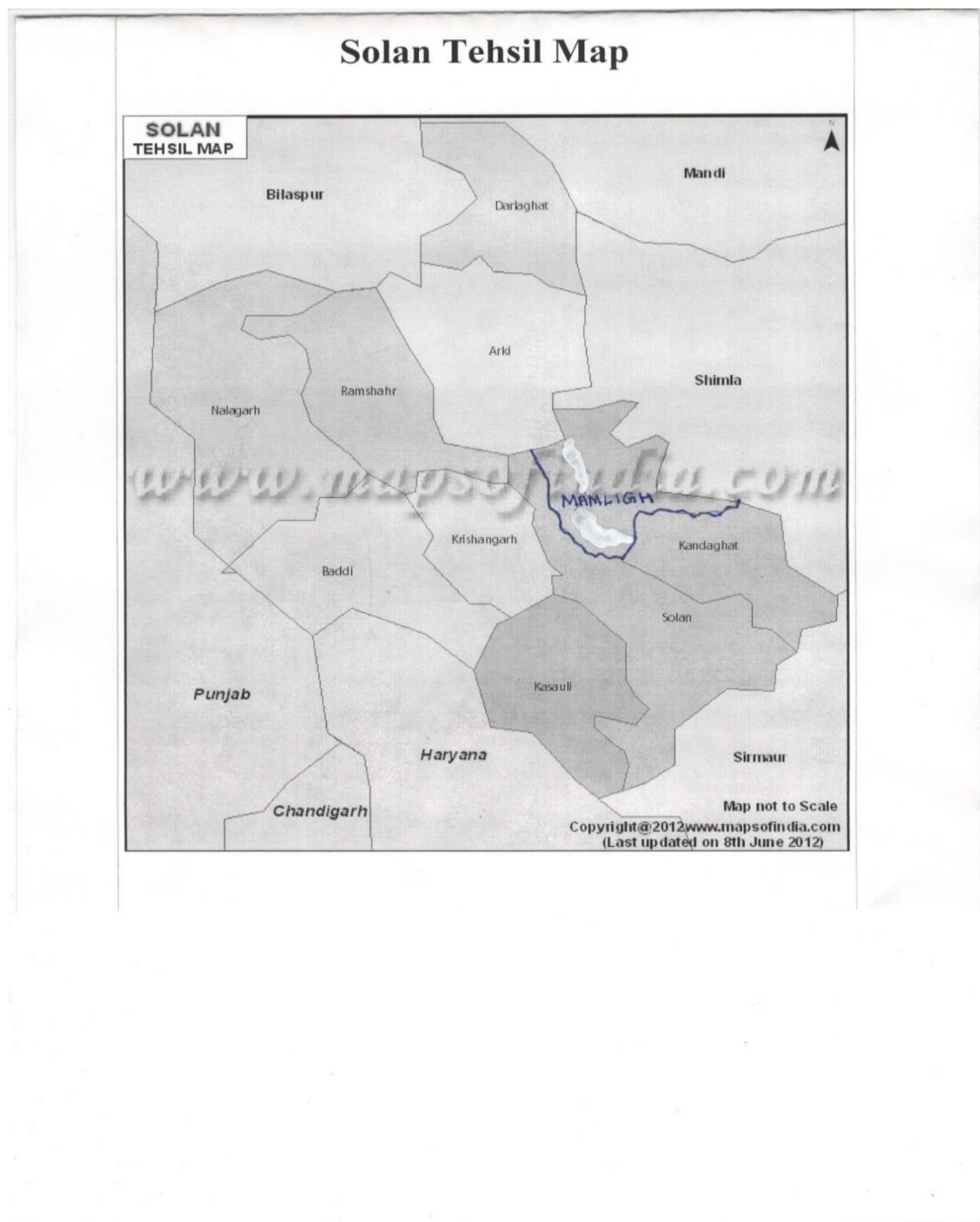


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EMERGENCY TELEPHONE NUMBERS OF SOLAN DISTRICT:-

Sr. No.	Department	Emergency Telephone number						
		Toll free numbers at Solan	Solan	Nalagarh	Arki	Baddi	Kandaghat	Parwanoo
	STD CODES	--	01792	01795	01796	01795	01792	01792
1.	Police Assistance	100	223841	223045	220710	246800	256229	233124
2.	Hospital/ Ambulance	102 & 108	223638	108 & 221204	108 & 220368	108 &	108 & 256137	108 & 234534
3.	Fire	101	223888	223294	Solan 223888	245352	Solan 223888	232233
4.	District Administration	1077	223702	223024	220666	244620	256100	233165
5.	Bus stand	--	226040	223076	220004	94184-55483	--	--
6.	Rest/Circuit house	--	223601	222199	220714	222199	223811	272067
7.	Electricity Complaint	--	223631	223039	220745	01795-244111	256128	233104
8.	Water complaint	--	223657	223083	220872	245183	256282	232359
9.	Railway Station	131	220674	No connectivity			256224	232625

Tehsilwise District Map of Solan District (H.P.).



District Disaster Management Plan, District Solan (Himachal Pradesh).

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CHAPTER-1

INTRODUCTION.

1.1 : INTRODUCTION :

A Disaster is an event triggered by natural or man-made causes that lead to sudden disruption of normalcy within society, causing widespread damage to life and property. Disruptions in the District like SOLAN is being caused by frequent disasters due to earthquake, landslides, droughts, floods, accidents, sudden fires, cloud bursts and cyclones and occasional man made tragedies like the gas leak etc. Besides growing numbers in our population are at a risk of prospective hazards such as air or road accidents, rail accidents, building collapse, electric fires, festival related disasters, forest fires, oil spills and fires etc. The safeguards within existing systems are limited and the risk involved is very high. If we look at the situation in pre-independence, drought and famines were the biggest killers in the State including whole country INDIA. The situation stands somewhat altered today, wherein it is probably a combination factors like increased irrigation development, improved reservoir management and flood security measures that have greatly reduced deaths caused by droughts and famines. Floods, cyclones and earthquake dominate 98% reported injuries with increasing frequency in recent years. Floods, droughts, cyclones, earthquake, landslides and avalanches and some major natural disasters that repeatedly and increasingly affect our country and the state.

1.2 : NECESSITY OF DISASTER MANAGEMENT PLAN:

The district is the administrative unit of the State for carrying out and streamlining the work of Government smoothly and efficiently. The District Disaster Management Committee headed by the Deputy Commissioner of the district would eventually have to manage the disasters. It is, therefore, imperative to equip and train the Administrative Officers and officials of the district, the disaster management team, local bodies and the people. The need to prevent the loss of lives and property is the driving force behind the disaster management programme.

Solan district has an area of 1936 sq.kms with 2562 revenue villages with a population of 5,76,670 as per census 2011. The district has been divided in 4 administrative sub-divisions, 5 Tehsils, 3 Sub-Tehsils, 13 Kanungo circles and 149 patwar circles. Patwari is the lowest functionary in revenue set-up, who reports all the eventualities and incidents occurring in his jurisdiction to Tehsil office and also prepare the relief/loss cases under the various provision of “**HIMACHAL PRADESH DISASTER MANAGEMENT & RELIEF MANUAL-2012**” and also assist his superiors to manage the situation.

1.3 : MULTI HAZARD APPROACH:

In the recent past the administrative response to natural disasters has progressively improved in terms of its effectiveness. This is mainly due to the well organized administrative machinery, presence of Himachal Pradesh Emergency Relief Manual, predetermined allocation of duties to concerned department head and officials at various level and recognized public and NGOs partnership. The District Administration, Sub-Divisional Magistrates, Tehsildars/Naib-Tehsildars alongwith the village level functionaries like Patwaris and Kanungos are always in readiness to help the people of the district during any natural calamities/disasters and impart their full co-operation.

1.4 : OBJECTIVE OF DISTRICT DISASTER MANAGEMENT PLAN:

Basic objective of the District Disaster Management Plan is to act quickly and to take suitable action on requirement and put all the auxiliary agencies into service in affected areas as per duties assigned to them.

1.5 : RESPONSIBILITY FOR UPDATION OF DDMP:

The Deputy Commissioner, Solan is responsible for revision and updation of District Disaster Management Plan annually and from time to time whenever it is required to be revised or necessity is felt for its revision. All concerned departments will provide necessary input information regarding In the recent past the administrative response to natural disasters has progressively improved in terms of its effectiveness. This is mainly due to the well organized administrative machinery, presence of Himachal Pradesh Emergency Relief Manual, predetermined allocation of duties to concerned department head and officials at various level and recognized public and NGOs partnership. The District Administration, Sub-Divisional Magistrates, Tehsildars/Naib-Tehsildars alongwith the village level functionaries like Patwaris and Kanungos are always in readiness to help the people of the district during any natural calamities/disasters and impart their full co-operation.

1.6 : UPDATION OF DISASTER RESOURCE NETWORK:

The information collected from all the departments including the army and air force headquarters in Solan district the database has been uploaded in the Govt. of India, Ministry of Home Affairs website in the <http://idrn.gov.in> and further efforts are being made to update the data entered for which all concerned departments has been directed to furnish the information on prescribed formats and also to convey the changes in every quarter, so as to enable office to keep the information updated.

1.7 : VISION OF THE DISTRICT ADMINISTRATION:

" DISASTER MANAGEMENT IS ALSO SEEN AS A PART OF GOOD GOVERNANCE." As such to create a disaster free district, through the confluence of cultures of preparedness, quick response, strategic thinking and prevention is the vision of **DISTRICT ADMINISTRATION**. Besides the sustained collective wisdom and effort by every possible means is the main mission. But the synergy of all the departments with the intensity of people's

participation to such commanding heights that disasters are averted and ensuing losses are minimal and infrequent is vision of district administration.

CHAPTER-2

District Profile

2.13 : District Solan :

Solan, as an independent district came into existence on 1st September, 1972, consequent upon reorganization of the districts in Himachal Pradesh. The district derives its name from Solan, the headquarter town, " **It is said that the name Solan is associated with the local deity SHOOLINI.**" Solan is considered as gateway to Himachal Pradesh. The district was carved out from the Solan and Arki Tehsils of the then "**MAHASU**" district and Tehsil Kandaghat and Nalagarh of the then Shimla district. Solan district has an area of 1936 sq.kms (according to the Surveyor General of India, which constitutes 3.49 percent of the total area of the State and ranks 9th amongst the district) with 2562 revenue villages with a population of 5,76,670 as per census 2011. The district has been divided in 4 administrative sub-divisions, 6 Tehsils, 3 Sub-Tehsils, 13 Kanungo circles and 149 patwar circles. Patwari is the lowest functionary in revenue set-up, who reports all the eventualities and incidents occurring in his jurisdiction to Tehsil office and also prepare the relief/loss cases under the various provision of "**HIMACHAL PRADESH DISASTER MANAGEMENT & RELIEF MANUAL-2012**" and also assist his superiors to manage the situation at grass root level. It is known as the "**Mushroom city of India**" because of the vast mushroom farming in the area as well as the mushroom research centre situated at Chambaghat. Solan is also called the "**City of Red Gold**", in reference to the bulk production of tomatoes in the area. The statistical profile of the district is as under :-

Sr. No.	Particulars/title	Statistical detail and % age as per census 2011.
1.	Total Area	1936 Sq.KMs.
2.	Total population. (a) Rural population & with % age (b) Urban population & with % age	5,76,670 4,74,592 i.e. 82.29 % 1,02,078 i.e. 17.71 %
3.	Literacy rate	75.23 %
4.	Administrative sub-divisions	4 viz. Solan, Arki, Nalagarh and Kandaghat
5.	Tehsils	6 viz. Solan, Arki, Baddi, Kasauli, Nalagarh and Kandaghat
6.	Sub-Tehsils	4 viz. Krishangarh, Ramshahar, Darlaghat and Mamlig.

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7.	Kanungo Circles	13
8.	Patwar Circles	149
9.	Total number of villages	2562
10.	Urban areas (Municipal Councils, Committee & Nagar panchayats).	5 i.e. Solan, Nalagarh, Arki, Parwanoo & Baddi.
11.	Cantonment boards	3 i.e. Subathu, Dagshai and Kasauli
12.	Total rural population	4,74,592 i.e. 82.29 % of the district.
13.	Main + Marginal Cultivators : 80,066 + 61,201 =1,41,267 (a) Male : 43,243 + 21,670 =64,913 (b) Female : 36,823 + 39,531 = 76,354	24.50 % 11.26 % 13.24 %
14.	Main + Marginal Agricultural labourers : 5,764 + 4,519 = 10,283 (a) Male : 3,775 + 2,381=6,156 (b)Female : 1,989 + 2,138 = 4,127	1.78 % 1.07 % 0.71 %
15.	Total workers ; 2,98,737 (a) Male : 1,90,001 (b) Female : 1,08,736	51.80 % 32.95 18.85
16.	Livestocks, fisheries, poultries and orchard labourers	2.39 %
17.	Total live stocks	3,18,672
18.	Total poultry	12,679
19.	Average rain per year	1420.4 mm
20.	Average temperature	0 to 40 degree celcius.

2.2 : Geography :-

The elevation of the district ranges from 300 to 3000 meters above mean sea level. The district has some parts of very low altitude and others of high altitude. The terrain is mostly mountaineous except valleys of Saproon in Solan Tehsil, Doon in Nalagarh Tehsil and kunihar in Arki Tehsil. The mountains of lower elevation are found in western and southern part of district comprising of Nalagarh and Arki Tehsils while higher ranges starts from central region and extends up to North-eastern corner of the district comprising Solan, Kasauli, Kandaghat and parts of Arki Tehsil. Mangal and Berral Panchayats of Arki Tehsil are situated on a very high mountain ranges and difficult terrain. Solan district is surrounded in the south by Punjab and Harayana States, while from the north by the Shimla district, on the western side by the Bilaspur district and eastern side by Sirmour district. It is located between latitude 76.42 degree and 72.20 degree east and latitude 30.65 degree and 31.15 degree north. This district is covered by catchment areas of four important rivers namely Satluj, Ashwani, Giri and Ghagher. Ashwani and Giri are the main tributaries of Yamuna and those of Satluj river are Kayar-Ka-Nala, Gambhar, Dabur Khud, Kuthar Nadi etc. Kaushalaya Nadi is the main tributary of Ghagar. Sirsa is the main stream in Nalagarh sub-division.

2.14 : Topography :-

Solan district is characterized by a wide variation in topography, geology, soil, climate, flora and fauna and ethnic groups with varied socio-cultural traditions. Human activities are the prime cause of environmental degradation, which may be direct or indirect, small or big, slow or fast, predictable or unpredictable depending on the nature, intensity and frequency of the disturbance to NATURAL ECOSYSTEM. Besides a large number of population resides along sides of small rivulets and rivers basins etc. and predominantly depend on agriculture. They are subjected to extremes of rainfall – either very high or very low, which leads to river flooding on one hand and also to food scarcity during drought on the other, therefore suffer from two major problems of floods and food insecurity. Besides the road accidents, earthquake, land slides, floods, industrial hazards, cloud bursts, building collapse and fires are also the major disasters.

2.15 : Temperature :-

Solan is a bracing hill station throughout the year but hotter as compared to Shimla. The climate of district Solan is sub-tropical to sub-temperate. The temperature ranges from 0° in winters to 40° in summers.

2.16 : Rainfall :

Solan district receives an average annual rainfall of 1420.40 mm, mostly during monsoon.

2.17 : Land Use pattern :

The total geographical area of the district is 1,80,923 hectares out of which 20,289 hect. under forest, 11,705 hect. barren and uncultivable land, 12,950 hect. put to non agricultural purposes, 14,877 hect. cultivable waste land, 77,283 hect. under permanent pastures and grass lands and 550 hect. is under miscellaneous tree crops & groves not included in area sown. The net area sown in the district is 37,609 hect. in which 26,143 hect. is sown more than once. Total cropped area including food and non-food crops is 37,609 hect. Net irrigated area is 12,615 hect., which is 33.54 % of the total net area sown of the district. The irrigated land holding per family is only 0.17 hect. The irrigated area is used for the cultivation of vegetable crops while other crops are sown in rain fed areas. Kandaghat, Solan and some parts of Kunihar and Dharampur blocks mainly use to grow cash crops while Nalagarh is mainly famous for sub-tropical fruits, cereals and oil seed crops.

2.18 : Economy of the District :

The district has monopoly of producing quality seed of crops like cauliflower, radish, bean, capsicum, turnip etc. Majority of the farmers are marginal and small. Dairy is also an important component of agriculture. The farmers on an average keep 4-6 animals comprising of buffaloes, bullocks, cows, sheep etc. During the survey, the problems related to low productivity of agricultural crops were identified. The crops like tomato, capsicum, cauliflower, ginger, pea, beans, stone fruits and carnation are heavily damaged by insect-pests and diseases resulting in low production. The major diseases and insect-pests of tomato are damping-off, buck eye fruit rot, alternaria leaf spot, bacterial wilt and canker, root knot nematode, cut worms, white fly, leaf miner, fruit fly and mites; black rot, stalk rot, aphids, diamond black moth etc. of cauliflower; rhizome rot of ginger; powdery mildew, pod borer and leaf miner of peas; fruit rot, collar rot and

leaf blight of capsicum; angular leaf spot and anthracnose of French bean etc. In fruits, the major problems are peach leaf curl, gummosis and root rot. In flower crops, fusarium wilt, alternaria leaf spot and corm rot are the major diseases. The micro nutrient deficiency in some vegetable crops have also been identified which result in poor quality and low yield. In cereal crops like maize and wheat, the major problem is of low yield, which is mainly due to use of traditional varieties and high population of weeds. Low yield of milk in milch animals is due to unhygienic conditions of sheds, no use of veterinary medicines and mineral mixture and non-availability of green fodder during winter season. Low production in mushroom is due to poor management practices and incidence of insect-pests and diseases.

2.19 : Soil :

As the district has hilly to plain areas, the soils are mostly neutral and the soil texture varies from sandy loam to clay loam. The soil depth is generally shallow except areas having vegetation cover.

2.20 : Drainage :

Approxiamately 80% part of Solan District is hilly and the high/low mountain makes its natural drainage system, often the rain water is flow down through small rivulets except manmade/natural ponds & watersheds etc.

2.21 : Rivers :

This district is covered by catchment areas of four important rivers namely Satluj, Ashwani, Giri and Ghagher. Ashwani and Giri are the main tributaries of Yamuna and those of Satluj river are Kayar-Ka-Nala, Gambhar, Dabur Khud, Kuthar Nadi etc. Kaushalaya Nadi is the main tributary of Ghagar. Sirsa is the main stream in Nalagarh sub-division.

2.22 : Livelihood & main occupation of the people :

Solan District is generating agro income by adopting cash crop cultivation and diversification of traditional cropping pattern and emerged as a source of inspiration to the farming community. The farmers of Solan had created an example to rest of the farming community by adopting modern modes of cultivation to grow off season vegetables and cash crops in large scale and added that the farmers were habitual of multi-cultural farming which was instrumental in increasing their income. Most of the people of Solan District depends upon agriculture farming and some are employed in Govt. semi Govt. and in Private institutions. Cash crops like Mushroom, ginger, tomato and seet peas are also grown in several parts of the district. Besides this, the people are also adopting floriculture as profession and also growing fruits like stone fruits, plum, apricot, almond, lichi, grapes and the like for their livelihood.

2.23 : Demography :

(c) Human: as per 2011 Human census.

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

Data	Human Population	Male	Female	Literacy rate	Density
India	1,21,01,93,422	62,37,24,248	58,64,69,174	74.04 %	382
State of H.P.	68,56,509	34,73,892	33,82,616	83.78 %	123
District Solan	5,76,670	3,06,162	2,70,508	85.02 %	298

(d) Cattles: as per 1998 cattle census.

Animal Population	Cattle	Goat	Sheep	Bullock	Mule	Buffaloes
3,18,672	<u>Cross breed</u> M-11,106 F-47,118 <u>Indigenous</u> M-56,486 F-1,54,570	67,488	<u>Cross breed</u> 1,321 <u>Indigenous</u> 4,313	54,472	488	M-5,275 F-90,787

2.24 : Disaster Proneness with area/region:

Solan district is prone to following type of disasters (more details are given in next chapter at appropriate section) :

- (i) Flash Floods during rainy season specifically chikni khud in Nalagarh & Baddi Tehsil
- (ii) Droughts, whole district, if no rains, as most part of the district rain fed.
- (iii) Heavy rains, whole of the district affected during monsoon season.
- (iv) Storms, whole district, as and when occurred,
- (v) Earthquake, whole district, as and when occurred,
- (vi) Landslides specifically Shimla-Kangra national highway near Shalaghat-Galog in Arki Tehsil, Shimla-Chandigarh national highway near Chhaki –Ka-More and Subathu-Kuthar Road near village Chiyali, Khaltu and Arla villages.
- (vii) Fires, specifically pine (chil) forest spread in all over the district, house and industries,
- (viii) Road accidents specifically national highways Shimla-Chandigarh & Shimla-Kangra and other State and Rural roads due to rash driving, poor roads and certain accidents prone areas as listed in next chapter.
- (ix) Cloud bursts, which are devastating convective phenomena producing sudden high-intensity rainfall (~10 cm per hour) over a small area. etc.
- (x) Building collapse due to poor construction and non-compliance of the proper procedure for construction of multi storied buildings in hilly region of Solan town near Ambusha Hotel & Konark Hotel at Salogra and Badog valley near SADA building causing 1 casualty, as occurred in past years during monsoon season.
- (xi) Industrial accidents for example Abmuja Ltd. at Dalgahata due to increase in temperature of main furnace, Panacea Biotech Ltd. at Baddi on collapse of furnace and in Advantico Coils Ltd. due to explosion in chemical containers which has tolled a number of fatalities.
- (xii) Flash flood in Chikni Khud in Nalagarh and Balad Khud in Tehsil Baddi often causes damage to life and property.
- (xiii) Whirling water in Giri River at Giri Pul.

CHAPTER-3

Hazards, Risk, Vulnerability Capacity Analysis.

3.1 : Hazard Evaluation :

Hazards are defined as “Phenomenon that pose a threat to people, structure or economic assets and which may cause a disaster. They could be either manmade or naturally occurring in our environment.”

The impact of damage in a disaster depends on :

- (1) The impact, intensity and characteristics of the phenomenon.
- (2) How people, environment and infrastructures are affected by that phenomenon.

This relationship can be written as under :-

Disaster + Risk = Hazard

Disaster = Hazards + Risk X Vulnerability – Capacity.

3.2 : Factors Responsible for Disasters :

Solan district is characterized by a wide variation in topography, geology, soil, climate, flora and fauna and ethnic groups with varied socio-cultural traditions. Human activities are the prime cause of environmental degradation, which may be direct or indirect, small or big, slow or fast, predictable or unpredictable depending on the nature, intensity and frequency of the disturbance to **NATURAL ECOSYSTEM**. Besides a large number of population resides along sides of small rivulets and rivers basins etc. and predominantly depend on agriculture. They are subjected to extremes of rainfall – either very high or very low, which leads to river flooding on one hand and also to food scarcity during drought on the other, therefore suffer from two major problems of floods and food insecurity. Low income standard of people, apathy, that nothing will happen, non-acceptance of bye laws for construction of houses, are also responsible for hazards. Besides, the road accidents, earthquake, land slides, floods, industrial hazards, cloud bursts, building collapse and fires are also the major disasters.

3.3 : Vulnerability:

Solan district is prone to floods, droughts, storms, earthquake, landslides and cloud bursts etc. It is also an INDUSTRIAL HUB with a number of small and large scale INDUSTRIES at Solan, Dharampur, Parwanoo, Baddi, Nalagarh areas and the AMBUJA Ltd. At Darlaghat, the JP Cements at Bagga and NTPC HYDROELECTRIC PROJECT KOL DAM at Mangal area of Tehsil Arki resulting it is susceptible to hazards. However all possible measures are applied by respective concerns or groups but a minor mistake can lead to a bigger problem at any time. In addition to this as per the study conducted by the NIDM New Delhi, Solan district is in

SEISMIC ZONE-V of INDIA along with Una, Bilaspur, Chamba, Hamirpur, Kangra, Kullu and Mandi of Himachal Pradesh and has also suggested to adopt appropriate disaster resistant features into planning, design and construction, aspects of all buildings to reduce earthquake disaster risk. **As such keeping in view the past experience and incidents Solan district is vulnerable to following type of disasters :-**

<u>Various Types of Disasters :</u>	
<u>Major Natural Disasters :</u> 1. Flood/Flash Floods/Heavy rains 2. Cyclone 3. Drought 4. Earthquake 5. Land Slides 6. Mines accidents 7. Cloud bursts. 8. Fires.	<u>Minor Natural Disasters :</u> 1. Cold/Heat wave 2. Thunderstorm 3. Mud slide/flow 4. Storm 5. Hurricanes
<u>Major Manmade Disasters :</u> 1. Setting of fires 2. Epidemic 3. Deforestation 4. Pollution 5. Building collapse 6. Wars. 7. Biological. 8. Hydrological.	<u>Minor Manmade Disasters :</u> 1. Road/Train accidents 2. Riots 3. Food Poisoning 4. Industrial Disasters 5. Environmental Disasters.

In addition to above following disasters are also beyond human control and can cause damage/loss to society/human beings :-

- ❖ Oil spills and gas leakages during supply of oil/gas to various locations.
- ❖ Fairs and Festival related disasters (crowd/stampede etc.).
- ❖ Pest and locusts attacks.
- ❖ Attacks by Wild animal etc.
- ❖ Aerial ropeway accidents.
- ❖ Other Chemicals disasters.

3.4 : Accident prone Areas :

The Police Department, District Solan has identified certain places, which are prone to accidents and evidence has been found in past years :-

- ❖ Jokhri Mor on NH 22 near Salogra.
- ❖ Bhagor Nala Mor/curve on NH-22
- ❖ Shivalaya mandir Mor near Patta Mor on NH 22.
- ❖ Shideshwar Mandir on NH 22

- ❖ Gurudwara Mor near Saproon Chowk on NH 22
- ❖ Samlech more Near Tapan Motor Solan on NH 22
- ❖ CHC More at Dharampur on NH 22
- ❖ Kharab NMor Chuna pani Near Jabli on NH 22
- ❖ Galyana Pani Kumarhatti NH 22.
- ❖ Danoghat on Shimla-Kangra NH in Arki area.
- ❖ Sheel mor in Palaniya area on Shimla-Kangra NH

3.5 : Flood Prone Areas :

Certain areas of Solan District which are adjacent to following rivers are prone to floods during monsoon season or during heavy rains :-

- ❖ **Satluj River in Mangal area** (Kol dam belt) of Sub-Tehsil Darlaghat enters from village Jandoi and passes through village Skore, Parla Kayar, Beral, Sue Nichli, Sui Upperli, Bohi, Padyar, and Hawani (PC Mangal) and thereafter enters into District Bilaspur, which often causes damage in above villages due to flash flood and formation of PARCHHU lake in TIBBET during rainy season and melting of glaciers etc.
- ❖ **Sirsa River of Nalagarh Tehsil** which originates from Kandol and passes through village Bir Palassi (PC Plassi), Manjholi, Dher Majra, Maganpura (PC Manjholi), Lakahanpur (PC Jhiran), Jagatkhana PC Dhang), Nikkuwal, Mandyarpur, Nanowal, Nar Singh, Maissi Plassi (PC Kirpalpur), Nanowal, Kheda Nihla, Baha Beli (PC Nanowal), Malpur, Bhud, Khol, Daso Majra (PC Bhud), Kainduwal, Sandauli (PC Sandauli), Baddi Shitalpur, Kalyanpur, Landewal, Chak Jangi, Saraj Majra Lawana, Saraj Majra Gujran, Juddi Khurd, Juddi Kalan (PC Baddi) often causes damage on occurrence of flash flood during rainy season.
- ❖ **Chikni Rivers of Tehsil Nalagarh** originates from village khaled of PC Koyadi and merged in Sirsa River in village Beed Plassi of PC Plassi which passes through village Beed Plassi (PC Plassi), Kanganwal, Dhang Nihali, Dhang Upperli (PC Dhang), Saned (PC Saned), Sallewai, Dattowal, Saudi (PC Rajpura), Nangal Nihla, Nangal Upperla, Plasada Nihla, Bhumiyani, Plasada Nihla, Plasada Ghaduwan (PC Nangal) often causes damage on occurrence of flash flood during rainy season.
- ❖ **Mahadev River of Tehsil Nalagarh** which originates from PC Palli and passes through village Aduwal Jandauri, Saudi Gujran, Saudi Rajoputan, Babanagar (PC Palli), Bhangla, Bhogpur, Dattowal, Mahadev (PC Bhogpur), Ratyor, Majri (PC Ratyor), Dabhota (PC Dabhota) and enters in District Roopnagar (Ropad) of Punjab State near village Dabhota often causes damage on occurrence of flash flood during rainy season.
- ❖ **Kala Kund River of Tehsil Nalagarh** originates from village Patta of PC Kundlu enters into District Roopnagar of Punjab State in village Kootla Kalan of PC Baruna which passes through Village Nangal Kuhal, baniyala, Jagatpur, Joghon, Bariyan (PC Joghon), Baglehar, Panjhera (PC Panjhera), Kashmirpur Gujran, Androla Upperla, Androla Nihala, Malwala (PC Kashmirpur), Kotla Kalan (PC Baruna) often causes damage during rainy season on occurrence of flash flood during rainy season.
- ❖ **Luhand River of Tehsil Nalagarh** originates from PC Chamba and enters into Punjab State from village Rampur of PC Bagheri which crosses through village Baheri (PC Janon), Rampur, Kulhari, Tikkeri (PC Bagheri) often causes damage during rainy season on occurrence flash flood during rainy season.

- ❖ **Balad khud of Tehsil Baddi** originates from PC Patta, Nalka, Chandi, enters into Punjab State from village Rampur of PC Bagheri which crosses through village Baheri (PC Janon), Rampur, Kulhari, Tikkeri (PC Bagheri) often causes damage during rainy season on occurrence flash flood during rainy season, which is also prone to floods.
- ❖ **Giri River of Tehsil Kandaghat** enters from Village Tanaji and passes through Tikkeri, Rahed, Gaura (PC Gaura of Tehsil Kandaghat), Ser Baneda (PC Mashiver of Tehsil Solan) and enters into District Sirmour at Yasawantnagar which often causes damage and many times the tourists swimming at Giripul drowned in said river due to whirling water on formation of whirlpool at said point in the Giri River, which has caused a number of fatalities/casualties in past years. Now, a notice board/warning has been placed at that point for the information of tourists and general public visiting in that place to avoid swimming in that place to save their life, which has stopped further casualties in that place.
- ❖ **Kaushalya River of Tehsil Solan/Kasauli** originates from Johar Patiala of PC Bhojnagar, Mahiyan, Tarol-Kayard (PC Tarol), Koti, Rani Gaon, Manjhol, Datyar (PC Basal), Kamli (PC Tiron) and thereafter enters into Haryana State, which is slightly susceptible for flash flood. But, its one positive point is that there is very less population on its shores.
- ❖ **Gamber rivers in Tehsil Solan** which forms Kuthar Khud and Rao Khud comprising of village Bil, Behali, Namol (PC Kunihar), Rihun, Bharol, Anji, Delgi, Raur, Bani, Dugdi, Tathol, Sujni, Behal, (PC Jabal Jamrot, Brawari, Baag, Ghadyan, (PC Haripur) Phagwaya, Bokra, Kanyara, Jerakh, Kolth Kaniatan, Kolthi Chamara, Kolthi Molu, Thana Panda, (PC Gamjhoon) and thereafter kuhni coming from Arki & Kandaghat Tehsil merged into it at Gamber Pool which often causes damage on occurrence flash flood in village Banoh (PC Dumehar), Dayawla, Jalang, Sarli, Samlech, Tanseta, Ladhech, Mann (PC Maan) which also passes through PC Balera of Tehsil Arki, PC Ukhu and Bhiyunkhari of (Sub-Tehsil Ramshahar) and thereafter enters into Govind Sagar lake in District Bilaspur which often causes damage during rainy season due to flash floods.

3.6 : Land Sliding Zones and sinking zones :

Some parts on SHIMLA-CHANDIGARH National Highways near Chakki-Ka-More & SHIMLA-MANALI National Highways near Palog-Shalaghat, Subathu-Kuthar road near Chiyalli and kharsi village and certain places of Nalagarh are prone to land sliding/sinking due to soil erosion etc. as per PWD National Highway Authorities. In addition to this there are some landsliding points where slips often occur, which causes damage during rains/monsoon season on following state roads:

(i) PWD B&R Division Nalagarh, District Solan :

(Source: Executive Engineer, B&R)

- ✚ Shalaghat-Kunihar-Ramshahar-Nalagarh Road KM 60/500 to 84/0 in village Jabal 31° 03' 55.20" N and 76° 54' 43.63 E.
- ✚ Swarghat-Ramshahar Road KM 0/0 to 23/120 at Swarghat 31° 13' 46.31" N and 76° 13' 01.77" E.
- ✚ Link Road to village Dharmana KM 0/0 to 9/160 at Dharmana 31° 09' 36.60" N and 76° 4' 10.27" E.
- ✚ Ramshahar-Chamdar-Luna Road KM 0/0 to 23/200 at Ramshahar 31° 05' 19.31" N and 76° 47' 37.39" E.
- ✚ Ramshahar-Suna-Nerti Road KM 0/0 to 25/070 31.05' 19° 31' N and 76° 47' 37.39" E.
- ✚ Baddi-Sai-Ramshahar Road KM 20/0 to 35/540 at Sai 31° 00' 06.00" N and 76° 49' 00.03" E.

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

- ✚ Sai-Ghared Road KM 0/0 to 7/0 at Sai 31° 00' 06.00" N and 76° 49' 00.03" E.
- ✚ Guru Kund-Talli Road KM 0/0 to 12/200 at Gurukund 31° 04' 52.84" N & 76° 46' 32.42" E.
- ✚ Mahadev-Jhandu Road KM 0/0 to 1/160 at Mahadev 31° 05' 13.74" N and 76° 48' 55.34" E.
- ✚ Diggall-Jaghar Via Dalchhamb Road at Diggall 31° 05' 47.54" N and 76° 51' 49.52" E.
- ✚ Shalaghat-Kunihar-Ramashahar-Nalagarh Road KM 94/0 to 112/284 at Ghugi-Da-Ghat 31° 03' 53.89" N and 76° 44' 40.08 E.
- ✚ Kumarhatti-Mitiyan Road KM 0/00 to 18/00 at Kumarhatti and Garloh 31° 04' 34.89" N and 76° 45' 06.32" E & 31° 04' 22.00" N 76° 48' 24.85" E
- ✚ Baglehar-Rajwatti-malheni Road at Pani-Da-More 31° 03' 45.86" N & 76° 42' 18.31" E
- ✚ Gol-Jamala-Kalyanpur KM 0/00 to 28/00 at Kalyanpur 31° 06' 05.89" N & 76° 42' 45.60" E.
- ✚ Mastanpur-Kotla-Kundlu Road 0/00 to 10/400 at Kotla 31° 11' 43.58" N & 76° 40' 10.90" E
- ✚ Bagheri-Tikkeri-Bagheri-Amb Da Har Road KM 0/00 to 6/00 at Bhori 31° 02' 40.26" N & 76° 40' 24.23" E.
- ✚ Baddi-Sai-Ramshahar Road (MDR-7) 5/800 to 850 & 13/725 to 765 at 30° 57' 50.32" N 76° 48' 55.51" E and 30° 59' 24.45" N & 76° 49' 55.33" E.
- ✚ Bhud-Patta-Gharer Road 8/100 to 140 at 30° 56' 41.39" N and 76° 50' 56.46" E.

(ii) PWD B&R Division Kasauli, District Solan :

(Source: Executive Engineer, B&R)

- ✚ Garkhal-Subathu Road KM 14/200 to 14/400 in village Kathni 76° 54' 55" N and 30° 58' 00 " E.
- ✚ Shalaghat-Arki-Kuthar-barotiwalda Road KM 37/0 to 41/0 in village Sanahi 76° 53' 05" N and 30° 58' 50 " E.
- ✚ Dharampur-Subathu Road KM 12/800 to 13/240 in village Dhar-Ki-Ber 76° 56' 50" N and 30° 54' 50 " E.
- ✚ Garkhal-Subathu Road KM 14/200 to 14/400 in village Kathni 76° 54' 55" N and 30° 58' 00 " E.
- ✚ Gunai-Barotiwalda Road KM 16/950 to 17/150 in village Chadyari 76° 50' 00" N and 30° 54' 55 " E.
- ✚ Bhojnagar-Chhaki-Ka-More Road KM 12/720 to 12/750 in village Koti 76° 55' 35" N and 30° 51' 40 " E.
- ✚ Chandi-Goela Road KM 0/105 to 0/135 in village Chandi 76° 49' 58" N and 31° 01' 40 " E.
- ✚ Patta-Joharji-Sua Road KM 11/120 to 11/150 in village Serta 76° 48' 15" N and 31° 05' 55 " E.
- ✚ Goela-Chhiachhi Road KM 16/435 to 16/485 in village Chandi 76° 47' 40" N and 31° 02' 40 " E.

(iii) PWD B&R Division Arki, District Solan :

(Source: Executive Engineer, B&R)

- ✚ Kandhar to Beral Road KM 6/720 to 9/090 31° 34' 00.56" N and 76° 92' 14.58 E and 31° 33' 34.84" N and 76° 92' 80.29.
- ✚ Bagga-Hawani-Kol Road KM 1/120 31° 33' 85.11" N and 76° 88' 98.48" E.
- ✚ Shalaghat-Arki-Kunihar-Barotiwalda Road near Kuni Bridge 31° 10' 72.17" N and 36° 96' 96.17.
- ✚ Piplughat-Saryanj Road KM 2/400 31° 20' 15.33" N and 76° 90' 98.22" E.
- ✚ Saryanj-Gharyach Road KM 14/600 near Jaghoon Hut 31° 17' 75.56" N and 76° 88' 04.55.

(iv) PWD National Highway Division Solan :

(Source: Executive Engineer, NH)

- ✚ National Highway 22 RD 67/150 to 67/200 in TTR Parwanoo 30° 08' 38.06" N and 76° 9585' E.
- ✚ National Highway 22 RD 70/0 to 70/150 in Tamboo More Parwanoo 30° 08' 38.06" N and 76° 9585' E.
- ✚ National Highway 22 RD 72/150 to 72/250 in Koti 30° 08' 38.06" N and 76° 9585' E.
- ✚ National Highway 22 RD 73/780 to 73/820 in Koti 30° 08' 38.06" N and 76° 9585' E.

- ✚ National Highway 22 RD 77/300 to 77/400 in Jabli 30° 52' N and 76° 59' E.
- ✚ National Highway 22 RD 77/300 to 77/400 in Jabli 30° 52' N and 76° 59' E.
- ✚ National Highway 22 RD 80/0 to 80/200 in Jabli 30° 52' N and 76° 59' E.
- ✚ National Highway 22 RD 89/200 to 89/500 in Dagshai 30° 52' N and 77° 3.3' E.
- ✚ National Highway 22 RD 90/250 to 90/400 in Kumarhatti 30° 53' N and 77° 3.3' E.
- ✚ National Highway 22 RD 96/700 to 96/800 in Barog Bye Pass 30° 52' N and 77° 4' E.
- ✚ National Highway 22 RD 97/100 to 97/300 in Barog Bye Pass 30° 52' N and 77° 4' E.
- ✚ National Highway 22 RD 100/600 to 100/800 in Barog Bye Pass 30° 52' N and 77° 4' E.
- ✚ National Highway 22 RD 101/500 to 101/600 in Solan Saproon 30° 54' N and 77° 5' E.
- ✚ National Highway 22 RD 101/750 to 102/0 in Solan Saproon 30° 54' N and 77° 5' E.
- ✚ National Highway 22 RD 111/300 to 111/360 in Salogra 30° 55' N and 77° 5' E.
- ✚ National Highway 22 RD 121/580 to 121/680 in Near Hotel Destination 31° N and 77° 5' E.
- ✚ National Highway 22 RD 122/160 to 122/260 in Tikri 31° and 77° 5' E.
- ✚ National Highway 88 RD 20/250 in Ghandal 31° 14' N and 77° 100' E.
- ✚ National Highway 88 RD 21/510 in Galog 31° 148' N and 77° 041' E.
- ✚ National Highway 88 RD 30/600 in Shalaghat 31° 190' N and 76° 985' E.
- ✚ National Highway 88 RD 31/430 in Durgaghat 31° 099' N and 77° 188' E.
- ✚ National Highway 88 RD 46/150 in Shalaghat 31° 239' N and 76° 93' E.
- ✚ National Highway 88 RD 353/150 in Bhararighatt 31° 247' N and 76° 887' E.

Besides, the Divisional Forest Officer, Solan has also detected a landsliding zone in Reserve Forest R-56 Parwanoo of Solan Forest Division, which often causes damage to forest vegetation over 5 hectare area and another found during construction of Sandhog-Gadyar Road in Demarcated Protected Forest D-224 Sandhog which has caused damage forest vegetation over 12 hectare forest area due to acute steep.

3.7 : Sensitive Places :

Almost all the INDUSTRIAL AREAS in this district are very sensitive towards hazards as per detail given below:-

- ❖ Nalagarh Sub-Division : Nalagarh, Baddi and complete BBN industrial areas.
- ❖ Solan Sub-Division : Solan, Parwanoo, Dharampur, Barotiwala.
- ❖ Arki Sub-Division : Darlaghat, Kashlog and Mangal Industrial areas.

3.8 : Highly Sensative Places :

Following places are very sensitive as per past experiences in this district :-

- ✚ TIMBER TRAIL ROPEWAYS, K.K.ROPEWAYS, in Solan Sub-Division.
- ✚ JHULA BRIDGES and automated ropeway to transfer goods in Mangal area on SATLUJ River.
- ✚ GIRI RIVER in Kandaghat Sub-Division.
- ✚ All the Roads and bridges of Solan district.
- ✚ All the electric transformer, sub-stations and power supply lines within district and also passing through the district.
- ✚ All the school/colleges/universities & Govt. offices.
- ✚ LPG filling center at Baddi.
- ✚ Chemical industries in BBN area.
- ✚ Petrol/Diesel Storage at Dadibhola, Nalagarh.

3.9 : Fairs & Festivals :

Many major and small fairs are being celebrated in various parts of the district, where crowd management is necessary:

- ✚ “Shoolini Fair” celebrated on last Sunday (for 3 days) every year in Solan Town.
- ✚ Haripur fair in Tehsil Baddi.
- ✚ Sayar fair at Arki celebrated in the month of September, Baridhar fair in Tehsil Arki celebrated in the month of June and Danoghat fair celebrated in the month of May every year in Arki Sub-Division.
- ✚ Pirthan Fair Nalagarh celebrated in the month of January & Mata Magla Fair Nalagarh celebrated in the month of June every year.

3.10 : Disaster vulnerability in respect of various type of calamities :

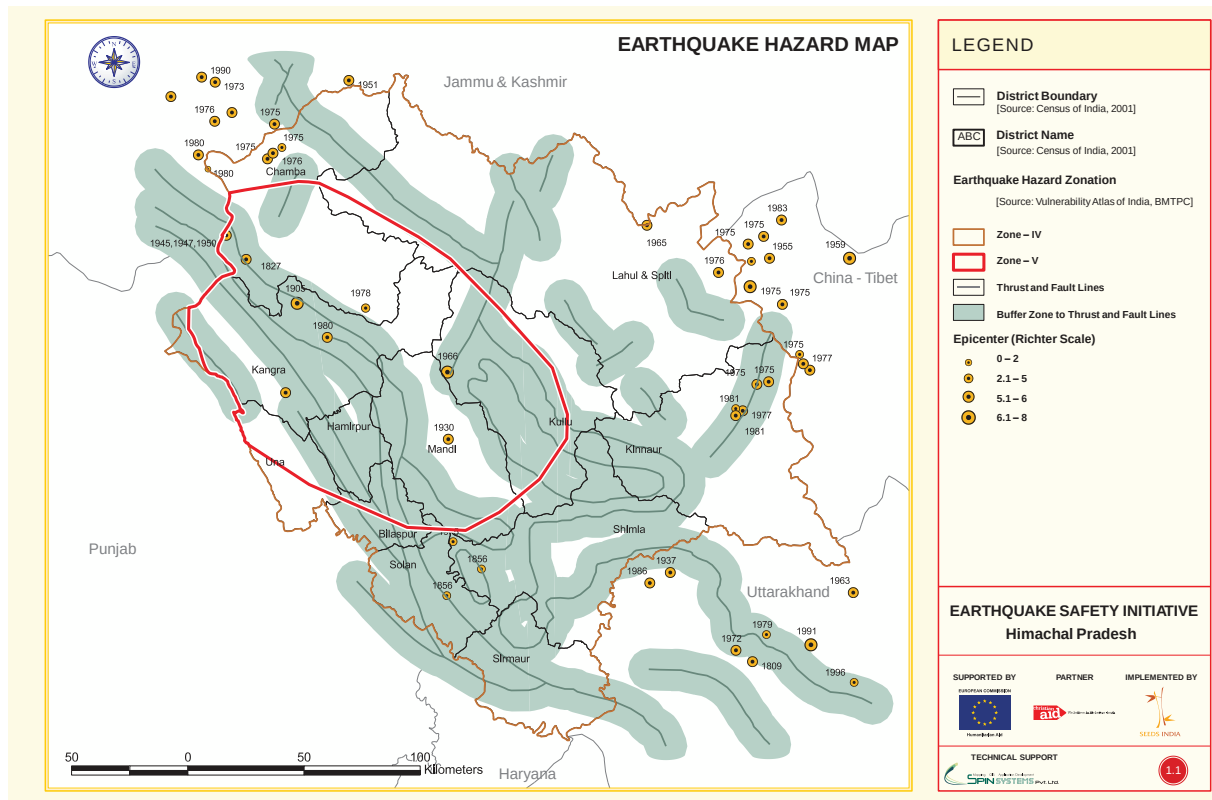
(i) Earthquake :

Past History	:	Yes
Frequency	:	Likely.
Impact	:	On buildings and other infrastructure of whole Distt.
Vulnerability	:	Whole Distt. Population
Magnitude	:	Whole of the District.

Responsible factors for damage	:	Non complying the construction bye laws and non construction of earth quake resistance buildings by the residents, poverty/low economic standards, apathy, location closure to slopes, belief, lack of infrastructural facilities/knowledge, inaccessible places etc.
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Likely damage	:	NIL
life	:	NIL
Property	:	NIL
Others	:	Affected lively hood all sector, Displacement for some time.

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(ii) Floods/Flashfloods/Heavy rains:

Past History : Yes.

Frequency : Likely (During Rainy season)

Impact : On house hold, Panchayat and other infrastructure etc..

Vulnerability : Whole District and floods/flash floods specifically in Nalagarh/Baddi area of the district as detailed in (Chapter 3 of) DDMP in previous paras.

Magnitude : Whole of the District.

Responsible factors for damage : Non complying the construction bye laws and non construction of proper drains alongside buildings/proper disposal of water by the residents, poverty/low economic standards, apathy, location closure to rivers/rivulets, belief, lack of infrastructural facilities/knowledge, inaccessible places etc.

Likely damage : As per detail given hereunder :

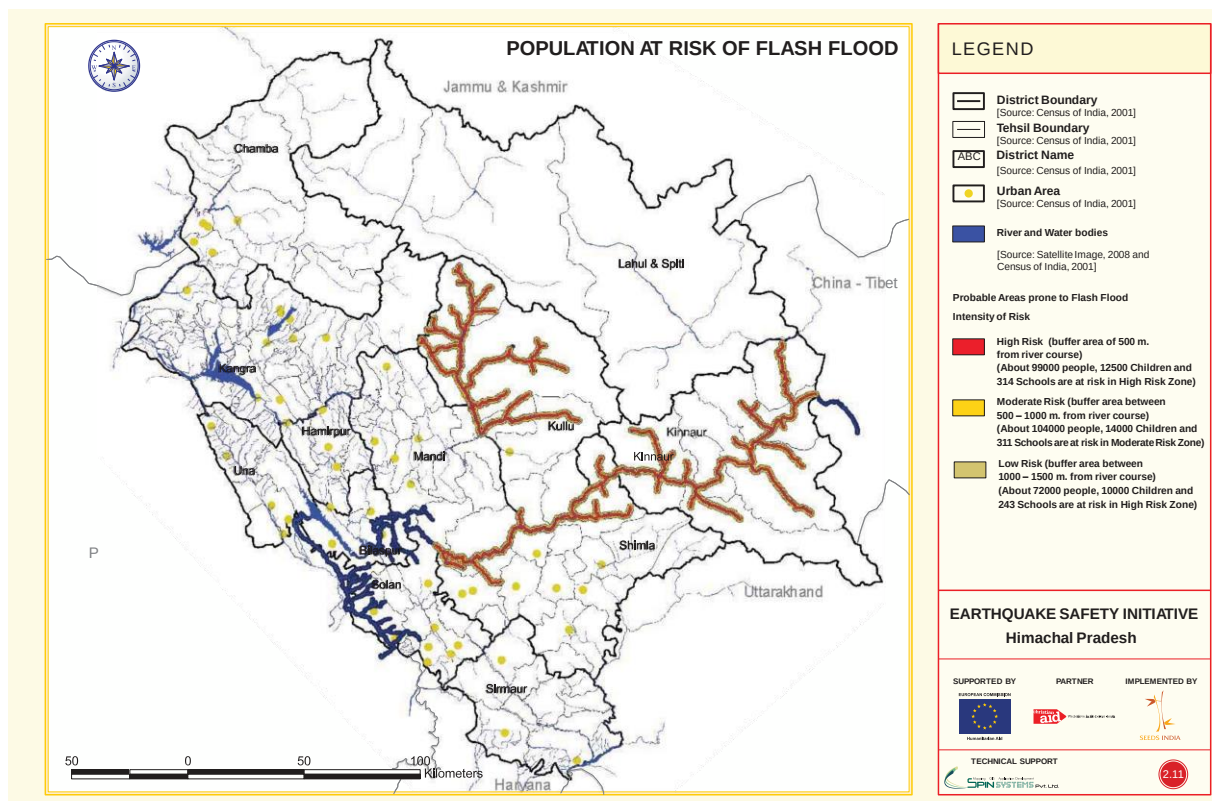
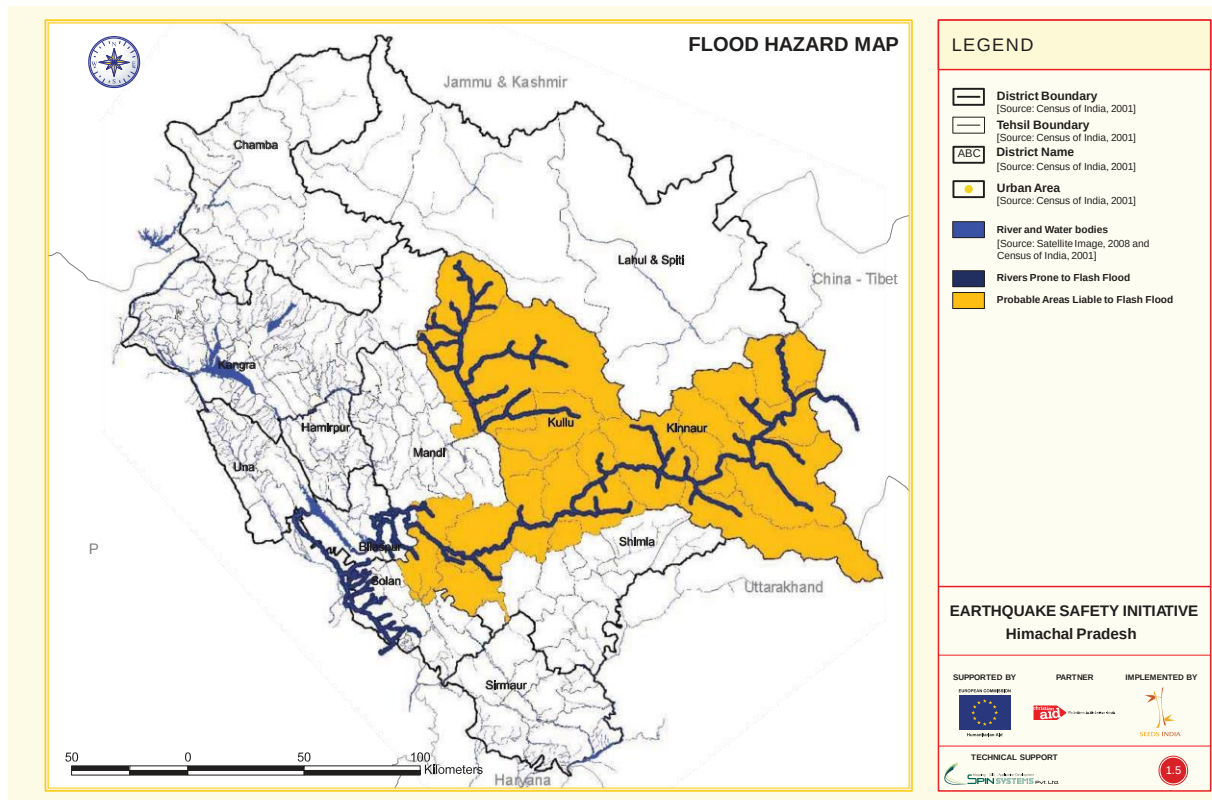
Year	Popula tion Affect ed	Damage to Crops		Damage to Houses		Huma n lives lost	Livestock lost	Damage to Public utilities like roads, I&PH, Elect.,	Total damage of the District
		Area (in hect.)	Value (in Crores)	Number (Houses and Cattlesheds)	Value (in lacs)				

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2004	30976 2	15419	3.25 Crores	235 houses and 104 cowsheds	0.75 lacs	NIL	3 cows	3.09 Crores	7.09 Crores.
2005	25034	13355	1.21 Crores	222 houses and 51 Cowsheds	49.70 lacs	NIL	1 mule	7.02 Crores	7.62 Crores
2006	29800 0	6321	4.73 Crores	138 houses and 41 cowsheds	5 lacs lacs	14	4 various animals.	13.84 Crores	18.63 Crores
2007	60,000	35610	21.16 C`rores	607 houses, 934 cowsheds & 8 Gharats	246.98 lacs	6	33 various animals	48.08 Crores	71.72 Crores
2008	--	--	--	668 houses and 518 cowsheds	91.35 lacs	--	--	51.10 Crores	52.01 Crores
2009	--	--	--	184 houses and 148 cowsheds	55.01 lacs	3 and 1 injury.	2 oxes	25.80 Crores	26.36 Crores
2010	--	200	2.43 Crores	284 houses and 210 cowsheds	81.38 lacs	4	38 various animals.	29.17 Crores	32.44 Crores
2011	13683	10 bighas	Rs. 50,000 only	197 houses and 148 cowsheds	70.55 lacs	7	4 various animals	36.95 Crores	37.66 Crores
2012	--	2 hectare	62,500	154 houses and 114 cowsheds	2.78 Crores	4 all Non- Himac halis	16 various animals.	25.83 Crores	25.61 Crores.
2013	--	Agr. 1002 Hort.650 Hectare.	6.36 Crore 5 Crore	70 houses & 44 Cattlesheds	28.31 lacs	NIL	24 cattles of Rs. 7 lacs	38.4 Crores.	49.75 Crore

Vulnerable Population : Whole District

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).



District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

(iii) Cloud bursts:

Past History : Yes.
 Frequency : Likely (During Rainy season)
 Impact : Infrastructure, house hold and Panchayat.
 Vulnerability : Probably whole District Population, if caused
 Magnitude : Whole of the District.
 Likely damage : As per detail given hereunder :

Date	Name of locality	Damage to Crops and land		Damage to Houses		Human lives lost	Livestock lost	Other properties damaged	Relief granted.
		Area (in hect.)	Value (in lacs)	Number	Value (in lacs)				
03.07.95	Village Basyana S/T Darla	15 bighas	7.50 lacs	5 houses and 7 cowsheds	3 lacs	NIL	7	Pond and public path.	As of CRF Norms.

Vulnerable Population : Probably whole District

(iv) Drought:-

Past history : Yes (Summer/Winter season on less raining)
 Frequency : Likely.
 Impact : Sub District
 Vulnerable Population : Specifically Tehsil Nalagarh, Baddi, Arki, Kandaghat strongly and Solan, Kasauli Tehsils mildly.
 Magnitude : Whole of the District.

Responsible factors for drought	:	Non construction of reservoirs/check dams for conserving water, poverty, poor economic standards, apathy, belief, dependence upon nature/rain, lack of infrastructural facilities/knowledge etc.
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Likely damage : As per detail given hereunder :

Yearwise detail of drought occurred in the District :

Sr.No.	Year	Name of crops when drought occurred	
		Kharif	Rabi
1.	1996	Normal	Drought due to deficit of rain.
2.	1997	Normal	Normal
3.	1998	Normal	Normal

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4.	1999	Normal	Normal
5.	2000	Normal	Drought due to zero rainfall.
6.	2001	Normal	Drought due to less rain.
7.	2002	Drought due to less raining during sowing period.	Normal
8.	2003	Normal	Drought due to less rain.
9.	2004	Drought due to deficit of rain in June & July.	Normal
10.	2005	Drought due to deficit of rain in June & August.	Drought due to deficit of rain.
11.	2006	Normal	Normal
12.	2007	Normal	Drought due to deficit of rain.
13.	2008	Drought	Drought
14.	2009	Drought	Drought
15.	2010	Normal	Drought
16.	2011	Normal	Normal
17.	2012	Normal	Normal
18.	2013	Damaged due to storm/rain	Normal

Source : Deputy Director of Agriculture, District Solan.

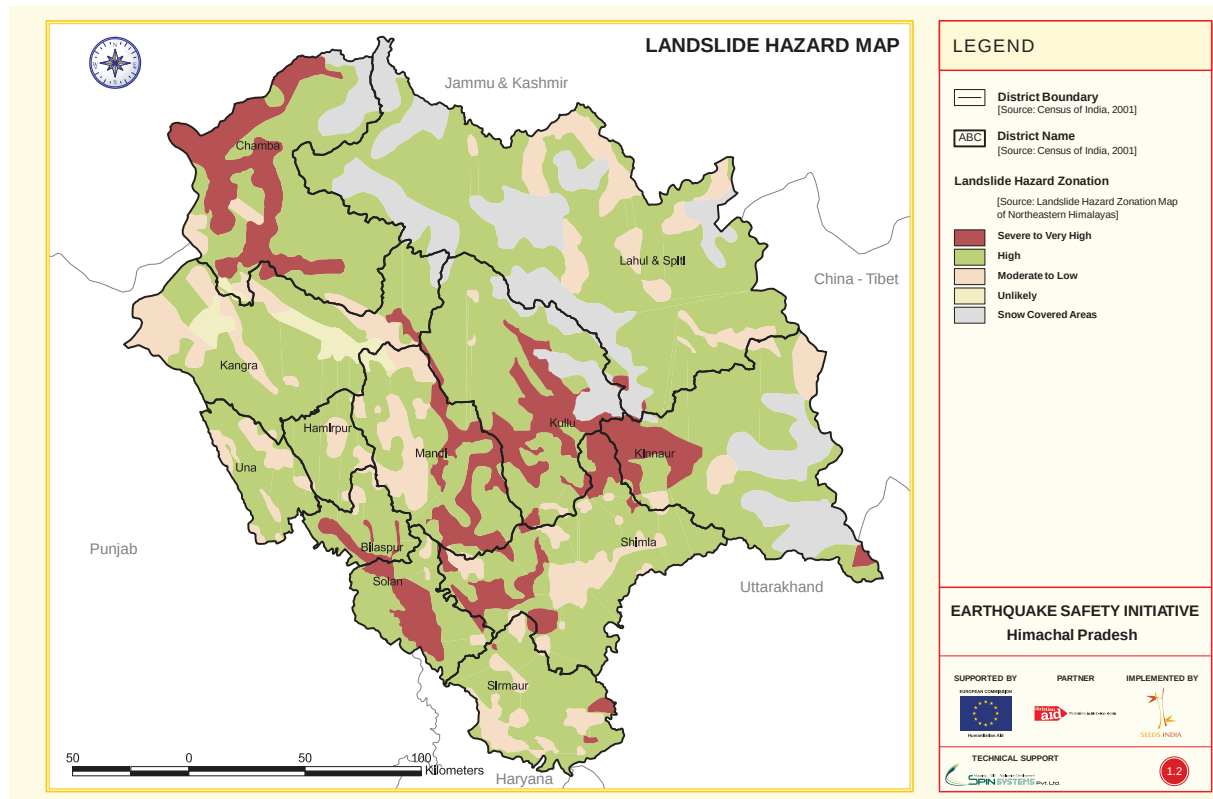
Yearwise detail of Crop loss assessed on occurrence of drought :

Year	Crop	Agriculture		Horticulture		Total (in Crores)
		Area	Value	Area	Value	
2008	Rabi	30750 hect	34.61 Crore	6100 progeny & 77000 nursery plants	0.55 Crores	35.17 Crores
2009	Rabi	19,901 hect.	40.78 Crores	80 hectares	0.18 Crores	40.96 Crores
	Kharif	2055 hect	7.34 Crores	6741 hectares	0.89 Crores	8.23 Crores
2010	Rabi	19,397	45.08 Crores	115 hect.	0.39 Crores	45.47 Crores
	Kharif	No drought	--	--	--	--
2011	Rabi	No drought	--	--	--	--
	Kharif	No drought	--	--	--	--
2012	Rabi	No drought	--	--	--	--
	Kharif	No drought	--	--	--	--
2013	Rabi	No drought	--	--	--	--
	Kharif	No Drought	--	--	--	--

Vulnerable Population : Whole District

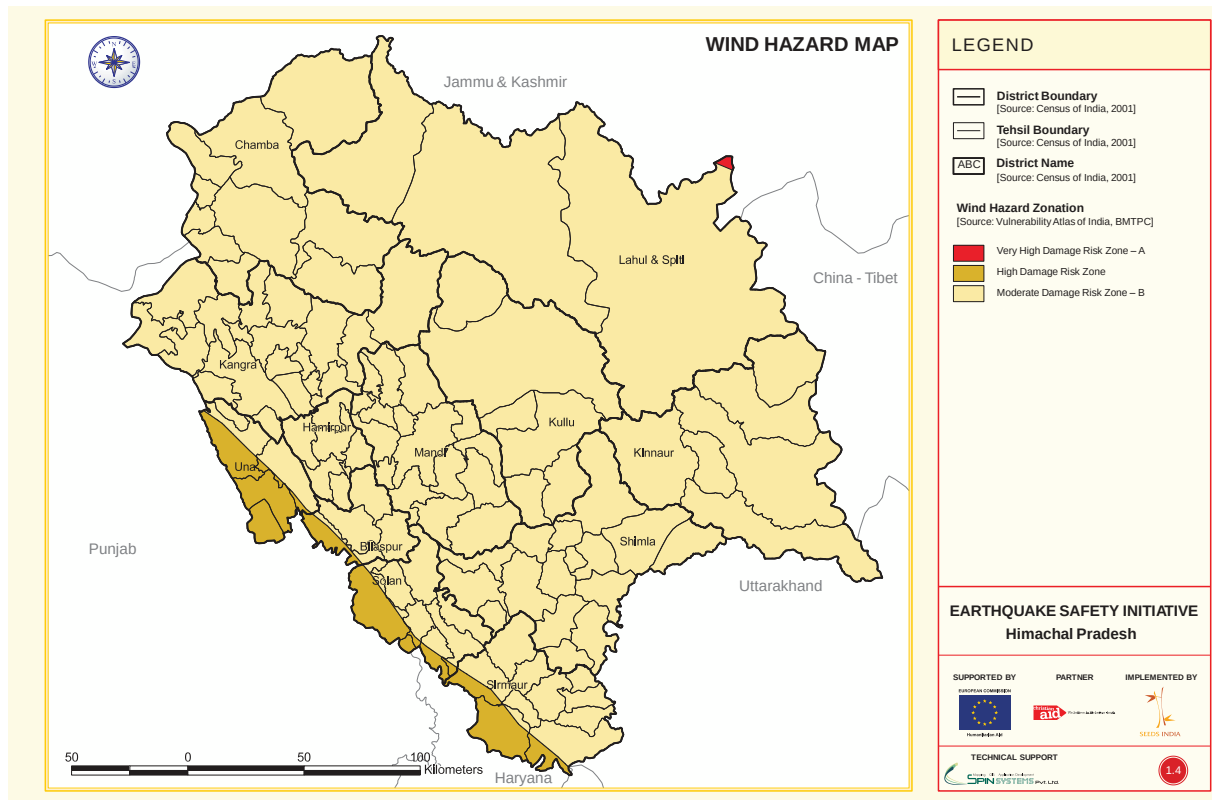
(v) Land slides /Land slips:-

Past History	:	Yes (Raining season)
Frequency	:	very likely.
Impact	:	House hold and village.
Vulnerable population	:	1% population of the District.
Likely damage	:	Added in rain damages
Life	:	minimal.
Property	:	10 to 50 lacs.



(vi) Wind Storms:-

Past History	:	Yes.
Frequency	:	Likely (all seasons)
Impact	:	House hold
Vulnerable population	:	10% whole District.
Likely damage .	:	Crops.
Life	:	Minimal
Property	:	10 to 50 lakh



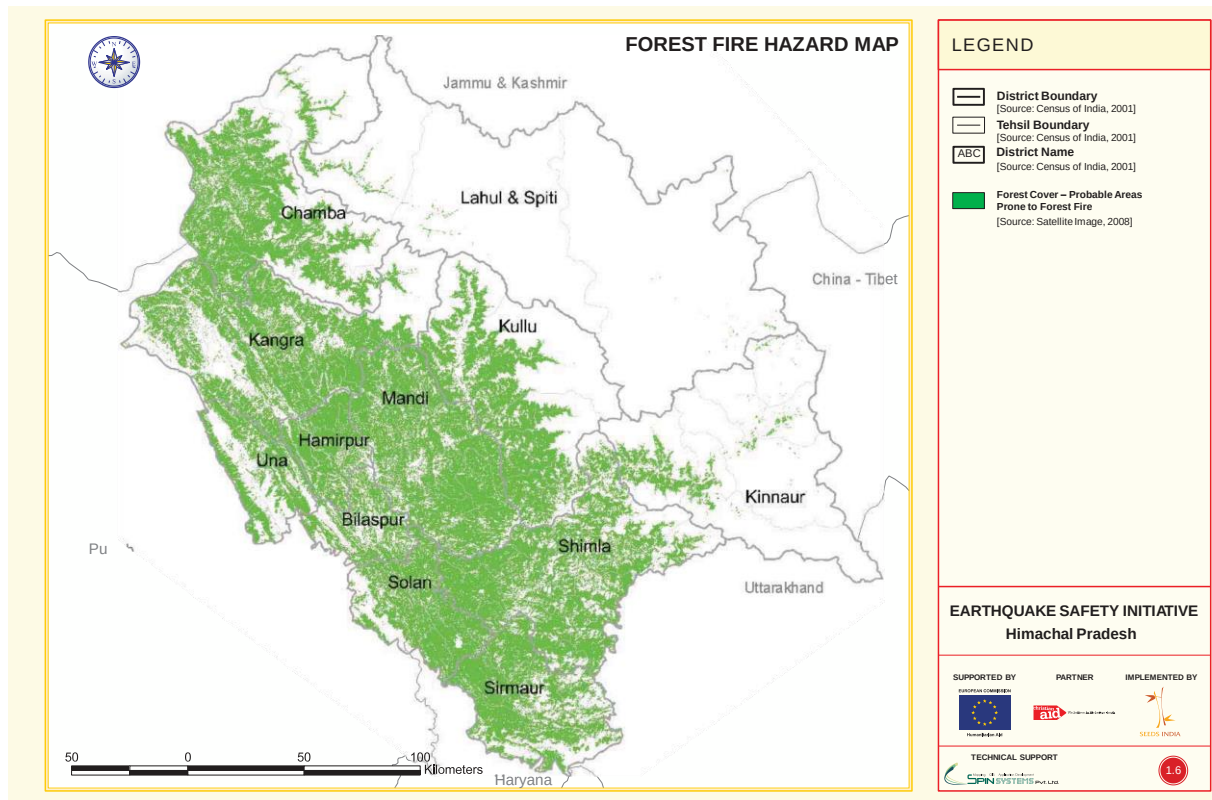
(vii) Building Fire:-

Past History	:	Yes.
Frequency	:	likely (specifically in summer season)
Impact	:	House hold and Industries.
Vulnerable population	:	Specifically areas adjacent to forest and having maximum forest cover in Sub-Tehsil Darlaghat, Ramshahar, Krishangarh, Tehsil Kasauli, Solan etc.
Magnitude	:	5 % population of the district.

Responsible factors for damage	:	Non complying the construction bye laws and non construction of fire proof buildings, wooden structures poverty, poor economic standards, apathy, location closure to fire house, belief, lack of infrastructural facilities/ knowledge, inaccessible places etc.
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Likely damage	:	Households and industries.
Life	:	Minimal.
Property	:	10 - 50 Lacs

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(viii) Accident:

(B) Road accidents :

Past history : Often.
 Frequency : May be.
 Impact : House hold/travelers/tourist etc.
 Vulnerable Population : Frequent populations travelling.

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

Likely damage : As per assessment made in past years, as under :

(a) Various Road accidents & Others and relief given to Himachalis & Non-Himachalis :

Yearwise detail of Deceased/Injured in accidents & Relief given to Himachalis :

Sr. No.	Year	Sub-Division	Detail of deceased		Detail regarding injured	
			Number of deceased	Relief given	Number of Injured	Relief given
1.	2007-08	Solan	54	30,25,000	32	93,000

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		Arki	20	13,25,000	8	17,000
		Nalagarh	43	35,70,000	11	1,24,000
		Kandaghat	20	17,25,000	11	1,75,000
		Total	137	96,45,000	62	4,09,000
2.	2008-09	Solan	30	30,00,000	27	2,55,000
		Arki	28	20,35,000	19	2,53,000
		Nalagarh	30	29,50,000	13	1,02,196
		Kandaghat	9	9,00,000	6	95,000
		Total	97	88,85,000	65	7,05,196
3.	2009-10	Solan	38	38,15,000	52	4,95,000
		Arki	5	5,00,000	5	75,000
		Nalagarh	54	53,80,000	22	2,03,000
		Kandaghat	5	5,00,000	7	20,000
		Total	102	1,01,95,000	86	7,93,000
4.	2010-11	Solan	42	42,00,000	50	3,35,000
		Arki	34	34,00,000	25	3,20,000
		Nalagarh	53	52,75,000	8	73,526
		Kandaghat	8	8,00,000	3	25,000
		Total	137	1,36,75,000	86	7,53,526
5.	2011-12	Solan	27	27,00,000	63	3,75,000
		Arki	9	9,00,000	5	75,000
		Nalagarh	54	54,00,000	8	1,90,000
		Kandaghat	9	9,00,000	23	2,28,000
		Total	99	99,00,000	99	8,68,000
	GRAND TOTAL OF ALL THE FIVE YEARS		572	5,23,00,000	398	35,28,722

Yearwise detail of Deceased/Injured in accidents & Relief given to Non-Himachalis :

Sr. No.	Year	Sub-Division	Detail of deceased		Detail regarding injured	
			Number of deceased	Relief given	Number of Injured	Relief given
1.	2007-08	Solan	4	2,50,000	5	35,000
		Arki	2	1,10,000	--	--
		Nalagarh	5	3,50,000	1	2,000
		Kandaghat	3	3,00,000	2	40,000
		Total	14	10,10,000	8	77,000
	2008-09	Solan	11	11,00,000	4	32,000
		Arki	--	--	--	--
		Nalagarh	8	8,00,000	---	---
		Kandaghat	2	2,00,000	2	10,000
		Total	21	21,00,000	6	42,000
	2009-10	Solan	5	5,00,000	29	1,85,000
		Arki	--	--	--	--
		Nalagarh	29	29,00,000	13	69,000
		Kandaghat	5	5,00,000	8	40,000

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	Total	39	39,00,000	50	2,94,000
2010-11	Solan	5	5,00,000	6	24,780
	Arki	--	--	--	--
	Nalagarh	16	16,00,000	1	1,000
	Kandaghat	--	--	--	--
	Total	21	21,00,000	7	25,780
2011-12	Solan	--	--	--	--
	Arki	--	--	--	--
	Nalagarh	--	--	--	--
	Kandaghat	--	--	--	--
	Total	--	--	--	--
	GRAND TOTAL OF ALL THE FIVE YEARS	95	91,10,000	71	4,38,780

(No relief/financial assistance granted to Non-Himachalis on death or injuries due to accidents after 01.10.2010 as per instructions received from the Joint Secretary (Revenue) to the Govt. of Himachal Pradesh vide letter No:Rev.D(D)1-7/2004 dated 1st October, 2010), however first aid and free medication is provided to them.

(B) Snake bite cases in district and relief given :

Year	Sub-division	Snake bites				Total	
		Human		Animals			
		No. of cases	Relief given	No. of cases	Relief given	No. of cases	Relief given
2008-09	Solan	2	2,00,000	7	61,500	9	2,61,500
	Nalagarh	--	--	10	90,500	10	90,500
	Kandaghat	--	--	--	--	--	--
	Arki	--	--	--	--	--	--
	TOTAL:	2	2,00,000	17	1,52,000	19	3,52,000
2009-10	Solan	--	--	5	50,000	5	50,000
	Nalagarh	6	6,00,000	32	3,05,000	38	9,05,000
	Kandaghat	--	--	--	--	--	--
	Arki	1	1,00,000	1	10,000	2	1,10,000
	TOTAL:	7	7,00,000	38	3,65,000	45	10,65,000
2010-11	Solan	1	1,00,000	3	20,000	4	1,20,000
	Nalagarh	10	10,00,000	20	2,00,000	30	12,00,000
	Kandaghat	1	1,00,000	--	--	1	1,00,000
	Arki	--	--	--	--	--	--
	TOTAL:	12	12,00,000	23	2,20,000	35	14,20,000
2011-12	Solan	--	--	4	20,000	4	20,000
	Nalagarh	6	6,00,000	20	2,00,000	26	8,00,000
	Kandaghat	--	--	--	--	--	--
	Arki	1	1,00,000	2	21,000	3	1,21,000
	TOTAL:	7	7,00,000	26	2,41,000	33	9,41,000

District Disaster Management Plan, District Solan 2013-14

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

2012-13	Solan	1	1,50,000	1	16,400	2	1,64,400
	Nalagarh	2	3,00,000	35	4,62,800	37	7,62,800
	Kandaghat	--	--	--	--	--	--
	Arki	--	--	--	--	--	--
	TOTAL:	3	4,50,000	36	4,79,200	39	9,29,200
2013-14	Solan	--	--	--	--	--	--
	Nalagarh	--	--	10	1,45,400	10	1,45,400
	Kandaghat	--	--	--	--	--	--
	Arki	--	--	--	--	--	--
	TOTAL:	--	--	10	1,45,400	10	1,45,400

Life : few/as per detail given above.
Property : 10 to 100 crore

(ii) Air.

Past history : NIL
Frequency : May be.
Impact : House hold/travelers
Vulnerable Population : Travelers.
Likely damage : NIL
Life : few.
Property : 10 to 100 crore

(iii) Rail:-

Past history : Yes.
Frequency : may be.
Impact : House hold/travelers.
Vulnerable, population : Frequent travelers
Likely damage : NIL
Life : Few.
Property : 10 to 100 lakhs.

(iv) Water:-

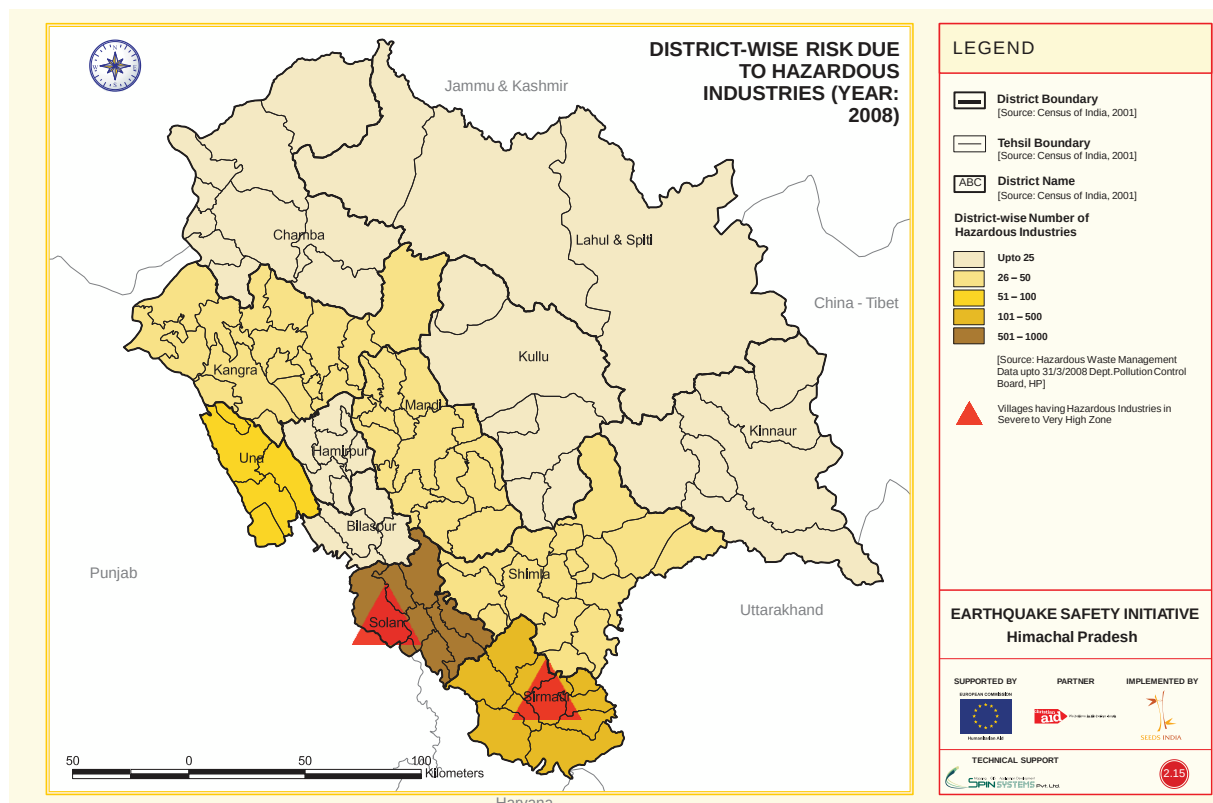
Past history : Yes.
Frequency : Likely in rivers like Giri, Satluj, Kaushalaya and Gamber, Sirsa, Chikni, Looned, Kala kund, Mahadev, Balad etc.
Impact : House hold/passers byes
Vulnerable population : River peripheries, water sports, fisher man, Tourists.
Likely damage : 10 to 50 lacs
Life : Few.

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(v) Industrial:-

Past history	:	Yes.
Frequency	:	Likely.
Impact	:	Industrial complexes, workers and local residents.
Vulnerable population	:	Industrial workers, local residents.
Likely damage	:	50 lacs to 5 Crores.
Magnitude	:	Industrial workers and population residing adjacent to industries.
Life	:	Few
Property	:	Rs. 1 to 5 Crores

Responsible factors for damage	:	Non complying the construction bye laws and non construction of fire proof buildings, inadequate safety measures, untrained officials to fight with fire etc.
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Others ecological happening :

(v) Epidemic :-

Past history	:	Yes
Frequency	:	Likely.
Impact	:	House hold, Panchayat.
Vulnerable population	:	All.

Likely damage	:	NIL
Life	:	Few
Property	:	Negligible

(vi) Pandemic :-

Past history	:	Yes
Frequency	:	Likely.
Impact	:	House hold, Panchayat.
Vulnerable population	:	All Farms and poultry animals .
Likely damage	:	NIL
Animals	:	Few.

(vii) War conventional :-

Past history	:	Yes
Frequency	:	May be.
Impact	:	Tehsil and vital installation..
Vulnerable population	:	All.
Likely damage	:	NIL
Life	:	NIL
Property	:	Vital Installation & infrastructure.

(viii) Civil Strife :-

Past history	:	Kasauli and Kunihar revolts during British rule 1984 and Anti Reservation 1991
Frequency	:	May be.
Impact T	:	Tehsil to whole district.
Likely damage	:	NIL
Life	:	Few.

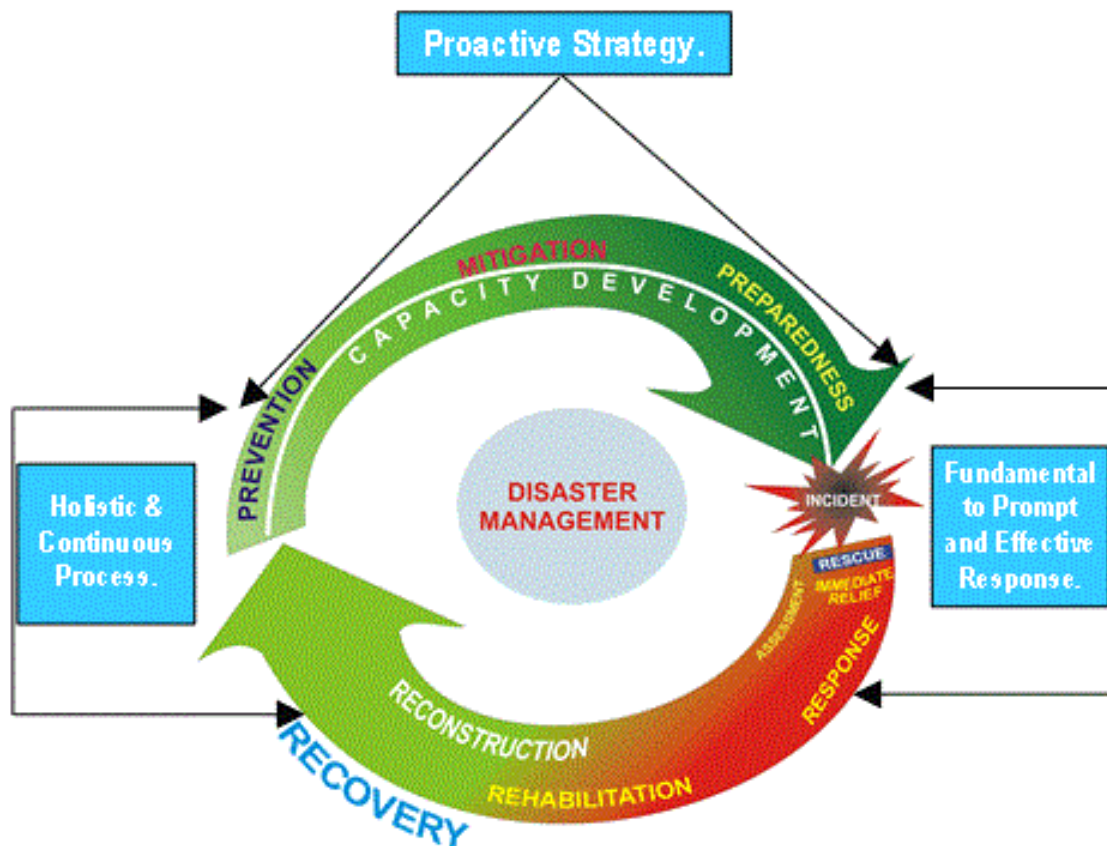
3.11 : Coping Capacity :

All the departments respond effectively during any disaster or natural calamity immediately without any loss of time. The CONTINGENCY PLANS has already been prepared by all the departments, which are helpful during any natural calamities and are being updated simultaneously. In addition to this, the Disaster Management Plan of Solan district has also been prepared and finalized and District Disaster Management Authority (DDMA), which is in operation. Besides, the Quick Response Team (QRT) has been constituted by the District police at all levels for quick response. Similarly, Disaster management Committees has been formed at Sub-Divisional, Tehsil, Sub-Tehsils and Local Level under the chairmanship of respective SDM, Tehsildar, Naib-Tehsildar and Patwari concerned in the district by including the officers of the line department. All these DMCs look into dissemination of warning, rescue and evacuation, first aid, shelter management, counseling, water and sanitation, carcass disposal, relief

distribution and damage assessment etc. during any calamity. Main features of District Management Plan is as under :-

- Action Plan to mitigate the Disasters.
- Setting up of control rooms at all level.
- Liason with press.
- Duties and responsibilities of various departmental officers.
- Rehabilitation centers.
- List of material to keep ready at any moment with various departments.
- List of manpower available with various departments in the district.
- Updating the IDRN website to arrange the MANPOWER & MATERIAL at once.
- Disaster management training, mock exercises and demonstration.
- Operation of District Relief Funds.

DISASTER MANAGEMENT CONTINUUM



3.12 : Capacity building :

It is necessary for assessing the capacity of the district and all the departments to respond effectively during any disaster or natural calamity to cope up with the situation immediately

without any loss of time. The CONTINGENCY PLANS prepared by all the departments are helpful during any natural calamities and list of manpower, material, machinery, buildings and infrastructure is available with them and also been in the inventory of DDMP, which is being updated simultaneously.

3.13 : Community Education and Awareness programme :-

Community is the first and the last to face the disasters. As such it is necessary to educate and equip for the recurring disasters. As such the communities are being made aware during Gram Sabha Meetings at Panchayat level and all the departments by SDMs concerned. Besides, most vulnerable areas are also identified during periodic awareness programmes being organized at the panchayat, educational institution, departments and social organizations level.

3.14 : Periodic Mock Drills :-

The Superintendent of Police Solan, Baddi and Commandant Home Guards, District Solan are conducting regular mock drills for the awareness of public as well as officers/officials of various departments in the district. The departments like, Health, HPPWD, I&PH, Education etc. are also assisting them for streamlining the process. In addition to this, mock drills were also organized by NIDM Delhi (on 26th & 27th July, 2011 at Baddi), District Administration (on 13th October, 2011 by organizing special seminars for Health, Education, Yuva Mandals, Press/Media Officials, Fire, Home Guards, NCC etc.), NDRF Bhatinda (w.e.f. 11th to 22nd January, 2012) again by District Administration (on 13th October, 2013 in all the Sr.Sec.Schools and Primary Schools of the district.

3.19 : Pre-Disaster Mitigation Steps :-

Each disaster brings with it a unique set of problems and situations. If these situations have not been anticipated well in advance, then the difficulties faced by the victims as well as the DMCs can increase enormously. Therefore there is a need address the characteristics of each disaster separately through multi hazard approach as detailed below :-

- ❖ The chlorine tablets are being distributed through Health Blocks, Hospital, Health Sub-Centres and Panchayats in the district to ensure the purity of water free from contamination.
- ❖ Battery charges communication equipments are also in operation in major offices of the district like administration and police etc.
- ❖ Generators are being used in major offices including district and other main hospitals in emergency.
- ❖ Common rescue operation equipments like search lights, ladders and ropes etc. are available at all the Sub-Tehsils, Tehsils and Sub-Division level including police fire and home guard departments
- ❖ Necessary equipments for the removal of debris and temporary bridges etc. are available with all the XENs (PWD/NH) in the district at various parts of the district.
- ❖ NON-PERISHABLE food will be arranged, if required, from the approved agencies.
- ❖ Inventory of water sources, shelters and urgent phone numbers etc. is available with all the XENs (IPH), BDOs, SDMs, Tehsildar and Naib-Tehsildars

- ❖ The HELPLINE numbers of POLICE (100), FIRE (101) , HOSPITALS (102), AMBULANCE (108), DISTRICT ADMINISTRATION (1077) is being publicized through cable and print media from time to time.

3.20 : Periodic Review :-

It is true that a step in time saves nine, therefore the periodic review of the situation at all levels of administration is necessary to boost the future actions and also to plan in strategic manner. However, it can not be presumed that when and where a DISASTER may arise, but the periodic review or pre-discussions on any calamity are helpful to meet such occasional challenges. Therefore precise actions, procedures and responsibilities have been assigned to concerned departments to ensure timely response in case of any disaster and meetings are also being organized to review the situation from time to time.

3.21 : Disaster Management Training :-

However the Police, Home Guard, Forest Guards and Fire personnel in HIMACHAL PRADESH are imparted necessary training in respect of RESCUE OPERATION on occurrence of specific eventualities like MOTOR ACCIDENTS, EARTHQUAKE, FIRE, CLOUD BURSTS etc. But, it is necessary to train more personnel from among REVENUE OR ADMINISTRATION who are actually related to with RELIEF AND REHABILITATION PROCESS therefore they are also trained through orientation trainings from time to time. Besides, the local bodies, NGOs and masses are being made aware regarding RELIEF and RESCUE operations by organizing seminars through Blocks and Gram Sabhas etc.

3.22 : Rehabilitation Centers :-

Disaster is an event which can happen at any time or any where without a glimpse or ray in ones brain/mind. Although, there are no regular rehabilitation centers, however the School, Colleges, University buildings existing in district Solan and also the Community or Mahila/Yuva Mandal Bhawans at various places are earmarked as **REHABILITATION CENTERS**, which can be used for the purpose on requirement at any time, as such the inventory of temporary rehabilitation centers in whole of the district alongwith the contact numbers etc. has been prepared by all the BDOs, Deputy Director of Education (Secondary and Primary) and concerned SDMs, Tehsildars and Naib-Tehsildars.

3.19 : List of Material and Equipments to be kept ready by various departments :-

Disaster is an event which can happen at any time, as such following material remains always ready with concerned departments and all levels:-

Sr. No.	Department	Essential Material to be kept ALWAYS ready by concerned departments/offices.
1.	District Administration through its field offices i.e. Sub-	Tarpaulins and Blankets for temporary rehabilitation. Advance Funds for immediate assistance/relief to the

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	Division Solan, Arki, Nalagarh & Kandaghat, Tehsils Solan, Arki, Nalagarh, Baddi, Kasauli and Kandaghat and Sub-Tehsils Darlaghat, Ramshahar & Krishangarh.	affected people as per norms prescribed in <u>"Himachal Pradesh Disaster Management & Relief Manual-2012"</u>
2.	Health and Family Welfare at District Hospitals, CHCs, PHCs etc.	Ambulance, stretchers, life saving medicines, temporary beddings for spot camps, minor operation theatre, adequate storage of blood and necessary trained manpower.
3.	Public Works i.e. All the XENs (B&R/NH) Solan, Kasauli, Arki & Nalagarh.	JCBs or Bull dozers, trucks, necessary manpower and recovery equipments.
4.	Fire (All Fire Officers, Solan, Parwanoo, Baddi & Nalagarh)	Fire fighting equipments like fire extinguishers, water tanks, hydraulic pressure van, ladders, ropes, asbestos dress etc. and necessary manpower.
5.	HRTC (RM, HRTC Solan and Nalagarh)	Adequate buses, storage of diesel & petrol, necessary manpower and cranes etc.
6.	Food and Civil Supplies (DFSC Solan)	Arrangements of adequate essential commodities, kerosene oil and LPG etc.
7.	I&PH (All the XENs (IPH) Solan, Arki and Nalagarh of District Solan)	Regular supply of water and necessary equipments for temporary arrangement of potable water.
8.	HPSEBL (All the XENs, HPSEBL, Solan, Parwanoo, Baddi, Nalagarh, Arki of District Solan)	Regular supply of electricity and temporary arrangements of electricity to affected areas alongwith adequate number of charged batteries.
9.	NCC (Boys/Girls) Solan	Adequate tents.
10.	Forest (DFO Solan, Kunihar & Nalagarh)	Fire fighting equipment and material.
11.	BSNL (DGM, BSNL, Solan and all the SDE/JTO (Telcom) in District Solan)	Charged batteries and temporary equipments for streamlining communication.
12.	Public Relations (DPRO Solan, APRO Nalagarh and Kunihar)	Public address system and charged batteries.
13.	Police (SP Solan, Baddi, DSP Solan, Parwanoo, Baddi, Nalagarh and Darlaghat)	Wireless equipments and search lights etc.
14.	Home Guards (Commandant, HG Solan)	Tents, ropes, rope ladders and search lights etc.
15.	Municipalities/Nagar Panchayats (EO, MC/NP Solan, Parwanoo, Baddi, Nalagarh and Arki).	Disposal pipes, tanks, manpower etc.

3.23 : Steps to be taken to prevent disasters :-

It is not possible to stop the disasters from happening; prevention is a very important step to protect someone and to have the less damage as possible. Increasing our knowledge regarding disasters and knowing what to do and how to act in those moments will increase confidence and safety. Therefore, following steps are being taken to prevent disasters:-

- A. **Enlistment of possible disasters** : All possible disasters are enlisted and the departments concerned are directed to be in readiness with all the equipments available with them.
- B. **Create effective operational processes**: Being implemented as per requirement and prevailing situation.
- C. **Understand and implement technologies to prevent downtime**: No one solution or plan can provide complete disaster protection, so there need to put in place people, processes, and technology that combine to give organization the greatest possible chance for survival. These suggested practices can give a place to start planning for the survival.

3.25 : Need of Capacity Building :-

It is the District Administration which analyzes and understand the risk causes, prevention, mitigation and emergency response helps by reducing vulnerability and occurrence of hazards or containing them from realization as disaster with the help of respective Departments/NGOs. Disaster impact on life, property and environment on a scale that threatens short-term and long term sustainability of life support system, resources, livelihood and overall well being, is of direct system, resources, livelihood and overall well being, is of direct concern in disaster management. Impacts may be in form of direct damages or indirect or intangible or chain-in-secondary or tertiary effects or loses. Disaster risk management is broad subject rooted in environmental systems, community action, and wisdom tools and is management centric, whereas emergency response mainly stems with well tested command system and s operation centric. Capacity to manage disaster risks and emergencies require knowledge, skills resources, motivation and attitude at different levels. It includes training, education, guidelines and legislation, policy support for actions and systemic accountability.

“It is true that it takes years to build and fractions of seconds to destroy....”.

Whenever disasters strike, they do not discriminate or differentiate amongst men and nations, poor or rich, young or old. They do not negotiate or listen and they do not wait, they simply come, kill and destroy causing irreparable losses. When these hazards strike, it is the communities who are first to react, it is the communities irrespective of their profession, status, caste or culture who need to react. Therefore, it is important that the capacities of communities are built to observe, understand and prepare themselves for the worst impact. It is important to allow transparency of actions of the nodal agencies working towards mitigation measures to encourage communities to get involved, so that at the time of occurrence of disasters, they do not wait for help, they can stand feet and mobilize self help, before rescue and relief reaches the.

3.26 : Response on occurrence of any incident :

Action to meet with any eventuality is being taken immediately by the concerned SDMs with the help of concerned departments at local level, which is however adequate and as also quoted in previous sections when the Cable Car accident occurred in the district in early nineties, the assistance from Army and Air Force Authorities was taken for rescue operation in the district. Similarly, the services of experts and army can be taken on requirement. However, adequate search and rescue operation equipments are available with all concerned departments like PWD, IPH, FIRE, Health, Home Guards etc. and some primary equipments are also provided to all the SDMs/Tehsildar and Naib-Tehsildars in the district.

3.27 : Gap identification :

The casualties during flash flood in Balad khud of Tehsil Baddi and Chikni Khud of Tehsil Nalagarh could have been avoided if we had expert divers, swimming suits/life jackets etc. Now, it has been purchased by the SDM Nalagarh and expert divers are also being listed by the SDM Nalagarh, SP Baddi & Fire Department etc. Road accidents on National Highways and other Rural Roads are due to high terrain and typical topography of the Roads in the district, besides rash & drunken driving also plays a destructive role. The incoming 4-lane proposal of Shimla-Chandigarh National Highways may have a very crucial role to decrease the road accidents. In addition to this, there is shortage of staff in all the departments which affects the rescue operation and Control Rooms are also not much effective as required at departmental level as well as at administration level. The inaccessible places are required to be joined with nearest link roads under various developmental schemes in the district. Atleast, the village paths are required to be made userfriendly under MGNAREGA, so the hindrances are occurred for rescue operation in rural area on occurrence of any eventuality. Lack of knowledge and infrastural facilities at all levels is also a responsible factor causinf damages. Besides, the expert's advice and suggestions for perfect implementation of disaster management activities are also necessary. The emergency operation centers are required to be made effective by engaging adequate staff and equipments for this purpose, which can be put to use on requirement.

Therefore, Separate staff to execute the relief and rescue operation work is required at District, Sub-Division, Tehsil and Sub-Tehsil level and the teams are required to be notified/ publicized with their telephone numbers. As presently, these activities are being carried out with the help of existing staff of various departments. But due to large number of vacancies in all the departments these activities are affected badly.

3.28 Lesson learnt from past incidents :

As also indicated in above para the divers are enlisted, main equipments like search lights, ropes/rope ladders, life jackets, gas masks etc. have been purchased by all the SDMs. The RCC cutters were not available when the buildings were collapsed, which has also been purchased now by all the SDMs. Besides, TCP and MCs/NPs are instructing the people to construct earthquake resistant buildings and follow proper construction norms & standards. In addition to this, emergency operation centre should be run under over all control of Senior Administrative Officer, who should direct concerned authorities/departments on requirement but due to shortage of staff the real objective is often hampered. Besides, in case

of major incidents, for deciding the rescue operation a committee of expert officers may be constituted at District level, which will suggest the immediate action to be taken and said team should also keep regular vigil on all the events.

- (a). Adequate staff.
- (b). Adequate equipments.
- (c). Constitution of Analysis committee.

CHAPTER-4

Institutional Mechanism

4.1 : INSTITUTIONAL MECHANISM

In our federal system of governance, in the aftermath of a disaster, the primary responsibility for undertaking the rescue, relief and rehabilitation measures rests with the concerned State Governments and District Administration. The role of the Central Government is supportive, in terms of physical and financial resources and complementary in sectors such as transport, early warning systems, etc.

The Disaster Management Act 2005, lays down a three tier institutional structure for disaster management at the national, state and district levels in the form of NDMA, SDMA and DDMA. National Policy on Disaster Management (NPDM) has further specified the roles and responsibilities of various organizations for disaster response.

4.2 : NATIONAL LEVEL

4.2.1 : National Crisis Management Committee (NCMC)

At the National Level, the Command, Control and Coordination of the disaster response will be overseen by the National Crisis Management Committee (NCMC) under the Cabinet Secretary. NCMC will issue guidelines from time to time as required for effective response to natural disasters. All Ministries/Departments/Agencies at the national level shall comply with the instructions of NCMC. The NPDM prescribes that NCM shall deal with ‘major disasters that have serious or national ramifications’.

4.2.2 : Ministry of Home Affairs (MHA)

The Ministry of Home Affairs is the nodal agency at the National level for coordination of response and relief in the wake of natural disasters(except drought, pest attack & hailstorm). MHA will provide financial and logistic support to the State Governments, keeping in view, their resources, the severity of the natural disaster and the capacity of the State Governments to respond in a particular situation.

4.2.3. : National Executive Committee (NEC)

Section 10(2) (k) of the Disaster Management Act stipulates that the NEC under the Union Home Secretary will ‘coordinate response in the event of any threatening disaster situation or disaster’. NEC may give directions to the concerned Ministries/Departments of the Govt. of India, the State Governments and the State Authorities regarding measures to be taken by them in response to any specific threatening disaster situation or disaster.

4.2.4 : Other Central Ministries/Departments

The other concerned Central Ministries/Departments/Organisations will render Emergency Support Functions (ESF) wherever Central intervention and support are needed by the State Governments.



4.3 : STATE LEVEL

4.3.1 State Executive Committee (SEC)

It will be the primary responsibility of the State Government to respond to natural disasters and provide relief to the affected people. Section 22(2) (G) of the Disaster Management Act stipulates that the SEC under the State Chief Secretary shall 'coordinate response in the event of any threatening disaster situation or disaster'. SEC shall give directions to any Department of the State Government or any other authority or body in the State regarding actions to be taken in response to any disaster. Department of Relief/ Disaster Management shall be the nodal department for disaster management and Secretary of the Department /Relief Commissioner shall implement the decisions of the SEC pertaining to State level Response to natural disasters.

Disaster response being a multi-agency function, other Departments of the State Governments will provide emergency support in their relevant domains at the State/District levels.

4.4. : DISTRICT LEVEL

4.4.1 : District Disaster Management Authority (DDMA)

Section 30(2)(xvi) of the Disaster Management Act stipulates that the DDMA under the chair of the Collector or District Magistrate or Deputy Commissioner, as the case may be and the co-chair of the elected representative of the local authority, shall 'coordinate response to any threatening disaster situation or disaster'. The Collector/District Magistrate/ Deputy Commissioner, as the head of administration at the district, shall be the focal point in the command and control for disaster response at the district level, in accordance with the policies/guidelines/instructions from the national and state levels. Depending on the nature of disaster and response he will be the Incident Commander himself or delegate the responsibility to some other officer.

All the Departments/Agencies of the Central and State Governments in the District/City involved in response and relief will work in accordance with the directions of the Incident Commander.

The lower administrative units of Districts viz; Subdivisions under the administrative control of a Sub-divisional Magistrate/Officer and Blocks and Tehsils under the administrative control of the Block Development Officers/Tehsildars will coordinate the functioning of the various departments in their respective jurisdiction.

The Incident Command Teams at Subdivision and Block levels under SDO/SDM or BDO/Tehsildar as the case be will be responsible for all response and relief works.

4.4.2. : Mechanism for International Assistance

As a stated policy of the Government of India no appeals shall be made seeking foreign aid for disaster response. However if the foreign national governments voluntarily offer assistance as a goodwill gesture in solidarity of the disaster victims, the Ministry of Home Affairs will coordinate with the Ministry of External Affairs for obtaining and channelizing such assistance.

All national and international non- government agencies while rendering emergency support functions on the ground will function under the overall command of the State Government through the Incident Commander.

4.4.3. : Disaster Management Structure:

The District Administration is the focal point for the implementation of all Government plans and activities, as such considerable powers have been vested in the District Collector or Deputy Commissioner to carry out relief operations in the shortest possible time. Therefore the DISASTER MANAGEMENT has become a pre-requisite in present scenario, which can be called as action plan in normal usage. Following action plan is proposed for district Solan,

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which infact has been functioning off and on when some vulnerable situation arises anywhere in the district, therefore to make the RELIEF OPERATION more meaningful or effective it is necessary to constitute the DMCs at District, Sub-Division, Tehsil and Sub-Tehsil levels under the overall control of DISTRICT DISASTER MANAGEMENT AUTHORITY as notified by the Government of Himachal Pradesh REVENUE DEPARTMENT Notification No:Rev.D(D)4-2/2000-V dated 1st June, 2007 as per provisions of DISASTER MANAGEMENT ACT, 2005.

4.4.3 (a) DISTRICT DISASTER MANAGEMENT AUTHORITY :-

Sr. No.	Designation of the officer with department.	Office and Residence Phone number alongwith fax number.		
		Office Phone	Residence Phone	Fax No.
1	2	3	4	5
1.	Deputy Commissioner, CHAIRMAN	01792-220656	01792-220555	01792-220086
2.	Superintendent of Police, Solan and Baddi.	01792-220567 01795-245800	01792-220568 01795-271900	01792-223576 01795-245800
3.	Superintending Engineer, HPPWD	01792-220675	01792-220676	01792-223802
4.	Superintending Engineer, HPSEB	01792-221481	01792-221557	01792-223652
5.	Superintending Engineer, I&PH Nahan and Shimla.	01702-222295	01702-224029	01702-222295
6.	Chief Medical Officer	01792-224181	01792-220532	01792-224151
7.	Chairman, Zila Parishad, Solan	01792-221851	01792-246255	01792-223756

The District Disaster Management Authority will co-ordinate all the District level officers for immediate and effective management of disasters on requirement with the help of District, Sub-Division, Tehsil and Sub-Tehsil level disaster management committees in the district as per detail given hereunder.

4.4.3 (b) DISTRICT DISASTER MANAGEMENT COMMITTEE :-

The District Disaster Committee will function under DDMA and assist it in implementing the DDMP. & the task assigned by the DDMA. It will ensure and effective and concerted response by Government people participation at district level. The idea is to manage disaster as a team with objective of :

- (1) A forum for communication, information exchange and developing consensus.
- (2) To co-ordinate, eliminate duplication and reduce gaps in services.
- (3) Being more effective through pooled resources.
- (4) Mobilize and provide timely assistance and material support to disaster affected community.
- (5) Co-ordinator (Disaster Management Group)

4.4.3 (i) : In view of above to deal with disasters a case group of Co-ordinators has been constituted as a committee to implement monitor and evolve the DDMP as follows:

- | | | |
|--------|---|--|
| (i) | Chairman | : Deputy Commissioner |
| (ii) | Co-ordinator Search & Rescue | : Superintendent of Police |
| (iii) | Co-ordinator, Medical aid and Ayurveda | : Chief Medical Officer |
| (iv) | Co-ordinator, Animal Health | : Deputy Director (Animal Husb.) |
| (v) | Co-ordinator Infrastructure & Reconstruction. | : SE (PWD) 3 rd Circle, Solan.
And XEN (NH) Solan. |
| (vi) | Co-Ordinator, Logistics, Water, Food & Supply, Transport, Timber fire wood. | : District Food & Supplies Cont. |
| (vii) | Co-ordinator, Evacuation, Camp, Administration & Liaison out side agencies. | : Addl. District Magistrate |
| (viii) | Co-ordinator, Public Relation, Media & Public Awareness. | : District Public Relation Officer. |

4.4.3 (ii) : DISTRICT DISASTER MANAGEMENT COMMITTEE : there will be following members in DDMC, SDDMC and TDMC/STDTC are also functional in Solan district under the overall Control and Chairmanship of worthy Deputy Commissioner, Sub-Divisional Magistrates, Tehsildars and Naib-Tehsildars respectively as per detail given hereunder :

(A) OFFICIAL MEMBERS :-

Sr. No.	Designation of the officer with department.	Office and Residence Phone number alongwith fax number.		
		Office Phone	Residence Phone	Fax No.
1	2	3	4	5
1.	Deputy Commissioner, CHAIRMAN	01792-220656	01792-220555	01792-220086
2.	Superintendent of Police, Solan	01792-220567	01792-220568	01792-223576
3.	Superintendent of Police, Baddi	01795-246800		01795-246800
4.	Addl. Deputy Commissioner, Solan	01792-223705	01792-220076	01792-220086
5.	CEO, BBND, Baddi	01795-271121	--	01795-271121
6.	SDM, Solan	01792-223707	01792-220165	01792-220086
7.	SDM, Arki	01796-220666	01796-220777	01796-220666
8.	SDM, Kandaghat.	01792-256100	01792-256200	01792-256100
9.	SDM, Nalagarh	01795-223024	01795-223049	01795-223024
10.	GM Industries, Baddi	01792-230528	--	01792-230528
11.	Deputy Director, Industries,	01795- 244222	--	01795- 244222

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	Baddi.			
12.	Superintending Engineer, HPPWD, 3 rd Circle Solan	01792-220675	01792-220676	01792-223802
13.	Superintending Engineer, HPPWD, NH Circle at Chaura Maidan, Shimla-2.	0177-2814801	--	
14.	Superintending Engineer, HPSEBL Solan.	01792-221481	01792-221557	
15.	Superintending Engineer, I&PH Nahan.	01702-222295	01702-224029	01702-222295
16.	Superintending Engineer, I&PH Shimla at Kasumpatti.	0177-2620380	--	0177-2625913
17.	Superintending Engineer, Pollution Control Board at Baddi.	01795-245374		01795-245374
18.	Chief Medical Officer, Solan	01792-224181	01792-220532	01792-224151
19.	General Manager, Hydro Power Project, P.O. Barmana, District Bilaspur.	01978-245061		01978-245063
20.	Sr.XEN, Electrical System Division, (Transmission) HPSEBL, Saproon, Solan, District Solan	01792-223579	--	01792-223579
21.	XEN, HPPWD, B&R Solan.	01792-223811	01792-223720	01792-223811
22.	XEN, HPPWD, B&R Kasauli	01792-272067	01792-272076	01792-272067
23.	XEN, HPPWD, B&R Nalagarh	01795-222119	01795-222298	01795-222199
24.	XEN, HPPWD, B&R Arki	01796-220714	01796-220713	01796-220714
25.	XEN, HPPWD (NH) Solan	01792-223804	01792-223313	01792-223804
26.	XEN, I&PH Solan	01792-223808	01792-228008	01792-223808
27.	XEN, I&PH Arki	01796-220774	01796-220770	01796-220774
28.	XEN, I&PH Nalagarh	01795-223506	01795-223585	01795-222747
29.	DFO Solan	01792-223751	01792-223796	01792-223751
30.	DFO Nalagarh	01795-223124	01795-223090	01795-223124
31.	DFO Kunihar	01796-262228	01796-262350	01796-262228
32.	DPRO Solan	01792-220089	01792-220089	01792-220089
33.	PO, DRDA Solan.	01792-223915	-	01792-220086
34.	DIO(NIC) Solan	01792-224169	01792-220794	01792-220086
35.	Commandant, IVth GTC Subathu.	01792-275044 01792-275045	01792-275044	01792-275044
36.	Group Captain, Air Force Station, Kasauli.	01792-272091 01792-272094	01792-272795	01792-272105
37.	Brigadier, Army HQ Kasauli	01792-272208	01792-272208	01792-272208
38.	Commandant, Army	01792-223799	-	-

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39.	Commandant, Army Wing Dagshai	01792-266123	-	-
40.	Commandant, Home Guards, Solan	01792-223845	01792-222326	
41.	Chief Executive Officer, Dagshai Catonement.	01792-266152	--	01792-266153
42.	Chief Executive Officer, Subathu Catonement.	01792-275025	--	01792-275425
43.	Chief Executive Officer, Kasauli, Catonement.	01792-272029 01792-273029	--	01792-272029
44.	Deputy Director (Agriculture)	01792-230734	01792-230735	01792-231235
45.	Deputy Director (Horticulture)	01792-230741	01792-222403	01792-230741
46.	Assistant Director (Animal Husbandry)	01792-223593	01792-224197	01792-223593
47.	Deputy Director of Education (Secondary)	01792-230825	01792-224025	-
48.	Deputy Director of Education (Primary)	01792-230440	01792-220014	-
49.	BDO Solan.	01792-223871	01792-223871	01792-223871
50.	BDO Kunihar	01796-262230	01796-262230	01796-262230
51.	BDO Kandaghat	01792-256238	01792-256238	01792-256230
52.	BDO Dharampur	01792-264042	-	01792-264042
53.	BDO Nalagarh	01795-223026	01795-223026	01795-223026
54.	DFSC Solan.	01792-224114	-	-
55.	Fire Officer, Solan.	01792-223888	01792-223794	-
56.	Regional Manager, HRTC, Solan	01792-230219	--	01792-230219
57.	Regional Manager, HRTC, Nalagarh	01795-223147	--	01795-223147
58.	Station House Master, Indian Railway, Solan.	01792-220674	-	-
59.	DGM, BSNL Solan.	01792-220100	01792-	-
60.	Executive Officer, MC Solan.	01792-223532	01792-	-
61.	Executive Officer, MC Parwanoo	01792-232921	01792-	-
62.	Executive Officer, MC Nalagarh	01795-223028	01795-	-
63.	Executive Officer, Nagar Panchayat, Arki	01796-220803	01796-	01796-220666
64.	Executive Officer, MC, Baddi	01795-246957	-	-

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65.	District Panchayat Officer, Solan	01792-223756	01792-	01792-223756
66.	District Programme Officer, ICDS	01792-221934	--	--
67.	District Welfare Officer,	01792-223742	--	--
68.	Town & Country Planner, Solan.	01792-228485	01792-220359	-
69.	CO, NCC (Boys) Solan.	01792-223774	01792-224523	-
70.	CO, NCC (Girls) Solan	01792-220459	01792-223698	-
71.	Superintendent, Sub- Jail, Solan.	01792-223835	--	--
72.	District Revenue Officer, Solan, MEMBER SECRETARY	01792-224033	-	01792-220086

(B) NON-OFFICIAL MEMBERS:

1. All the Hon'ble MLA's Solan district.
2. The Chairman, Zila Parishad, Solan.
3. Two Members from the NGOs.
4. Two prominent Citizens of the District.

4.4.3 (iii) SUB-DIVISIONAL DISASTER MANAGEMENT COMMITTEE :-

(A) OFFICIAL MEMBERS :-

Sr. No.	Designation of the officer with department.
1	2
1.	Sub-Divisional Magistrate CHAIRMAN
2.	DSP/SDPO/SHO
3.	Tehsildar/Naib-Tehsildar
4.	BMO
5.	XEN, HPPWD (B&R)
6.	XEN, HPPWD (NH)
7.	XEN, HPSEB
8.	XEN, I&PH
9.	DFO/RO as the case may be.
10.	BDO
11.	Inspector, Food & Supplies
12.	Incharge, HRTC
13.	EO, MCs/NPs.
14.	Incharge, Home Guards.
15.	Incharge, Fire Station.
16.	APRO

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17.	Incharge of Army/Air-Force wing as the case may be.
18.	Railway Authorities as the case may be.
19.	Incharge NCC as the case may be
20.	BEO(Education)
21.	Principals of GSSS
22.	ADO of Agriculture.
23.	HDO of Horticulture
24.	MO PHCs.
25.	MO (Animal Husbandry)
26.	All the Field Kanungos.
27.	Any other officer/officials SDM concerned intends to add.

(B) NON-OFFICIAL MEMBERS:

1. Local Hon'ble MLA's Solan district.
2. The Chairman, BDC.
3. Two Members from the NGOs.
4. Two prominent Citizens of the District.

4.4.3 (iv) : TEHSIL/SUB-TEHSIL DISASTER MANAGEMENT COMMITTEE :

(A) OFFICIAL MEMBERS :-

Sr. No.	Designation of the officer with department.
1	2
1.	Tehsildar or Naib-Tehsildar CHAIRMAN
2.	SHO
3.	MO Incharge
4.	AE, HPPWD
5.	AE, HPPWD (NH)
6.	AE, HPSEB
7.	AE, I&PH
8.	RO as the case may be.
9.	Inspector, Food & Supplies
10.	Incharge, HRTC as the case may be
11.	EO, MCs/NPs as the case may be.
12.	Incharge, Home Guards.
13.	Incharge, Fire Station.
14.	APRO
15.	BEO(Education)
16.	Principals of GSSS
17.	ADO of Agriculture.
18.	HDO of Horticulture

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19.	MO PHCs.
20.	MO (Animal Husbandry)
21.	All Field Kanungos.
22.	All Patwaris
23.	Any other officer/officials SDM concerned intends to add.

(b) NON-OFFICIAL MEMBERS:-

1. Local Hon'ble MLA's.
2. The Pradhans, Gram Panchatyats.
3. Two Members from the NGOs.
4. Two prominent Citizens of the District.

4.4.4. : Various Disaster Management Teams at all levels :

(a) Search & Rescue Teams :

- (i) District Police Solan & Baddi : Multi Hazard.
- (ii) Fire Station Solan, Parwanoo, : Multi Hazard.
Nalagarh and Baddi.

(b) Medical Teams :

- (i) Mobile First aid Team
- (ii) Mobile Hospital.
- (iii) Surgical Team.
- (iv) Mobile Specialists Epidemic Team.
- (v) Medical Rehabilitation.
- (vi) Mobile veterinary team.

(C) Infrastructure Team :

- (i) Road/Bridge Repair Team
- (ii) Debris clearing Team
- (iii) Building repair Team
- (iv) Water pumping/Supply pipes repair Team
- (v) Sewerage repair Team
- (vi) Electric Generator Team
- (vii) Electric Supply/line repair Team
- (viii) Demolition/diffusal of explosive Team
- (ix) Railway line repair Team

(d) Logistic Teams :

- (i) Causality transport Team
- (ii) Equipments and stores transport Team.

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- (iii) Food & Supplies Team.
- (iv) Water supplies Team.
- (v) Fuel and fire wood supply Team.
- (vi) Timber supply Team.
- (vii) Vehicle repair and recovery Team.
- (viii) Temporary relief camp Team.
- (ix) Free kitchen Team.

(e) Communication Teams :

- (i) Wireless operator Team.
- (ii) Land line repair Team.
- (iii) Exchange repair Team.
- (iv) Mobile exchange/tower repair Team.
- (v) Electronics repair Team.

(f) Disposal of dead and carcass :

- (i) EO MC/NP Solan, Baddi, Parwanoo, Nalagarh and Arki
- (ii) Pradhan/Up-Pradhan of concerned Gram Panchayat.

4.4.5. : Control Rooms of Administration & Police and Emergency Operation centers :

Control Room	Contact number	Address	In charge
1.DC Solan	01792-223702 01792-223706	DC Solan	AC to DC Solan
2. ADM Solan	01792-223705	ADM Solan	ADM Solan
3. SP Solan	01792-220567	SP Solan	SP Solan
4. SP Baddi	01705-245800	SP Baddi	SP Baddi
5. SDM Solan	01792-223707	SDM Solan	SDM Solan
6. SDM Nalagarh	01792-223024	SDM Nalagarh	SDM Nalagarh
7. SDM Kandaghat	01792-256100	SDM Kandaghat	SDM Kandaghat
8. SDM Arki	01796-220666	SDM Arki	SDM Arki
9. ASP Solan	01792-220567	ASP Solan	ASP Solan
10. DSP HQ	01792-223929	DSP HQ	DSP HQ
11. DSP Parwanoo	01792-223507	DSP Parwanoo	DSP Parwanoo
12. DSP Darlaghat	01796-248062	DSP Darlaghat	DSP Darlaghat
13. DSP Nalagarh	01795-223109	DSP Nalagarh	DSP Nalagarh

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14. DSP Baddi	01795-246800	DSP Baddi	DSP Baddi
15. Tehsildar & NT Solan	01792-223708	Tehsildar & NT Solan	Tehsildar & NT Solan
16. Tehsildar & NTKasauli	01792-272037	Tehsildar & NTKasauli	Tehsildar & NTKasauli
17. NT Kuthar	01792-284556	NT Kuthar	NT Kuthar
18 Tehsildar & NT Kandaghat	01792-256143	Tehsildar & NT Kandaghat	Tehsildar & NT Kandaghat
19.Tehsildar & NT Arki	01796-220888	Tehsildar & NT Arki	Tehsildar & NT Arki
20.Tehsildar & NT Nalagarh	01795-223044	Tehsildar & NT Nalagarh	Tehsildar & NT Nalagarh
21.Tehsildar Baddi	01795-244620	Tehsildar Baddi	Tehsildar Baddi
22.NT Ramshahar	01795-258533	NT Ramshahar	NT Ramshahar
23.NT Darlaghat	01796-248101	NT Darlaghat	NT Darlaghat
24. NT Mamlig	01792-	NT Mamlig	NT Mamlig

4.4.6 : Site Operation centers :

The centre will be formed on requirement in shape of camp in nearest Govt. building at incident place, whether it belongs to PRI, School or other department.

4.4.7 : Modalities for involvement of Army :

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

4.5 : Action to be taken by the Departments and Departmental Sub-Plans :

4.5.1 : Different agencies/departments responsible for taking action during hazards :

As per responsibilities assigned by the State Government to various department in State Disaster Management Plan following departments are responsible for preparing action plan and intimating the reports during occurrence of following calamities :-

Sr. No.	Type of hazards	Department responsible for reporting and taking action quickly
1.	Floods	I& PH Department
2.	Hailstorm	Agriculture and Horticulture department
3.	Cloud Bursts	I& PH Department+Forest Deptt for forest area.
4.	Heat waves & Cold waves	Department of Health

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5.	Snow & Avalanches	Snow & Avalanches Study Establishment at Manali and Department of Home
6.	Drought	Department of Agriculture
7.	Thunder & Lightening	Department of Environment, Science & Technology
8.	Land slide & Mudflows	Geological wing of department of Industries.
9.	Earthquake	Department of Environment, Science & Technology
10.	Dam failure & Dam bursts	Department of MPP and Power.
11.	Chemical & Industrial Disasters	HPSPCB, Department of Environment, Science & Technology
12.	Nuclear Disasters	Department of Home
13.	Forest Fires	Forest Department
14.	Urban Fires	Department of Home
15.	Major building collapse	Department of Town & Country Planning.
16.	Serial Bomb Blast	Department of Home
17.	Festival related disasters	Department of Home
18.	Electrical disasters and Fires	HPSEB & MPP & Power
19.	Air, Road and Rail accident	Department of transport civil aviation.
20.	Boat capsizing	Department of Transport
21.	Village Fire	Department of Home
22.	Biological disasters & Epidemics	Department of Health
23.	Pest Attacks	Department of agriculture and horticulture.
24.	Cattle epidemics	Department of Animal Husbandry
25.	Food poisoning	Department of Health

4.5.2 : Sub-Plan for Revenue Department Role & Functions :**(i) Introduction :**

The Revenue Department is the nodal agency for providing relief to the people affected by natural calamities. The Officers of the Revenue Department, like the District Collector and Sub Divisional Officers (C), also perform the general administrative functions of coordinating with other Government departments. In case of a disaster, the affected people need not only ex-gratia payments, but also the medical relief, search, rescue of the trapped people, and preventive action to check outbreak of epidemic, security of the people, etc. is also required. The District Collector, being the District Relief Manager, is responsible for not only providing the ex-gratia payment on behalf of the Revenue Department but is also responsible for ensuring the general preparedness of all the Government agencies and a coordinated response of all the agencies in case of disaster. The operating procedure for the Revenue Department, therefore, seeks to take care of all these responsibilities. The District Collector will not only be himself be aware of the essential elements of District Disaster Management Plan but will also make all the Revenue Officers of the District aware about of the essential elements of the Plan, for this purpose, he will organize a refresher training of all Revenue Officers in the month of May every year.

(ii) Purpose of Sub-Plan :

The Sub-Plan is meant to ensure quick and effective performance of function easy reference for coordination of response actions.

(iii) Preparedness & Action :

- (a) The District Collector will ensure that he receives the preparedness reports from all the concerned Government departments in March every year and will convene a meeting of the District Disaster Management Committee in the first week of April and July every year to review the preparedness for various kinds of disasters.
- (b) The District Collector will prepare and maintain a resource inventory of all the trained manpower, equipment and material needed for different response functions in case of flood and earthquake in the district. He will ensure that the concerned departments validate and update the resource inventory in June every year and will send a preparedness report to the Relief Commissioner in July every year.
- (c) He will appoint the Desk Officers for District Emergency Control Room in consultation with the District Disaster Management Authority in July every year so that in case of an emergency, these Desk Officers can immediately assume their charge and the DDCR becomes fully operational.

(iv) Operational Tasks :

The Revenue Department is responsible for the following functions:

- (a) Operation of the District Control Room;
- (b) Distribution of ex-gratia payment to affected people;
- (c) Running of Relief Centres;
- (d) Financial management of different components of response operations;
- (e) Procurement of equipment and material needed by different response agencies from Government departments, the local community and the local market;
- (f) Receipt and utilization of donated material for the relief of the affected people;
- (g) Agencies for immediate mobilization;

(v) Operational Control:

The District Collector will be the overall incharge of the activities for the management of disasters in the District.

(vi) Available Resources:

The name, address and telephone numbers of the revenue officers/officials will be maintained in the DDCR and the concerned Tehsil Office, Sub Division Office and Collectorate for mobilization of the same.

(vii) Task Allocation & Activation :

On the occurrence of any natural calamity, the Collector will immediately convene a meeting of the District Disaster Management Committee at the DDCR and will make a preliminary assessment of the situation; issue instructions to different department heads, assess the availability of response with the agencies and take decision regarding supplementing the resources from other departments. The Collector and the concerned Sub Divisional Officer will reach the affected area as soon as possible for coordinating relief operations and will maintain contact with the DDCR through wireless or other communication medium and coordinate response of different agencies.

(viii) Co-ordination and Directions :

In the absence of District Collector from the district headquarter; Additional District Magistrate will be responsible for coordination between different response agencies.

(ix) On Completion of Operation :

The District Collector or Additional District Magistrate (As the case may be), after completion of the entire task assigned to all the departments relating to immediate response, will take a briefing session with all officers of the rank of Executive Engineers above. He will send a brief report to the Divisional Commissioner which will include an expenditure statement including the debris case and establishment of the centers and construction of the diversion for ensuring communication in the affected areas and other measures to be taken.

(x) Check list for District Collector :

- 1 A meeting of the District Disaster Management Committee should be convened/held in the first week of July to review the preparedness for floods and earthquake etc.
- 2 Gather the preparedness reports from all the concerned Government departments this year.
- 3 Concerned departments should submit validated and updated report on the resource inventory in June this year and sent a preparedness report to the Relief Commissioner
- 4 Prepare and update a resource inventory of all the trained manpower, equipment and material needed for different response functions in case of flood and earthquake in the district
- 5 Appoint a Desk Officers for DDCR in consultation with the District Disaster Management Committee members in July.

4.5.3 : Sub-Plan for Police Department Role & Functions :

(xvi) Check list for District Police :

Police is the leading agency, which works under the operational control of the District Superintendent of Police. Hazard analysis of the district indicates that there is mainly risk of fires, road accidents and flash flood etc. In view of hazard scenario in the district, the role of Police department will include:

1. Evacuation of the affected people

2. Supplement resources of Homeguards for search, rescue and evacuation operations.
3. Security of the property of affected people and law and order maintenance in affected area.
4. Traffic Management leading to affected area and alternative arrangements etc.
5. To ensure Essential Commodity Act.

(xvii) Purpose of Sub-Plan :

The Sub-Plan is meant to ensure:

1. Quick and effective performance of function
2. Easy reference for coordination of response actions

(xviii) Preparedness Action :

- 1 All the officers of the department of the rank of Naib Tahsildar and above reported with the DDCR through the Sub Divisional Collector and took instructions.
- 2 Information regarding the road communication available, construction of the diversion and other structures for communication of the affected area taken.
- 3 Whether survey teams for identification of unsafe buildings both private and Government which are required to be demolished in the interest of the public safety constituted and report sent to DDCR. Being a key response organization in the district, it is vital that this organization remains in a state of preparedness to ensure its general readiness to respond to a disaster situation. The District Superintendent of Police will ensure the execution of following action and send compliance to the District Collector in the first week of March every year, in the format mentioned in Checklist.
 - (i) Orientation training will be organized every year for the purpose in the month of April;
 - (ii) The department will include inputs relating to the hazards identified in the Plan in the regular training module of the volunteers in the district;
 - (iii) The department will organize one refresher training for its volunteers at least once in every financial year;
 - (iv) The department will organize a simulation exercise in May every year for both its regular officers and the volunteers;

(xix) Operation Task & Control :

The department of Police will be responsible for performing the following functions:

1. Search, Rescue and Evacuation of the affected persons
2. First aid to the injured people in the absence of the medical relief team.
3. Security of the property, and law & order maintenance in affected area.
4. Traffic management leading to affected area.
5. To ensure enforcement of Essential Commodity Act.

6. Investigation of offences.

(xx) Operational Control :

The search and rescue teams of the Police will function under the operational control of the District Superintendent of Police. District Superintendent of Police will deploy his teams for the evacuation operations and other functions.

(xxi) Available Resources :

The name, address and telephone numbers of all the officers/officers/officials will be maintained by the Superintendent of Police mobilization of the same.

(xxii) Supplementary Resources:

The Superintendent of Police will also identify the additional manpower & resources that may be called upon by the District Magistrate to supplement the in case of an emergency. Homeguards, NCC and other volunteers can also act as supplementary resource.

(xxiii) Activation Guidelines :

The District Magistrate through the District Emergency Control Room will issue the instructions to the Superintendent of Police, Solan and Baddi.

(xxiv) Operation Co-ordination :

1. The Superintendent of Police, Solan & Baddi will immediately instruct all the police stations of the district to communicate the message to the Police in their respective areas. A radio announcement for the same can also be done for effective communication.
2. The District Superintendent of Police, Solan & Baddi will also workout a deployment plan for the Police force keeping in view the disaster situation and will make arrangements for the transport of the Police to their duty point.
3. The Police called for duty will immediately report to the Station House Officer (SHO), Reserve line of their respective police station.
4. SHO will make arrangements for transport of the Police officials.

(xxv) Direction and Co-ordination :

On receiving the alert message for readiness from the DDCR, Superintendent of Police, Solan and Baddi will immediately put on alert the Police on duty and the key officials of his agency. Security of property, wireless communication availability, immediate assessments of the situation are to be done immediately. For ensuring quick mobilization and deployment of the resources of the Police department a checklist for the Superintendent of Police is indicated in checklist, which he will fill up and send to the District Magistrate through the DDCR.

(xxvi) Operational Checklist :

Once the Rescue operations have started the District Superintendent of police would be required to assess the activation and operational procedure followed by the department. Assessment should be done based on criteria mentioned above

(xxvii) Task Allocation :

The SDM concerned or the senior most executive Magistrate present on the spot will take decisions regarding assignment of task to Police team for various operations in the affected areas on the spot.

(xxviii) On Completion of operation :

The Police team will send task completion report to the District Magistrate through Disaster Eergency Control Room as soon as the task is over. The task completion report will indicate the number of injured people and the number of people still trapped inside the debris. On completion of all the tasks relating to search, rescue and evacuation assigned to the Police by the District Magistrate, the Superintendent of Police, Solan and Baddi will take a briefing session with Station House Officers and submit a briefing report to the District Magistrate. It can be in the same format.

(xxix) Checklist for Superintendent of Police :

1. All the regular officers of the organization are made aware of the responsibilities of Police department in disaster management
2. Orientation training are required to be organized every year for the purpose in the month of April.
3. The department has to provided the regular training to volunteers in combat operations with respect to earthquakee and flood
4. The department has to conduct a simulation exercise in May every year for both its regular officers and the volunteers.

(xxx) Action by Police on Activation :

1. All police officers, including SAF officers, stationed in the district reported to the collector
2. Radio communication established with State Emergency Operation Centre, Divisional commissioner, District emergency control room, all the Police Station are put on full alert.
3. Guards provided as needed for supply depots such as cooperative food stores and distribution centres, security of relief centres, medical relief centres, affected area, and relief supplies.
4. Strict enforcement of Essential Commodities Act ensured to check black marketing
5. Anti social elements identified and necessary precautionary measures taken for confidence building.
6. Overall traffic management and patrolling on highway and other access road to disaster site.

- 7 Officers made available to inquire into and record deaths, there may not be time or adequate manpower available to carry out standard postmortem procedures, hence made arrangement for postmortem in sample cases
- 8 A public information centre activated to respond to personal enquiries about the safety of relatives in the affected areas investigation of offences started.

4.5.4 : Sub-Plan for FIRE & Home Guards- Role & Functions :

Homeguards is the leading agency to combat any situation, which works under the operational control of the police and overall administrative control of the District Collector. Hazard analysis of Solan district indicates that there is risk of fires, building collapse, road accidents, land slide and flash flood etc. In view of hazard scenario in the district, the role of Homeguards will include:

1. Search & rescue of people
2. Evacuation of people from affected areas

Within the administrative structure prevalent in the district, homeguard organization utilizes the services of its local volunteers to supplement the manpower resources of the Police Department in the maintenance of law & order, search, rescue and evacuation operations in case of disaster. The organization has regular trainers who train the volunteers to combat any critical situation viz. search, rescue, fire fighting and evacuation operations.

(x) Purpose of Sub-Plan :

The sub-plan is meant to ensure:

1. Quick and effective performance of function
2. Easy reference for coordination of response actions

(xi) Preparedness and Action :

Being a key response organization in the district, it is vital that this organization remains in a state of preparedness to ensure its general readiness to respond to a disaster situation. The Commandant, Homeguard will ensure the execution of following action and send compliance to the District Collector in the first week of March every year, in the format mentioned in Checklist.

- (a) Orientation training will be organized every year for the purpose in the month of April;
- (b) The department will include inputs relating to the hazards identified in the Plan in the regular training module of the volunteers in the district;
- (c) The department will organize one refresher training for its volunteers at least once in every financial year;
- (d) The department will organize a simulation exercise in May every year for both its regular officers and the volunteers;
- (e) The department will verify stock of equipment and material available with the agency for performing its function as per the District Emergency Management Plan in May every year. The department will also evaluated and

update the resource data base for meeting the requirement of manpower, equipment and material for performing the functions assigned to the agency in District Disaster Management Plan in May every year.

(xii) Operational Task & Control :

The department of Homeguard will be responsible for performing the following functions:

- (a) Evacuation of persons on receipt of warning for flood or occurrence of a disaster;
- (b) Search and rescue of the injured, trapped and marooned people;
- (c) First aid to the injured people in the absence of the medical relief team.
- (d) Once the search, rescue and evacuation operations are over, the District Magistrate can also utilize the manpower resource of homeguards department for assisting in the distribution of relief material.

(xiii) Operational Control :

The search and rescue teams of the Homeguards will function under the operational control of the Platoon Commandant. The District Commandant will deploy these teams for the search, rescue and evacuation operations.

(xiv) Available Resources :

The department will not only maintain the inventory data base of equipment, material and vehicle, but will also try to seek the assistance of District Disaster Management Committee in locating additional resource of equipment and material available with local community and market. The department will work out an arrangement for procuring the same. The District Collector will be requested to procure additional resources for meeting the requirements of the agency. The agency will also identify the additional manpower resource that may be called upon by the District Magistrate to supplement the manpower resource in case of an emergency.

(xv) Operation Co-ordination :

- (a) The Superintendent of Police, Solan and Baddi will immediately instruct all the police stations of the district to communicate the message to the Homeguard Volunteers in their respective areas. A radio announcement for the same can also be done for effective communication.
- (b) The District Commandant, Home Guards, District Solan will also workout a deployment plan for the Homeguards keeping in view the disaster situation and will make arrangements for the transport of the Homeguard Volunteers to their duty point.
- (c) The Homeguard Volunteers called for duty will immediately report to the Station House Officer (SHO) of their respective police station.
- (d) SHO will make arrangements for transport of the Homeguards.

(xvi) Direction and Co-ordination :

On receiving the alert message for readiness from the DDCR, the Commandant, Homeguards will immediately put on alert the Homeguard volunteers on duty and the key officials of his agency. The Commandant will also ensure the immediate stock verification of the equipment and material required for search, rescue and operation. The Commandant, Home Guards will remain in touch with the District Magistrate and Superintendent of Police for the deployment of his resource for search, rescue and evacuation operations. For ensuring quick mobilization and deployment of the resources of the home guard department a checklist for the District Commandant, is indicated in the checklist, which he will fill up and send to the District Magistrate through the DDCR.

(xvii) Operational Checklist :

Once the rescue operation have started by the Commandant, Home Guards, he would be required to assess the activation and operational procedure followed by the department. Assessment should be done based on criteria mentioned in Checklist.

(xviii) Task Allocation :

The SDM concerned or the senior most executive Magistrate present on the spot will take decisions regarding assignment of task to Homeguard team for search, rescue and evacuation operations in the affected areas and in the absence of an Executive Magistrate on the spot, the Homeguard Team undertake decisions regarding search, rescue and evacuation. Once the task is assigned, the Homeguard team will follow the following drill:

(a) Survey:

Rescue is done under trying conditions. The rescue team leader needs to quickly assess the situation and mobilize the resources for timely and effective rescue. For this surveys are of great help preliminary survey: The leader reaches the site, notes down important points and orders the rescue party for work.

(b) Detailed survey:

The leader makes primary plan and rescue is started. The rescued victims are asked about the location of the rest of the victims and then the resources are mobilized for their rescue. The water, electricity connections are cut-off so that rescuers and victims are not further endangered. After the survey the buildings are marked suitably to avoid duplication of job.

(c) Stages of rescue:

Surface area casualty is removed and first aid is administered. Water, electric supplies are cut-off. The casualty under damaged structure are searched and rescued. Casualty in voids and debris are searched and rescued. Selected debris is removed. Total debris is removed.

4.6 : ACTION PLAN TO MITIGATE VARIOUS DISASTERS :

4.6.1 : ACTION PLAN TO MITIGATE THE EARTHQUAKE :

(a) Pre-Disaster Activities:

- (i) Preparation of earthquake catalogues and epicentral and geologic-tectonic maps to be obtained.
- (i) Analysis of seismic risk and seismic zoning for general purposes to be done.
- (ii) Development of seismic codes of design and construction of various structures to be enforced.
- (iv) Training of engineers and architects in earthquake engineering principles and use of codes to be done (both government and private) through reputed Institutions to be carried out.
- (iii) Promulgation of laws and bye-laws for providing earthquake resistance feature in all new construction according to the codes to be enforced.
- (iv) Development of methods for seismic strengthening of existing structure, particularly in the structures considered critical for the community to be done.
- (v) Development of simple methods for upgrading the seismic resistance of traditional non-engineered construction and their dissemination to the common builders and owners by mass communication media, demonstrations, extension work, etc. to be done.
- (vi) Earthquake insurance for the buildings and structures to reduce the economic impact on individuals to be done by awareness.

(b) RISK ASSESSMENT:

Regular monitoring of structural integrity of public buildings, water tanks, roads, bridges, dams and other built structures to be done.

(c) PUBLIC AWARENESS:

Awareness raising, particularly in Earth Quake -prone areas, of basic safety precautions to undertake, at the individual and organizational levels, during an Earth Quake by the District Administration/VOs

- ❖ Development and distribution of awareness leaflets.
- ❖ Exhibitions of simple techniques to be organized to make houses EQ resistant.
- ❖ Demonstration of the Model Houses to be done.
- ❖ Preparation of Awareness movies

(d) Training and Orientation to be given to:

- ❖ Government officers and staff in response measures to an EQ
- ❖ For SDM's/Tehsildar and District level officers-National
- ❖ Disaster Management Institute or any other institute
- ❖ Notified by the Government of HP.

- ❖ Administrative Officers and Engineers to be sent to EQ
- ❖ Disasters areas for on the spot study of EQ impact and
- ❖ To learn the post EQ disaster management.
- ❖ Other staff of various departments – HIPA, Shimla H.P.
- ❖ Home-owners: on making their houses EQ-resistant
- ❖ Masons; on EQ-resistant construction techniques.

(e) MINIMISING RISKS:

Delineation of fault zones and reduction of human activities in such areas enhancing structural integrity through measures like slope stabilization to be done during

- ❖ construction of public buildings, particularly schools, hospital buildings/community centers/ Panchayat Bhavans) and publicly funded buildings (e.g. IAY Homes) in an EQ- resistant manner to be done.
- ❖ Identification of public shelters e.g. schools etc and equipping them with basic aid facilities, training of government servants/volunteers in basic first aid measures to be done.
 - ✓ Arrangement of involvement of Voluntary Organizations:
 - ✓ Promote awareness of EQ-risks
 - ✓ Training in EQR house construction
 - ✓ Public education in basic response measures –what to do when an Earthquakee occurs to be done
 - ✓ Establishment of **Hamradio sets** particularly in remote settlements (link with seismic stations) to be done.
 - ✓ Establishment of **District Hazard Safety Cell** to be headed by the SE, PWD with a view to assess the EQ resistance of existing life line buildings and retrofitting the same and also to ensure that the new construction (government buildings and construction in the MC areas) is as per BIS codes.

(f) Post-Disaster Activities:

- ❖ Arrangements for maintenance of law and order to be made.
- ❖ Arrangements for evacuation of people to be made.
- ❖ Recovery of dead bodies and their disposal arrangements to be done.
- ❖ Arrangements to be made for the medical care for the injured.
- ❖ Supply of food and water and restoration of water supply lines to be done.
- ❖ Temporary shelters like tents, metal sheds to be made available.
- ❖ Restoring lines of communication and information flow to be made.
- ❖ Transport communications to be restored.
- ❖ Quick assessment of damage and demarcation of damaged areas according to grade or damage to be done.
- ❖ Cordoning off severely damaged structures liable to collapse during aftershocks to be done.
- ❖ Temporary shoring of certain precariously standing buildings to avoid collapse and damage to other adjoining buildings to be done.
- ❖ Immediate actions to prevent certain chain-reactions from developing such as release of water from the reservoir behind a damaged dam to avoid flooding of areas if the dam fail,

- emptying of, containers of toxic or inflammable liquids and gases, treatment of environment for preventing spread of diseases etc. to be done.
- ❖ Collection of scientific data from field observations as well as from instrumentation specially deployed in the affected areas to monitor the aftershocks to be done.
- ❖ Preparation of proposals about reconstruction requirements and strategy to be adopted and whether reconstruction opportunity could also be utilized for affecting socio-economic development of the damaged area to be done.
- ❖ Activation of DDCR immediately at District level, sub division level and sites level immediately make public the phone numbers and officers handling the control room.
- ❖ Search and rescue operations, activation of public shelters.
- ❖ Gathering of information regarding the Earthquake's spread and damage done.
- ❖ Periodic press releases.
- ❖ Liaison with particularly army/paramilitary forces (to minimize possibility of further damages/loss).
- ❖ Opening of relief centers and supply of food and other basic requirements.
- ❖ Creation of SOC –with round the clock-with offices in rotation (establishment- or install one immediately).
- ❖ Regulation of entry into affected area by public (issue pass).
- ❖ Restoration of minimum communication network.
- ❖ Quick relief operations to be started.(one week to one month)
- ❖ Operationalisation of shelters-established public shelters and new emergency shelters (mainly by selected agencies).
- ❖ Distribution of relief supplies, blankets, medicines as needed.
- ❖ Health surveys-preferably by Voluntary Organizations.
- ❖ Provision of medical services particularly for the injured. Mobile units if needed to be arranged.
- ❖ Establishment of hygienic and sanitary conditions in the relief villages (use bleaching powder etc.)
- ❖ Restoration of basic transport facilities: (movement of two wheeler possible) at least to begin with.
- ❖ Distribution of basic/minimal compensation: (through proforma) using local people's representatives. (Kind-Ration/clothing/Utensils).
- ❖ Establishment of a District level Relief and Rehabilitation Cell with government and non-government representatives.
- ❖ Rapid damage assessment (up to 3 or 4 months): Basically to determine compensation due.
- ❖ Announcement of relief-rehabilitation policy/package (state level): (existing policy use it, if not according to the damage).
- ❖ Reconstruction (owner-driven) upto 2 years.
- ❖ Informing people of rehabilitation policy/package through media.
- ❖ Sandesh Yatras, exhibitions, posters displays orientation meetings at village level by VOs on Rehabilitation package and EQR housing construction and repairs.
- ❖ Training programmes for house-owners administrative staff (engineers) and masons if necessary-by government and non-government agencies to be arranged.
- ❖ Full restoration of transport and communication networks.
- ❖ Work on restoring structural integrity of built environment, particularly roads, embankments, slopes.

(g) SAFETY TO NEW CONSTRUCTION (CHECK LIST):

- ❖ Whether provisions of appropriate earthquake regulations for planning design and construction of all new engineered structures according to seismic intensity zones done.
- ❖ Whether provisions of codes of Practice and Manuals for earthquake resistant construction in all non-engineered buildings done.
- ❖ Whether incorporated the code provisions in an appropriate manner in building by-laws of municipalities/local Panchayats.
- ❖ Whether informed the public through the use of mass media and demonstrations regarding simple and economical earthquake resistance features for their otherwise traditional constructions done.

(h) SAFETY OF EXISTING BUILDINGS AND STRUCTURES (CHECK LIST) :

- ❖ Whether carried out safety analysis of dams and other appurtenant structures and strengthen them if found necessary.
- ❖ Whether carried out safety studies of existing bridges and incorporate appropriate retrofitting features to achieve desired earthquake resistance.
- ❖ Whether carried out seismic rating analysis of existing critical buildings such as hospitals, schools and other community and public buildings and to strengthen them by insertion of shear walls, bracings, cement grouting or adding buttresses or other techniques.

(i) History of Earthquakes in District Solan :

As there is no mechanism for recording the Earthquake details at Solan. Besides, no noticeable damage has been caused in district due to Earthquake in the past however, mild attacks of earthquake are felt alongwith other parts of India many times. Brief detail of the such attacks felt in the district are as under :

- (a). 20th June, 2011 alongwith whole of north India.
- (b). 4th April, 2011 alongwith whole of north India.
- (c). 21st March, 2011 alongwith whole of north India.
- (d). 5th March, 2011 alongwith whole of north India.

4.6.2 : ACTION PLAN TO MITIGATE THE DROUGHT :

Drought is a creeping disaster. It is a slow onset natural hazard and it offers **time and opportunity** to mitigate its impact. Drought connotes a situation of **scarcity** and distress usually caused by prolonged failure of rain affecting seriously the agricultural activities leading to loss of production and employment, drinking water shortages, deficiency in fodder supply and consequential effects in terms of panicky **migration** of people in search of an alternative employment or livelihood. As far as the action points for the district administration is concerned would be useful to distinguish between widespread and prolonged droughts calling for National/State level policies and the more frequently occurring local level scarcities.

(a) Causes of drought:

- (i) Failure of Monsoons.
- (ii) Lack of irrigation facility
- (iii) Non-harvesting rain water/snow

(b) Indicators of Drought:

- (i) Low storage in Reservoirs.
- (ii) Poor recharge of ground aquifers.
- (iii) Wells drying up.
- (iv) Wilting of crops.

(c) Season:

March to June/ October till monsoon.

(d) Type of Drought :

- (i) **Meteorological drought :**
Inadequate rainfall. Uncertainty, a long dry spells, unequal distribution.
- (ii) **Hydrological drought:**
water scarcity, lowering of the ground water, table, depletion of water resources, drying up of tanks, wells and reservoirs.
- (iii) **Soil Moisture drought :**
Run off, seepage, evaporation and transpiration.
- (iv) **Agriculture Drought**
Lack of crop/fodder growth, decrease in soil moisture.
- (iii) **Ecological drought**
Damage to the environment due to the factors mentioned above.

Solan district is prone to drought quite frequently. A large population of the district is dependent on agriculture, horticulture and animal husbandry activities. Sources of irrigation are very limited. Hence, all these activities depends upon rain and snowfall. Inadequate monsoon and poor rain fall brings misery in the lives of local residents. Rainfall is very erratic in the district.

I. Drought Mitigation Measures :

(i) Drought Assessment

1. Where drought conditions exist, the Deputy Commissioners shall order for special survey to identify the drought hit villages, areas and send list of the same to the State Government.
2. A special Girdawari will be carried out to assess the extent of loss to the crops.

3. Report will be sent to the State Government for declaration of Drought according to Norms prescribed.

(ii) Contingency plans.

1. Each Sub-Division/Tehsil shall prepare contingency plan for carrying out drought mitigation measures.
2. Drought mitigation will include the following.
 - (i) Provision for drinking water and arranging transportation for the same.
 - (ii) Provision of fodder for live stock animals and facilitation of list transportation.
 - (iii) Provision of transport subsidy for fodder where supplies are arranged by the drought affected families themselves.
 - (iv) Employment generation should be provided to the drought affected families.
 - (v) Shelf of schemes for employment generation.
 - (vi) Providing relief as per norms in the CRF/NCCF and State Relief Manual.
 - (vii) Energisation of Hand pumps.
 - (viii) The Deputy Commissioners will prepare Distt. Plan and assess the requirement of fodder with the assistance of Animal Husbandry Department taking into consideration the population of animals in the Distt. on the occurrence of drought.
 - (x) The Deputy Commissioners will ensure the prompt & efficacious distribution of fodder.
 - (xi) The Divisional Commissioners to monitor the drought relief measures within their jurisdiction.

(iii) Departmental level.

Contingency plans of Agriculture and Horticulture Departments should include the following:-

- (i) Subsidies on fertilizers, pesticides /insecticides and other inputs for agriculture and Horticulture departments.
- (ii) Supply of seeds /plants at subsidized rates.
- (iii) Alternative crops should be suggested.
- (iv) Animal husbandry department should assist Deputy Commissioners in assessment and arrangement of fodder.
- (v) IPH department should co-ordinate activities relating to drinking water in drought affected areas.
- (vi) IPH department should take steps for energisation of hand pumps and installation of hand pumps in drought prone/affected areas.
- (vii) IPH department should ensure supply of safe potable water to prevent outbreak of deceases.
- (viii) Water harvesting/storage be encouraged and assisted by concerned departments.

(iv) Funds.

- (i) Funds will be placed at the disposal of the Deputy Commissioners and the

Departmental heads by the State Level Committee constituted for the purpose out of the calamity Relief Fund.

- (ii) Utilization Certificate will be provided by the concerned departments on the prescribed format and the prescribed periodic intervals.
- (iii) The departmental heads and the Deputy Commissioners will over see and supervise the utilization of funds and ensure that they are utilized for the purpose for which they are provided.
- (iv) Separate accounts will be maintained as prescribed for the Calamity Relief Fund.

(e) Drought Management:

A. Pre-Disaster Activities :

- 3 Focus on employment generations.
- 4 Water conservation and power supply.
- 5 Standing crop saving.
- 6 Public Distribution supplies of essential commodities.
- 7 Implements nutrition programme for the vulnerable group.
- 8 Speed the pace of development creating employment and productive assets, which would trigger overall development.
- 9 Provide Income generation activities to the affected population.
- 10 Create productive assets in affected areas.
- 11 Early warning system should reach the village level-use the media and appropriate method.

(i) Planning for drought management :

- (a) **Fodder** : Location, inventory, requirement, movement-plan in advance.
- (b) **Cattle** : Location of cattle camps, identification of sick cattle and treatment, cattle population and movement cycles- identifying good markets.
- (c) **Food grains:** Prioritization of food grain availability and good supply network through PDS (maintenance of adequate stock).
- (d) **Water** : preparation of drinking water contingency plan, tanker availability/construct/install temporary water storage structures on the village sides.
If already constructed, if need be repair it-encourage local traditional structures under any scheme.
- (e) **Afforestation programme** : plan ahead with species, which could tide over the drought, plant drought resistant varieties.
- (f) **Health related facilities:** preventive steps- store medicine/prevent water contamination and control diseases. Nutritional requirements fulfillment.
- (g) **Relief Works:** with special emphasis on soil conservation and water conservation (ground and surface).
- (h) **Coordination meeting for Drought:** Periodically convene the coordination meeting members of district level, block level and Panchayat level.

(ii) Meeting the Onslaught-Action Points :

- (a) Formal declaration of drought specifying areas clearly district/tehsil/block/ Panchayat or whole District, as the case may be.
- (b) Internalization of powers under drought to various authorities-Financial powers, executive powers to be given to the officers.
- (c) All government officers services to be pooled.

(iii) Launching Employment Generation Programmes :

- (a) Announcement of work.
- (b) Preparation of musters.
- (c) Provision of food grains through local ration shops.
- (d) Type of work depending on areas/local requirements.
- (e) Road works
- (f) Digging and deepening of wells
- (g) Desiltation of tanks and ponds.
- (h) Afforestation if not completely at least land work.
- (i) Construction activities-public buildings.
- (j) Water supply schemes and check dams across nalas and riverbeds.

(iv) Provision of Foodgrains in drought affected areas :

- (a) Ensure availability.
- (b) Price monitoring through committee's upto the Panchayat level.

(iv) Agricultural Intervention:

- ✚ Agriculture is crucial for the local people.
- ✚ Introduce-water budgeting in all reservoirs to regulate water supply.
- ✚ Distribution of timely agricultural inputs.
- ✚ Relaxation of agricultural credit norms to farmers.
- ✚ Provide extension support to create awareness about the water/crop saving techniques to minimize crop loss.
- ✚ Once known from the early warning of the meteorological departments farmers to be convinced to go for-adoption of alternative varieties/crops (millets)
- ✚ Drought resistant varieties-obtain it from state seed corporations National seed Corporations/Agricultural Universities.
- ✚ Recommend short duration pulses.
- ✚ Alternative fodder crops
- ✚ Alternative sowing system (instead of raising nurseries –Direct sowing etc.)
- ✚ Motivate farmers to collectively share available water.
- ✚ At Panchayat level relief committee to be constituted to oversee the drought.
- ✚ Safeguard the interest of the tail-enders.
- ✚ Ensure optimum use of surface and ground water.

(v) Fodder for Cattles :

- ✚ Availability of fodder.
- ✚ Timely movement of fodder.
- ✚ Opening of cattle camps (if necessary).
- ✚ Opening of special camps for sick cattles (veterinary care).
- ✚ Regular supervision of cattle camp.
- ✚ Alert the veterinary officer to be responsible and control of diseases.
- ✚ Networking with cattle market and if drought is severe-encourage to dispose.
- ✚ Payment of subsidy, if any.
- ✚ Accounting system well laid down with detailed information.
- ✚ Opening of grass (fodder) depots as per requirement/request.
- ✚ Movement of grass.
- ✚ Packing of grass-enriching hay with Urea.

(vi) Supply of potable/Drinking Water during drought/scarcity:

- ✚ Implement small schemes like bonding in rivers as relief works to augment water supply.
- ✚ Disinfection of water sources to be checked up and Irrigation and Public health department to be given responsibility.
- ✚ Diversion of water for drinking on priority.
- ✚ Provision of Drinking water through tankers etc.

(vii) Health, Sanitation and Nutrition etc :

- ✚ Provision of adequate health care facilities-storing of adequate medicines.
- ✚ Inoculation against diseases/disinfect against biological contamination.
- ✚ Provision of supplementary nutrition/through ICDS/Anganwadi/to the vulnerable groups.
- ✚ Draw up Plans-at PHC level to cope with any epidemics.
- ✚ Constant surveillance of Public Health Measure.
- ✚ Refer- last drought related diseases and to take preventive action.

B. POST DISASTER:

- ✚ Declaration of end of scarcity –allowing the completion of work.
- ✚ Closing of Relief Works: Closure of accounts, stock taking of works, Safe staging of work, Completion of payments and closure of muster rolls etc.
- ✚ Closure of cattle camps: Closure of accounts, stock taking and completion of payments due.
- ✚ Closure of Grass Depots: Closure of accounts, stock taking and completion of payments.
- ✚ Stock taking of assets created: list out the assets created, mark it year wise.
- ✚ Entrust the assets to the community/local Panchayats.
- ✚ Take all steps to prevent migration of people to other places.
- ✚ Final evaluation meeting: Review and evaluation of work done by the committee or by an independent agency. Involve all the stakeholders.

Long Term Plan : The Following long term measures are planned to eradicate drought problem from the District :

Water harvesting : structures to be made compulsory in new constructions.

Snow harvesting : to be popularized

Fodder development: Fodder development in waste lands, dry resistant varieties to be started

Linkage of Watershed : Project, (R I), Kandi, Agriculture to manage draughts

A. Drought Mitigation and preparedness of Horticulture Department :-

Drought is one of the disasters, which usually prevails during summer season but can extend to any period over round the year. There is hardly 20 to 25% cultivable area under irrigation and rest 75 to 80% of cultivable area falls under rain fed condition out of total 6700 hectares area under Horticulture Crops in the District. Most of the Horticulture Crops are grown on either on waste lands or area prone to drought like situation in the District except floriculture crops. One of the major reason behind this is small holdings of the farmers.

B. Steps to be taken for Drought Mitigation:-

Conservation of water or judicious use of the water can play an important role for the management of drought. Although the water is a renewable resource, but in recent years there has been considerable stress in the availability of water to meet the increasing demand of large population.

(i) Application of micro-irrigation system :

Drip irrigation and sprinklers are effective tools for micro irrigation and productivity can be increased by 30-100% with 50-70% saving of water.

(ii) Creation of water sources :

- (a) Water storage tanks 20-25 cubic meters cap.
- (b) Bore well/tube well.

(iii) Application of mulching :

- (a) 7-25 microns for short duration crops i.e. 3-4 months.
- (b) 50 microns-medium duration crops i.e. 11-12 months (Flowers, Papaya crops).
- (c) 100-200 Microns-long duration crops more than 12 months-all fruit crops.

(iv) Green house cultivation :

The green house technology is the technique of providing favorable growth condition to the plants inside fabricated structures with ultra-violet stabilized cladding material. In its simplest form it is used to protect the plants from the adverse climatic conditions. In the sophisticated

from of green house technology is used to provide the optimum growth conditions of light temperature, humidity, carbon dioxide etc. for the best growth of plants to achieve maximum yield and best quality.

(v) Shade net house :

Shading nets are used to provide relief to the plants from the scorching sunlight, high winds, direct rainfall as well as insects and pests.

C. Constitution of Block level Committees :-

Block level committees have been constituted under Horticulture Development Officers in all the blocks of Solan District viz. nalagarh, Kunihar, Dharampur, Solan and Kandaghat.

A. Drought Mitigation and preparedness of Animal Husbandry Department :-

Animal Husbandry Department is dealing with breeding and health issues of animals, has to play an important role in the management of disasters. Livestock and poultry are an integral part of our social and economic system without which we can not imagine the existence of human life. Since this category of life is equally prone to various hazards therefore to prevent loss of life of animals and property to remove and minimize the vows and worries of the people affected by any natural calamity and man made lapse hazards. The District is headed by Deputy Director of Animal Husbandry, who is assisted by 2 Assistant Directors. The District has further divided into four sub-division, where Sr. Veterinary Officers has been deployed and specialized teams are constituted at each sub-division for meeting any exigency with all supporting staff.

(a) First Aid to Animals :

It is the prime duty of each hospital in charge to provide first aid to injured and ailing animals and in case of any emergency concerned division level team visit in affected areas to provide necessary medical aid to affected animals and to evacuate them for safer places with the help of local Panchayat/municipality.

(b) Arrangement of temporary sheds :

Temporary sheds for animals are constructed for the evacuated animals with the help of local Panchayat/municipality, so that they can be provided shelter and necessary treatment and medication etc.

(c) Arrangement of fodder and water :

In case of any disaster necessary arrangement of fodder and water are also made alongwith the medication/treatment by the department and to evacuate them for safer places with the help of local Panchayat/municipality.

(d) Disposal of dead animals:

The department of animal husbandry take initiative for the safe disposal of the dead bodies of animals with the help of local Panchayat/municipality, so as to prevent the outbreak of any disease/epidemic.

4.6.3 : ACTION PLAN TO MITIGATE HEAVY RAINS/FLOODS:

Heavy Rains/flash floods often causes damages in various parts of Solan District during MONSOON season and even rest of the period if torrential rain is occurred in the District. Besides, the Nalagarh and Baddi area of the district is prone to floods and wherever heavy rains are occurred in hilly area of the district all the big rivers of plain areas are flooded and often causes loss to public & private properties. The village situated on/near the banks of river Sutlej, Kaushalaya, Ashwani & Chikni & Sarsa and its tributaries' are prone to floods. The dumping in many areas is also responsible for flash floods/floods.

(a) FLOOD/RAIN MANAGEMENT PROGRAMMES

(i) STRUCTURAL MEASURES:

1. Watershed management by constructing check dams.
2. Reservoirs.
3. Natural Water Detention.
4. Safe Disposal of Surplus Runoff.

(ii) NON-STRUCTURAL MEASURES:

1. Flood plan Zoning.
2. Flood Forecasting and Warning; along the Sutlej on formation of Parchoo lake in tibbet.
3. Flood Proofing.
4. Establishment of rain gauges in all the Tehsil HQs

Structural measures are in the nature of physical measures and help in “modifying the floods” while Non-structural measures are in the nature of planning and help in “modifying the losses due to floods”. In structural measures we keep the water away from the people and in Non-structural, we the people away from water. All of these works can be individually divided into long term measures and short-term measures.

Long-term measures even though time-taking and costly must be undertaken, as they are very effective and permanent in nature. While **Short term measures** serve the purpose in a limited way.

- (a). Embankments
- (b). Channel improvements.
- (c). Emergency Floodways and River Diversions.
- (d). Inter Basin Transfers.
- (e). River Bank protection & Anti-erosion works.

- (f). Village rising and/or construction of community-cum-shelter buildings above H.F.L

(b) DURING HEAVY RAINS/FLOODS:

Rescue and Evacuation Operations:

This gets top most priority. On receiving the flood warning, the people should be evacuated by road if floods have not yet hit the area. Once the floods have hit, boats/rafts at village/evacuation center should be pressed into action. Also ensure that in each team there are some divers who can save life. Depending upon the gravity of the situation, following personnel should be pressed for evacuation/rescue operations:

- ✚ Home guards/fire service
- ✚ Pre trained local men/Ex-service men.
- ✚ Police
- ✚ Army
- ✚ Trained Local Divers

Ensure that arrangements are made for security of belongings left behind by people in evacuated areas. Involve local residents in patrolling such areas at night. Unless the residents are convinced about the security, they may not be ready to evacuate. Ensure that members of a family are evacuated together to the same safe site Any human deaths must be promptly reported.

(iii) DISTRICT CONTINGENCY ACTION PLAN

(a) Pre flood/heavy rains arrangements:

- Whether a meeting of the district level committee on Natural calamities was convened.
- Have the control rooms started functioning before monsoon.
- Whether high flood level marking done in suspected areas/ village.
- Whether drainage lines cleaned and obstruction/congestion removed.
- Whether the past breaches in river and canal embankments has been closed.
- Whether rain-recording and submission of rain gauge-readings and preparation of maps and charts arranged.
- Whether the charge of flood areas has been arranged.
- Whether arrangements were made for the dissemination of weather reports and flood bulletins issued by the Meteorological Centres, Central Water Commission, Flood Forecasting Organization.
- Whether deployment of boats at strategic points done.
- Is there a need for power boats.
- Whether installation of temporary Police Wireless Stations and temporary telephones in flood-prone areas done.
- Is the arrangement for keeping telephones and telegraphs lines in order ensured.
- Whether arrangements for storage of food in interior, vulnerable, strategic and key areas has been done.
- Whether arrangement for dry food stuff and other necessities of life have been made.
- Whether arrangements for keeping the drainage system desilted and properly maintained - a month before monsoon.

- Whether agricultural requirements of crop insurance/seed availability assured.
- Whether health measures action plan kept ready.
- Whether Veterinary action plan kept ready.
- Has the selection of flood relief shelters been done and kept ready.
- Whether advance arrangements for Army assistance have been made.
- Have the officials been trained in flood relief work.
- Was the organization and bringing of relief parties done.
- Whether other precautionary measures taken to prevent food.
- Whether alternative drinking water supply arrangements have been made.

(b) Post Flood/Heavy rains Arrangements :

- What arrangements made for rescue operations.
- Whether shelter arrangements for the people in distress are made. If the efforts of the civil authorities are most likely to be inadequate, should army assistance be sought immediately.
- Relief measures by non-official and voluntary organization may be enlisted as far as possible- Has it been done.
- Whether provision of basic amenities like drinking water, sanitation and public health care and arrangements of cooked food in the relief camps have been done.
- Whether necessary arrangements for air dropping of food packets in the marooned village through helicopters have been made.
- Are there sufficient numbers of relief parties for the rescue of the marooned people. If so can they move in time.
- Have alternative communication links to have effective communication with marooned areas done.
- Whether controlled kitchens to supply food initially at least for 3 days done.
- Is there need for organizing cattle camp/veterinary care to the affected animals. If so what action has been taken.
- Whether emergency relief to all the affected people has been disbursed.
- What action has been taken for daily reports and arrangements to disseminate correct information through mass media have been made.
- What action plan for rehabilitation of homeless people done.
- Whether the commencements of agricultural activities-desiltation, resowing have been taken place.
- Whether action has been taken to repair and reconstruct infrastructural facilities such as roads, embankments and resettlement of food prone areas done.
- What health measures intervention have been planned and done.
- What arrangements for economic reconstruction are planned in the district.

4.6.4 : ACTION PLAN TO MITIGATE THE ROAD ACCIDENTS :

Three National Highways and various State and local roads are passing through District Solan and Road Accidents often takes place which are major killer and take place without any warning. Accidents may involve tourists, other passenger vehicles, goods vehicles, vehicles carrying hazardous and toxic materials. The damage therefore may involve injuries and death, chemical spills, fires or release of toxic gases. However, the data on road accidents reportedly indicate that

70% of road accidents arise from driver failure. The terrain of Solan District is very tough, roads are narrow and road accidents occur quite frequently taking lives of large number of innocent people. A part from this factor, the generic reasons are:

- ✚ Poor road conditions
- ✚ Mixed traffic
- ✚ Poor vehicle maintenance
- ✚ Poor driving failures
- ✚ Lack of safety belts and helmets
- ✚ Poor emergency services
- ✚ Absence of pedestrian amenities

Road accidents occur in Solan District with alarming frequency.

(1) POSSIBLE IMPACT:

(i) Effects on Individuals

- ❖ Loss of life
- ❖ Trauma care
- ❖ Burns
- ❖ Injuries demanding surgical treatment
- ❖ Poisoning or exposure to toxic material

(ii) On accident event (involving passenger vehicle)

Following priorities should be kept in view :

- ❖ Look for and rescue the injured or those trapped in the vehicles.
- ❖ Arrange for transport of the injured to the nearest medical care centre.
- ❖ Place the dead bodies on one side to avoid obstructions.
- ❖ Organize locally traffic control using the available manpower to avoid traffic jams.
- ❖ Discourage people from crowding near the accident spot.
- ❖ Discourage people from looting the goods from the accidents vehicle.
- ❖ Arrange to inform the nearest traffic police post through passing vehicles on either side.

(iii) Disruption of services:

- ❖ Road network
- ❖ Traffic
- ❖ The spills from vehicles carrying hazardous materials may require stoppage of traffic and cleaning of road surface. Various materials are recommended depending on the nature of spill. Also, specialized agencies may have to be called for undertaking spill cleaning operations.

- ❖ Diversion of traffic resulting from such accidents may require traffic control to give information at various entry points also located far away (which need quick identification) from the site of accident, so as to avoid inconvenience to the travelers.
- ❖ Special cranes may be required for clearing the accident site.

(2) ECONOMIC AND SOCIAL CONSEQUENCES:

- ❖ Law and order problem.
- ❖ Security and protection of goods and materials in the vehicles involved in the accident. The details of goods need to be officially recorded.
- ❖ Fires.
- ❖ Gas leak affecting settlements near the accidents etc.
- ❖ It may be necessary to inform the settlements around to take necessary precautionary measures, if the accident involves leakage of toxic gases.

(3) Mitigation Measures:

If the provision of Motor Vehicle Act and other related legislation and regulations including regulations on transport of hazardous and toxic materials are strictly enforced the incidence of road accidents will reduce drastically.

(i) Strengthening Institutional Capacity:

- ❖ Strengthening the enforcement wing in Transport Commissionerate.
- ❖ Creation of adequate highway/traffic aid posts. At every major intersection on the highway, traffic aid posts should be set up.

(ii) Trauma care centers :

Trauma care centers should be established at every 40 to 50 kilometers on the national and state highways. Trauma care centres should also be set up at :

- (a). Zonal Hospital Solan.
- (b). Civil Hospitals.
- (c). Community Health Centres located in various parts of the District.
- (d). Every Highway petrol party & traffic aid post should have a hotline telephone connection with the nearest trauma care centers.
- (e). Modern technology including speed monitoring equipments and computerization of movement of vehicles with adequate checkpoints on the national highways should be introduced.
- (f). Equipments for removal of accident vehicles from the highways should be easily accessible to the SDM's and the police.
- (g). Considerable confusion exists because of multiple authorities and agencies involved in the regulation and monitoring of movement of vehicles on all roads.
- (h). It is necessary to coordinate the roles of all such agencies through a single agency. (Local Magistrates and Police)

(4) Strengthening Road Infrastructure:

- ❖ Parking of vehicles on national highways and even of state highways should be strictly prohibited and monitored.
- ❖ Excavations on roads must be protected well, particularly in the night, with barricades, fluorescent signs and red lights.
- ❖ Special ways for parking of vehicles on truck routes should be provided at strategic points with provision for food and other facilities.
- ❖ Public works department should concentrate on removal of bottlenecks on national and state highways in particular. Bridges should be widened before roads are widened.
- ❖ Efforts should be made to provide road dividers on all national and state highways on a priority basis with advance warning.
- ❖ Efforts should be made to light up all national highways carrying excessive vehicle load.
- ❖ The speed breakers must have standard designs.
- ❖ Provision of lay byes for all bus stops must be made mandatory with authority given to RTO to clear them off all encroachments.
- ❖ Information sign-boards should be provided giving the location of the nearest village, police station, hospital, petrol pump etc. at every traffic aid post.
- ❖ Parapets should be constructed at all the risk and accident prone areas.

(5) Improving Regulations:

- ❖ Insurances claims should be linked with compliance of all regulations related to vehicles and transport restrictions.
- ❖ All two wheeler drivers, including pillion must always wear the right kind of protective head-gear.
- ❖ As the inter-state transport of goods has been increasing over the years, there should be a uniform national regulation on permissible loads.
- ❖ All vehicles carrying school children must be registered and provided with flashlights signs and designated halts. Regulations for overtaking such vehicles when they are stationery should be introduced.
- ❖ Vehicles with break-down on the highway must display a plate on a stand with a danger sign pointed thereon in the front and rear. Every goods vehicle must have such plates with the stands.
- ❖ Simulation aided training should be adopted for drivers carrying hazardous and toxic materials.
- ❖ Every vehicle must be provided with hazard lights (blinking lights) which would warn drivers of other vehicles of the stationery vehicles.
- ❖ Reflectors and tail lamps should be made compulsory for handcarts, cattle driver carts, domesticated elephant on road, tractors, tractor and jeep trolleys, cymes, cycles-rickshaws and such other non-motorized vehicles not falling under Motor Vehicles Act.
- ❖ Simplify the procedure under section 140 of the Motor vehicles Act 1988, for compensation to accident victims.
- ❖ Frequently occurring accident spots to be identified/marked cause-probed and rectification-mitigation measures taken.
- ❖ Adequate cautions in these areas to be given.
- ❖ Lanes if possible to be marked for pedestrians/cyclists.

- ❖ Bridges and road separators should have adequate signs boards and reflectors.
- ❖ Drunken driving/liquor availability all along the highways are the cause for accidents.
- ❖ Goods carriages should not be allowed to carry passengers.

4.6.5 : ACTION PLAN TO MITIGATE THE BUILDINGS COLLAPSE:

Building collapse and killing of human beings and damages have become very common in the rural as well as in urban areas. Poor quality construction has also aggravated the cause of Building Collapse. Natural calamities like earthquake, cyclone, extensive rains and flood could also be contributing factors for building collapses.

(1). BUILDING STRUCTURAL COLLAPSE RESCUES

(i) Purpose

To provide guidance during “Technical Rescue Operation” that require search and rescue operations to occur in any form or type collapsed structure or damage structure.

(ii) Response

No response should enter a collapsed or damaged building to render patient care or extrication until a general survey and size up of damage is done.

The following Departments to be informed:

- ❖ Fire Department.
- ❖ Police Department
- ❖ Technical Rescue Team
- ❖ District/Sub Division, Tehsil and Sub-Tehsil level Control Room

(2). SEARCH AND RESCUE STAGES:

Following information must be gathered :

- ❖ Buildings use
- ❖ Number of occupants
- ❖ Number of victims trapped and their probable location.
- ❖ Are rescue operations currently underway.
- ❖ Presence of hazards.
- ❖ Gas and utilities.
- ❖ Flammables
- ❖ Electrical
- ❖ Flooding possibility
- ❖ Plumbing and sewer disruption.
- ❖ Structural stability of adjoining buildings
- ❖ Rescue efforts already underway by untrained personnel and/or citizens. Seek their help but-/technical guidance is essential in such rescue operation of qualified engineers.
- ❖ The district should constitute teams of Volunteers at Sub Divisional headquarters to carry out search Rescue operations.

(3) IMMEDIATE RESCUE OF SURFACE CASUALTIES:

Victims found on top of the debris or lightly buried should be removed first. All rescue efforts should be directed to the victims who can be seen or heard. Rescue efforts should be also directed to reach those victims whose location is known even if you cannot see or hear them.

(4) SITE ORGANISATION AND MANAGEMENT

Following checklist to be followed:

- ❖ Shut down electric connection/water supply/any other pipelines etc.
- ❖ Evaluate structural integrity with the help of Civil Engineer. Request an engineer or architect.
- ❖ Direct rescue operations from a safety stand point.
- ❖ Assign team leaders for each designated rescue team.
- ❖ Divide the collapsed area into manageable areas. Draw up a contingency plan and place on standby
- ❖ Keep ready the Medical team and emergency Wards. Crushing injuries, victims in a state of shock. Ortho and Surgeons to be kept ready. At site First aid to be given and rushed to hospital in ambulance.

(5) RESCUE FROM LIKELY SURVIVAL PLACES

Seek out casualties by looking in places that could have afforded a reasonable chance for survival. Typical areas that should be searched are:

- ❖ Spaces under stairways
- ❖ Basement and cellar locations
- ❖ Locations near chimneys or fireplaces
- ❖ Voids under floors that are not entirely collapsed
- ❖ Undemolished rooms whose egress is barred.
- ❖ Voids created by furniture or heavy machinery

(6) Locate casualties using the "hailing system".

- ❖ Place rescuers in "call" and listen positions
- ❖ Have the operations officer call for silence
- ❖ Going "around the clock" each rescuer calls out or taps on something. A period of silence should follow each call for any response.
- ❖ All members should attempt to determine a "fix" on any sound return
- ❖ After a sound has been picked up at least one additional "fix" should be attempted from another angle.
- ❖ Once communication with the victim have been established, it should be constantly maintained.

(7) BREACHING AND SHORING

(i) In some instances, victims may be reached by breaching and shoring

- Initially try to avoid the breaching of walls. This may undermine the structural integrity of the rest of the building.
- It is safer to cut holes in floors and use the shaft approach.
- If you must breach a wall or cut a floor, cut a small hole first to assure that you are not entering a hazardous area.

(ii) Shoring may be used to support weakening walls or floors.

Shores should not be used to restore the structural elements to their original positions. An attempt to force beams or walls into place may cause collapse, if you decide to shore, keep the following in mind:

- The maximum length of a shore should be no more than 50 times its width.
- The strength of a shore is dependent on where it is anchored. If anchored to a floor, it will be dependent on the strength of the floor.
- Shoring should be attempted only by qualified personnel or under the supervision of technical rescue personnel.
- Air shores may be used in place of timbers and will provide a stronger shoring system.
- Shoring should NEVER be removed once in place.

(8) Selected Debris Removal

- The stage of the rescue process will consist of reducing the size of the rubble.
- This must be accomplished based on a pre-determined plan.
- Cranes and heavy equipment may be needed to accomplish this portion of the rescue. Consult the fire department's resource log to obtain these.
- Remove debris from the top down.
- Remove debris from selected areas where information suggests that victims might be.

(9) GENERAL DEBRIS REMOVAL

This should be employed after all other methods have been used. This should be used only after the decision has been made the site Manager that no other victims may be found alive. This basically amount to the demolition phase.

(10) RESCUE FROM COLLAPSED BUILDING :

It is safer to reach entrapped victims from above. Diagram the building on the command board Ensure control of all accesses to the site. Beware of "at will" response by volunteers or citizens. The cause of the building collapse to be investigated and lessons learnt to be used for preventive action sufficiently old and multi-storied to be tested for structural strength and remedial action to be done.

4.6.6 : ACTION PLAN FOR MITIGATING SNOWFALL AND AVALANCHES :

Snow cover on a slope tends to slide down the slope because of gravity. Conditions affecting stability include the gravitational force component of the snow and resisting forces, such as the

frictional resistance of the slope or the anchoring effect of shrubs. In general, avalanches are caused when this balance is lost and when the forces exceed the resistance. Avalanches are rarely observed closely since they normally occur during a short time period of one or two minutes. **However, it has been observed that there is very less snowfall in the district Solan, specifically on high peaks like Kali-Ka-Tibba Chail, Sidh Baba Temple Peak Chail, Blossom palace, Hinner-Ka-Tibba in Tehsil Kandaghat, Karol & Matiwal Mountain and Barog valley in Tehsil Solan, Bari-ki-Dhar, Dano-Ka-Jubber & Sukhan peak in Tehsil Arki and the formation of avalanches has not been noticed in the past. But we should be aware in this regard and take necessary precautions.**

(i) Major Causes :

Major causes of avalanches can be classified into fixed (prime factors) and variable factors (exciting factors), such as weather conditions and the weight of the snow cover, avalanches occur when these factors are combined. The types and scale of avalanches can differ depending on the combination of these various factors and their scale. Major prime factors and exciting factors are shown below :

- ✚ Avalanches constitute major hazards in the higher reaches of Himalayas.
- ✚ Parts of Himalayas which receive snow fall round the year and avalanche spots are in abundant. Avalanches occur in winter soon after the snow in Jammu & Kashmir, Himachal Pradesh and the hills of West Uttar Pradesh.
- ✚ Rohatang area in Kullu District, Pangi, Bharmour and Dalhousie area of Chamba district are prone to avalanches.

(ii) Types of Damage

The following lists typical examples of damage to roads caused by avalanches. The scale of damage can differ depending on the scale and type of avalanche.

- ✚ Traffic blocked by snow deposited on road surface.
- ✚ Roads damaged by avalanches.
- ✚ Road structures, such as retaining walls, overturned.
- ✚ Structures damaged by an avalanche during construction of roads occur most frequently.

(iii) Mitigation of Avalanches:

Modification of the path of avalanche movement To have control structures like snow bridges, snow rakes, snow net, snow fences, avalanche gallery, diversionary dam, earthen mounds and above all planting with trees in those areas. Accurate forecasting will help people down below to rush to safe places. A forest with thick growth of trees inhibits the formation of avalanches for the following reasons:

- (a) Tree trunk support snow cover and provide an anchor to potential to save avalanches.
- (b) Snow drifting is almost eliminated.
- (c) Tree canopy retains snow and releases it gradually to form a stable cover on the ground.
- (d) Forest canopy stabilizes the snow.

Avoid traveling during day time from 08:00 AM to 04:00 PM. usually avalanched triggered at this time.

(iv) Mitigation of Snowfall related problems

-  Provision of snow cutters in the affected areas
-  Establishment snow gauges at snowfall oriented areas of State like Kinnuar, Lahul spaiti, upper areas of Shimla District, Dalhousie, Bharmour, Tissa, Salooni, and Pangi of Chamba District etc

4.6.7 : ACTION PLAN TO MITIGATE THE FOREST FIRES :

The most common hazard in forests is forests fire. Forests fires are as old as the forests themselves. They pose a threat not only to the forest wealth but also to the entire regime to fauna and flora seriously disturbing the bio-diversity and the ecology and environment of a region. During summer, when there is no rain for months, the forests become littered with dry senescent leaves and twinges, which could burst into flames ignited by the slightest spark. The Himalayan forests, particularly, Garhwal Himalayas have been burning regularly during the last few summers, with colossal loss of vegetation cover of that region.

(i) Causes of Forest Fire :

Forest fires are caused by Natural causes as well as Man made causes Natural causes- Many forest fires start from natural causes such as lightning which set trees on fire. However, rain extinguishes such fires without causing much damage. High atmospheric temperatures and dryness (low humidity) offer favorable circumstance for a fire to start.

Man made causes- Fire is caused when a source of fire like naked flame, cigarette or bidi, electric spark or any source of ignition comes into contact with inflammable material.

(ii) Classification of Forest Fire:

Forest fire can broadly be classified into three categories;

- Natural or controlled forest fire.
- Forest fires caused by heat generated in the litter and other biomes in summer through carelessness of people (human neglect).
- Forest fires purposely caused by local inhabitants.

(iii) Types of Forest Fire :

There are two types of forest fire i) Surface Fire and ii) Crown Fire

Surface Fire :

A forest fire may burn primarily as a surface fire, spreading along the ground as the surface litter (senescent leaves and twigs and dry grasses etc) on the forest floor and is engulfed by the spreading flames.

Crown Fire :

The other type of forest fire is a crown fire in which the crown of trees and shrubs burn, often sustained by a surface fire. A crown fire is particularly very dangerous in a coniferous forest because resinous material given off burning logs burn furiously. On hill slopes, if the fire starts downhill, it spreads up fast as heated air adjacent to a slope tends to flow up the slope spreading flames along with it. If the fire starts uphill, there is less likelihood of it spreading downwards.

(iv) Preventive Action :

Local Community to be fully involved in fire detection and prevention of forest fires as per provisions of section 3 of the Himachal Pradesh Village and Small Town Patrol Act, 1964 and specific orders are issued every year that all able bodied adult male inhabitants of the village in Solan District shall be liable for patrol duty for the safety of public properties/amenities and such orders are in force w.e.f. 15th April to 15th July every year. Besides, under the employment creation scheme or scheme to be created specially and fire watchers from the local people to be employed during the season. Incentives to the villagers who are coming forward to safeguard and who have controlled fire to be provided. If there is no fire in a recurring areas, in the development scheme incentives to be provided for the villagers. Under the forest management in working plan as prescribed forest lines to be maintained properly during the season. In case of fire at various areas the fire fighting team to be kept ready and a responsibility to the local forest guard and to the panchayat and the village chief to be given. Fire watch towers to be erected in recurring places (for detection). The local people and other who enter into the forest to collect fuel wood, non-timber forest produce and smokers to be specially requested to be vigilant and only those who are authorized or permitted alone need to be sent. If there is a fire, the cause of the fire to be immediately assessed and steps taken so that it does not recur again. The forest department to be made the nodal department and the local villagers including women through Mahila Mandals to be associated.

As per information received from the DFO Solan the total area under forests in Solan Division is 571.58 square KMs and the soil is clay loan, loamy and sandy loam soil. The area is sloppy, which is good for drainage. Most of the rain fall occur during monsoon season and winter season.

(v) Risk Assessment by the Forest Department :-

Sr.No	Data of population living in the hazard prone areas.	Solan
1.	Human	45,489
2.	Animals	27,560
3.	Houses	4897
4.	Land under cultivation	4432.68 hectare
5.	Industries	NIL
6.	Public utilities	NIL

(vi) Fire Prone areas in Solan Forest Division :-

Sr.No	Block of forests	Range
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District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

1.	Kandaghat-Dhiarighat	Kandaghat
2.	Baran-Ka-Cheon-Dharot	Kandaghat
3.	Nauni-Khaldhar-Charar- Chawal-Mathan	Solan
4.	Shil-Manog-Shashal-Kali Kuffer-Nagali	Solan
5.	Bhawan-Ki-Dhar-Deora- Nandal-Nagali	Solan
6.	Subathu-Kathani	Subathu
7.	Kothi-Koon	Subathu
8.	Kadon-Sihardi	Dharampur
9.	Maltu Dhar	Dharampur
10.	Barog-Nagali	Dharampur
11.	Bohali-Joharji	Dharampur
12.	Barog-Manjholi	Dharampur
13.	Chabal Ki Dhar	Dharampur
14.	Chunjri-Chewa Khil Chunjri	Dharampur
15.	Gulhari	Dharampur
16.	Chola-Anji Matla	Dharampur
17.	Datyar-Gahidhar Nry nallah	Parwanoo
18.	Bhoj nagar Banasar	Parwanoo
19.	Bhoj Nagar Chaki Ka Mor	Parwanoo

(vi) Fire line in Forest Division Solan :

Range	Block	Beat	Name of fire line	Length
Parwanoo	Lugon	Banasar	R-47 Karalaghat to Banasar	1 KMs
	Lugon	Banasar	Jodhpur to Banasar	3 KMs
	Lugon	Banasar/Nabhon	Banasar to Shogrighat	4 KMs
Dharampur	Bhojnagar	Joharji	Bhojnagar to Mataghat	3.5 KMs
	Dharampur	Barog	R-31 Barog	2.5. KMs
	Chabbal	Chabbal	R-30 Chabbal	13 KMs
Solan	Solan	--	Khaldhar to D-132 Charar	5 KMs
Subathu	Subathu	Kathni	Khaldhar to Subathu	7 KMs
		Deothi	D-127 Shashal	1 KMs
		Alobra	Raikot to Alobra	12 KMs
			TOTAL:	44 KMs.

(vii) Year wise number and extent of Fire burnt areas :-

Year	No of cases	Area burnt (In hectares)
1983-84	3	10.5
1984-85	85	1558.2
1985-86	30	561.2
1986-87	2	9
1987-88	5	32.75
1988-89	29	225

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

1989-90	12	210
1990-91	3	44
1991-92	43	560.6
1992-93	29	410.5
1993-94	64	609.4
1994-95	--	--
1995-96	111	3088.1
1996-97	5	38.5
1997-98	1	42
1998-99	20	124.6
1999-2000	121	3743.65
2000-01	13	120

(viii) Fire management Measures :**1. Fire prevention measures :**

- + Earning good will of local people.
- + Education and publicity
- + Restriction on tarring of roads.
- + Joint management of forests.
- + Removal of pine needles.
- + Clearance of fire lines.
- + Engaging fire watches and fire protection staff.
- + Control burning.

2. Fire Fighting :

- + Timely detection of fire.
- + Counter fire.

3. Legal action and punitive measures:**4.6.8 : ACTION PLAN TO MITIGATE THE LANDSLIDES :**

Landslides are simply defined as the mass movement of rock, debris or earth down a slope and have come to include a broad range of motions whereby falling, sliding and flowing under the influence of gravity dislodges earth material. They often take place in conjunction with earthquake, floods and volcanoes. At times, prolonged rainfall causing heavy block the flow of river for quite some time. The formation of river blocks can cause havoc to the settlements downstream on it's bursting. In the hilly terrain of India including the Himalayas, landslides have been a major and widely spread natural disaster and often strike life and property and occupy a position of major concern. One of the worst tragedies took place at Malpa Uttarkhand (UP) on 11th and 17th August 1998 when nearly 380 people were killed when massive landslides washed away the entire village. This included 60 pilgrims going to Lake Mansarovar in Tibet. Consequently various land reform measures have been initiated as mitigation measures. The two

regions most vulnerable to landslides are the Himalayas and the Western Ghats. The Himalayas mountain belt comprise of tectonically unstable younger geological formations subjected to severe seismic activity. The Western Ghats and nilgiris are geologically stable but have uplifted plateau margins influenced by neo- tectonic activity. Compared to Western Ghats region, the slides in the Himalayas region are huge and massive and in most cases the overburden along with the underlying litho logy is displaced during sliding particularly due to the seismic factor. The most important triggering mechanism for mass movements is the water infiltrating into the overburden during heavy rains and consequent increase in pore pressure within the overburden. When this happens in steep slopes the safety factor of the slope material gets considerably reduced causing it to move down. Hence the natural way of preventing this situation is by reducing infiltration and allowing excess water to move down without hindrance. As such, the first and foremost mitigation measure is drainage correction. This involves maintenance of natural drainage channels both micro and macro in vulnerable slopes. The universal use of contour bounding for all types of terrain without consideration of the slope, overburden thickness and texture or drainage set- up needs to be controlled especially in the plateau edge regions. It is time to think about alternative and innovations, which are suitable for the terrain, to be set up. It need not be over-emphasized the governmental agencies have a lot to contribute in this field. Leaving aside the 'critical zones' with settlements could be avoided altogether and which could be preferably used for permanent vegetation, the 'highly unstable zones' generally lie in the upper regions, which are occupied by highly degraded vegetation. These areas warrant immediate afforestation measures with suitable plant species. The afforestation programme should be properly planned so the little slope modification is done in the process. Bounding of any sort using boulders etc. has to be avoided. The selection of suitable plant species should be such that can with stand the existing stress conditions in this terrain.

Some parts on SHIMLA-CHANDIGARH & SHIMLA-MANALI National Highways alongwith Subathu-Kuthar road and certain places of Nalagarh are prone to land sliding/sinking due to soil erosion etc. But no damage to lives and private properties has been reported in the district. As the landslides are often caused alongside various roads and most of the land belongs to Govt.

(i) Causes of Landslides

Landslides can be caused by poor ground conditions, geomorphic phenomena, and natural physical forces and quite often due to heavy spells of rainfall coupled with impeded drainage.

(a) Checklist of Causes of Landslides Ground Causes :

- ❖ Weak, sensitivity, or weathered materials
- ❖ Adverse ground structure (joints, fissures etc.)
- ❖ Physical property variation (permeability, plasticity etc)

(b) Morphological Causes

- ❖ Ground uplift (volcanic, tectonic etc)
- ❖ Erosion (wind, water)
- ❖ Scour
- ❖ Deposition loading in the slope crest.
- ❖ Vegetation removal (by forest fire, drought etc)

(c) Physical Causes

- ❖ Prolonged precipitation
- ❖ Rapid draw- down
- ❖ Earthquake
- ❖ Volcanic eruption
- ❖ Thawing
- ❖ Shrink and swell
- ❖ Artesian pressure

As envisaged above some parts on SHIMLA-CHANDIGARH & SHIMLA-MANALI National Highways alongwith Subathu-Kuthar road and certain places of Nalagarh are prone to land sliding/sinking due to soil erosion etc. But no damage to lives and private properties has been reported in the district. As the landslides are often caused alongside various roads and most of the land belongs to Govt.

(ii) Action Plan :

(a) Mitigatory Measures

In general the chief mitigatory measures to be adopted for such areas are

- ❖ Drainage correction,
- ❖ Proper land use measures,
- ❖ Reforestation for the areas occupied by degraded vegetation and
- ❖ Creation of awareness among local population.

(b) Non Structural Measures

- ❖ Areas which are prone to recurring landslides and which are near to habitation or along the communication routes such as roads require continuous monitoring. Maps of such sites should be prepared on a scale of 1:500-1:200 for mitigation planning.
- ❖ Rapid response to suggest immediate measures in the event of landslides. Control rooms need to be 24 x 7 operations during the season when incidences of landslides are reported.
- ❖ There is need to evolve early warning system for landslides. Some work has been done in this regard by CISO, Chandigarh.
- ❖ Total ban on grazing, cutting of trees in the affected area Awareness generation programme in hazard prone areas should be launched at various levels through media campaign, development and distribution of leaflet posters, meetings, workshops on priority basis.

(C) Structural Measures

- ❖ Construction of check dams, gully plugs, vegetative barriers etc.
- ❖ Large scale plantation in the areas of specific varieties.

4.6.9 : ACTION PLAN TO MITIGATE THE FIRES.

Fires are a major man made hazard which threaten the life of urban population in particular and rural in general.

(i) City areas of Solan: Solan town, Nalagarh, Kandaghat, Kasauli, Parwanoo Baddi & Arki are prone to fires mainly because construction has taken place in a haphazard manner and ignition of fire at one point can threaten the whole locality if it is not controlled in time. We have seen the ravages caused by fires in almost in all the cities in the past. The fires caused on Diwali intervening night in Solan town in the year 1999 has caused heavy loss so ever notices in the district, which has displaced many families residing on rent alongwith

(ii) Rural areas: The construction of houses and cowsheds in rural areas often involve use of a lot of timber. Besides, fuel wood is the main source of energy for cooking and warming. Rural habitations are generally clustered together and are susceptible to fires. Every year there are numerous incidents of fires in the rural area causing both human, animal and material loss.

A. Plan of Action

(i) Structural Measures

- ❖ At present fire services stations are located at Solan, Parwanoo, Badi and Nalagarh areas of the district. In the event of any fire tragedy in the rural and remote areas, the fire tenders are rushed from the nearest centers of the district to the site of accident. Fire services can save life and property in the affected area only if it reaches the site within shortest time. Keeping in view of the vulnerability of various places like Nalagarh, Baddi of the district to fire hazard there is needed to put in place fire services up to Tehsil and Sub-Tehsil level of the district, so that in the event of any fire concerned Officer of Administration can take assistance of the fire officials.
- ❖ Provision of fire hydrants should be made in all the Sub divisional, Block, Sub-Tehsil and MC HQ.
- ❖ There should be fire alarms and fire fighting equipments in all the public building and in each Government offices.

(ii) Non-Structural Measures

- ❖ People should be made aware of fire safety measures and there should be regular drills.

B. AWARENESS GENERATION PROGRAMME AND EMPOWERMENT

Communities can deal with disasters better if they are aware of the disasters and their vulnerability vis a vis various kinds of disasters. It is therefore proposed to launch a massive awareness generation campaign in the whole district through Panchayats and local level authorities/functionaries of various departments.

(a) Target Groups

- ❖ All the elected representatives upto Panchat level.
- ❖ All VOs, CBOs, NGOs, Mahilla Mandals, Yuvak Mandals.
- ❖ Educational Institutions.

- ❖ Health institutions.

(b) Mode of Awareness Generation

- ❖ Media campaign.
- ❖ Development and distribution of leaflet pamphlets.
- ❖ Organizing meetings.
- ❖ Workshops/seminars.

C. Empowerment

Training in Search and Rescue (SAR), Civil, Defense and disaster management (as per the requirement of the services) to:

- ❖ All the Government Officers at all level & government servants.
- ❖ NGOs & CBOs.
- ❖ Rural masons.
- ❖ Specialist response teams.
- ❖ Police force and home guards & Staff of health department.

4.6.10 : ACTION PLAN TO MITIGATE THE LOCUSTS CONTROL :

Locusts attacks :

Locusts generally appear in the month of June or July though there have been cases of their appearance even in October. They specially disappear after doing the damage which may be small in proportion to the total production, but may be very serious for the cultivators whose crops have been damaged. In some seasons, however, vast swarms invade the State and cause widespread devastation. Wherever, locusts are observed in any district measures should be taken to ensure:-

- (a) That laying/hatching of egg shall be promptly reported and that;
- (b) Measures shall at once be taken for the destruction of eggs and of young nymphs when hatched.

Reporting of the Incident

Whenever locusts visits a district, the Deputy Commissioners of adjoining districts of the State and other States should be intimated so that they should keep watch over the laying of eggs by locusts and technical advice about locusts swarm may be taken immediately from Pant Protection Officers. The Revenue Officers should take immediate necessary action. Tehsildar whom the people know and trust, can take a great deal of work cheerfully. The appearance locusts in a district and the measures taken for their destruction should be reported by the Deputy Commissioner to the Divisional Commissioner and the Financial Commissioner (Revenue) on the following proforma:-

Report Locusts	Regarding District	Date of Appearance	Direction of Flight	Damage Done	Measures Taken	Remarks
(1)		(2)	(3)	(4)	(5)	(6)

It should be borne in mind that a special report should not be made in every case when a flight is seen, but only when damage to crops to a considerable extent is caused by the swarms. In all other cases, it will be sufficient to mention that locusts have been observed.

Individual efforts in a district are inadequate to deal with a menace of the magnitude of the desert locusts. It may, therefore, be necessary in case of severe infestations to set up a special agency for co-ordination. In the absence of such an agency, the Commissioner should co-ordinate efforts in the different districts. The Director of Agriculture and his staff or any special officers who may be appointed, will supply technical advice, broadcast information and wherever possible supply apparatus and equipment.

Coordination :

Where in a case of severe infestation, it is considered desirable to set up a special coordinating agency, an officer of the headquarters of the district should be appointed to deal with the receipt and distribution of supplies and equipment and with the allotment of personnel. This officer should not normally go on tour or interfere in control methods, but he should work in close co-operation with officials of the Agriculture Department concerned with supplies and should have full authority under the Deputy Commissioner to allot staff made available within the District or from outside. Local officers should be responsible for areas not larger than two Tehsil each and should be responsible for the organization of circle within their charges and for the adoption of control methods. They should requisition supplies and staff from the officers at the headquarters. A manageable circle has been found to consist of about 25 villages. Preferably an officer of Gazetted rank should be in charge of such circle. It has been found that no village is likely to do well unless visited by a responsible official for a considerable period daily but in these matters local conditions vary and much must be left to the discretion of the local officers.

Laying of Eggs :

The laying seasons normally extends from six to eight weeks in March or April, and again, if the conditions are favorable about August, when about to lay her egg, the female locust makes a hole in the grounds by means of the two pairs of horny valves which open and shut at the top of her abdomen. With the valves close she pushes the trip into the ground and makes a hole for herself and her egg, which later are voided in a pale glistening, glutinous fluid which holds them together and binds them into a long cylindrical pad, covered with particles of earth which adhere to it. When fresh, the whole mass is soft and moist, but it soon acquires a firmer consistency. It is rarely placed much more than an inch below the surface of the ground but sometimes it lies much deeper, the eggs are laid by side at right angles to the axis of the pad to the number of from 30 to 100. They are slightly curved of a pale yellow, colour and rather larger in the middle than at the ends, about a fifth of an inch long and one fifteenth of an inch at the thickest part. The female is believed to lay three hatches of eggs, and the average interval between the periods of laying by the same female is laid to be two weeks. Eggs may be laid in almost any kind of soil but by preference in bare sandy soil, grounds and sandy soil, especially in high and dry grounds tolerably compact are much resorted to. Restores, grounds and study fields are much resorted to for ovipositing. Field of grass stubble will show no signs of holes but yet abound in eggs. Locusts have been known to deposit their eggs in the sandy banks of rivers and after the subsidence of the rains and the river floods, and when usual hatching time has arrived the young have issues from the sandy beds in many raids.

Measures to Combat the Menace :

The period between the laying of the eggs and the appearance of the young locusts is liable to variation. Under the influence of more than ordinary heat and moisture eggs have been observed to hatch out in about a fortnight. Therefore, whenever, locusts appear, careful observation should be taken at once to ascertain as soon as possible whether eggs have been laid and the young are hatched out, and necessary measures for their destruction should be carried out soon after the eggs are discovered.

- (a) One of the most rapid ways of collecting eggs especially where there are numerous and light soils is to slice off about an inch of the soil with a spade or a similar instrument and carry the eggs to one spot and after separating them from the sand and bury them in deep pits of the ground being packed hard on the surface.
- (b) Harrowing is an effective mode of destroying eggs, and of preventing future injury. The objective should be to strive deeply but to scarify and pulverize as much as possible the solid to the depth of about an inch. Breaking up to the mass and exposure of the individual eggs to the desiccating effects of the atmosphere effectually destroys them and when to this is added to well-known fact that thus exposed they are more liable to destruction by their numerous enemies, we see at once the importance of this mode coping with the evil.
- (c) Ploughing is another effective way of destroying eggs. The ground may be ploughed up repeatedly, ploughing five or six inches deep, if possible.
- (d) When eggs are deposited in standing crops measures should at once be taken to destroy, eggs without regard to consequent damage to the crop.

Young Unfledged Locusts :

The time from hatching till the wings appears varies from three to eight weeks. The young locusts display gregarious instincts and congregate in immense numbers. Sometimes vast numbers will be found collected in a small spade of brush wood and short grass. After their first transformation, their voracious appetites seem to come to them. They march into the field of crops just beginning to grow clearing the ground as they move. As one band meets another, they join together until they form immense closely packed armies. They migrate only when their original breeding places cannot hold them.

It has been found that more especially during the harvesting season in Rabi when crops are no longer green, kuhls/canal banks with abundant grass and vegetation sooner or after become the objective of hoppers. When this issues work on the affected areas it requires close supervision. Employees of the irrigation Channel must not be allowed to content themselves with the driving operations.

The organs of generation form gradually and get more complete with each change of skin. After the fifth changes the insect arrives at its complete state. It is impossible to prevent fecundations. The larva is produced largely and rapidly from eggs, and the first swarms are not early replaced but multiplied a hundred fold by each successive generation.

Dealing with the Menace :

- (a) Various methods have been employed for the destruction of the young locusts, such as burning, crushing and trampling but the last method obtained most favour.
- (b) When they are not above a week old a trench of 6 or 8 inches wide and deep such as two men may form in a few minutes suffice for securing the insects, which jump into it with alacrity and appear wholly unable to extricate themselves from it.
- (c) When however, they grow a little older and are making their way from road and paths ditches two feet wide and two feet deep with perpendicular sides should be dug wider at the top for effective barriers. The young locusts tumble into such ditch and accumulate and die at the bottom in huge numbers.
- (d) In order to keep them in ditch open, it may be necessary to dig pitch more deeper and side ditches at short intervals in which the locusts will accumulate and may be buried each being well pressed down.
- (e) Where the solid is tenacious and water can be let into the ditches so as to cover the bottom they may be made. The efficacy of the ditch depends so much on the ability of the young locusts to jump or scale it as on the tendency of the young insects not to do so. In the bottom of the ditch they soon become demoralized crippled and unfledged by constant effort and the trampling and growing up on one another.
- (f) The destruction of the young can only be carried out successfully during the period when the locusts are unable to fly and this is very short, being at the most only six weeks or two months.
- (g) In the cold weather the swarms are unable to move in the morning from numbness and under such circumstances the destruction of even full grown swarms is easy.
- (h) Complete destruction of the full grown of wings insect when they invade a country in larger swarms is impossible. Attempts have been made to frighten them away by firing guns, crackers beating drums and by rattling tackling noises, but if disturbed in this way they simply pass on to the next field.
- (i) Effective means of copies with the evil is by the destruction of:-
 - (I) The eggs.
 - (II) The young of unfledged insects.
- (j) Eggs are laid in messes just beneath the surface of the ground, seldom to a depth of more than one inch where immense swarms have settled scarcely an inch of the soil for employed in destroying the eggs are:-
 - (I) Collecting.
 - (II) Harrowing.
 - (III) Ploughing or digging
 - (IV) Flooding and
 - (V) Tramping

Other Measures :

- (a) When damage has been caused by locust in a certain area relief measure may be undertaken in the same manner as relief is provided to farmers whose crops are destroyed by hail storm.
- (b) The local Panchayats, Panchayat Samities and Zila Parishads are members are also expected to render necessary assistance to the administration in tackling the menace.
- (c) In case of severe infection or as and when the circumstances warrant special Committees may be constituted at State, District and Tehsil level.

CHAPTER-5

MITIGATION PLAN :

5.1 : Mitigation Plan :

The Revenue Department is the nodal agency for initiating rescue and relief activity in all the natural calamities like damages due to flood/heavy rains, road accidents, fire etc. with the assistance of all concerned departments. Rescue operation is being taken by the administration with police, home guards, fire and health personnels primarily and if the PWD/IPH department manpower or machinery is required it is also arranged simultaneously. The reports regarding occurrence of any calamity alongwith brief detail regarding loss and action taken should also be reported to Govt. as early as possible. Besides, the affected people need medical relief, search, rescue of the trapped people, and preventive action to check outbreak of epidemic, security of the people including ex-gratia payments etc. The District Collector, being the District Relief Manager, is responsible for not only providing the ex-gratia payment on behalf of the Revenue Department but is also responsible for ensuring the general preparedness of all the Government agencies and a coordinated response of all the agencies in case of disaster.

5.2 : Industrial accidents Mitigation Plan :

Industrial accidents are often occurred in the district with the installation of large number of pharmaceutical, Iron & Steel, Textile, Consumer products, Health care, Leather , Wool, Silk, Chemical, Petro-Chemicals, Liquid Petroleum Gas, Food & Bewrage, packaging, electronics, mechanical & electrical equipments, cements industries in various part of the district. The fire equipments for the fire safety is essentially installed in all the units. The Deputy Director (Industries) Baddi and General Manager (Industries) Solan have been directed to ensure that each industry should have Disaster Management Plan for the safety and mitigation of hazards etc.

5.3 : Sensatative Area Mitigation Plan :

Following places/areas are identified as very sensitive towards hazards as per detail given below:-

- ❖ Nalagarh Sub-Division : Nalagarh, Baddi and complete BBN industrial areas.
- ❖ Solan Sub-Division : Solan, Parwanoo, Dharampur, Barotiwala due to industries.
- ❖ Arki Sub-Division : Darlaghat, Kashlog and Mangal Industrial areas.
- ❖ TIMBER TRAIL ROPEWAYS, K.K.ROPEWAYS, in Solan Sub-Division.
- ❖ JULLA BRIDGES in Mangal area on SATLUJ River.
- ❖ Whirling water point GIRI RIVER at Giri Pul in Kandaghat Sub-Division.
- ❖ All the Roads and bridges of Solan district.
- ❖ All the electric sub-stations and power supply lines within district and also passing through the district.

- ❖ All the school/colleges/universities & Govt. offices.
- ❖ LPG center at Baddi.
- ❖ Chemical industries at BBN area.
- ❖ Petrol/Diesel Storage at Dadibhola, Nalagarh.
- ❖ Multi storied Building collapse.

In case of fire incidents, chemical accidents in Baddi & Nalagarh industrial area necessary equipments like search lights, life jackets, ropes, ladders, stretchers, public address system, portable generators, tarpaulins/tents, helmet, gas masks, fire fighting equipments etc. are purchased by the SDM Nalagarh and made available with Fire Officer at Nalagarh for rescue operations. In case of flash floods in chikni khud, the SDM Nalagarh has enlisted the name and telephone number of divers. The life jackets/swimming suit are available with SDM Nalagarh & Tehsildar Baddi. For pulling out the buses and heavy vehicles from water logged area the telephone numbers with address of crane owners is available at Annexure R at serial No: 17.

In case of collapse of multi storied buildings, the RCC cutters, stretchers, portable generators, dossiers, tippers, shovels etc. are available with all the SDMs/PWD authorities.

5.4 : ESSENTIAL ELEMENTS FOR A DISASTER MITIGATION PLAN :

- ✚ The natural disaster mostly strike without fore warning hence can rarely be predicted in Advance.
- ✚ Each disaster causes damage of different kind both in extent and intensity
- ✚ Each disaster prone area being geographical location specific (with diverse geo-demographic setting and vulnerability) needs specific planning.
- ✚ Local resource documentation (both men & material) availability and preparedness be checked periodically
- ✚ Use of conventional communication means and modern (including wireless & Radio, short wave communication, SOS signal be well planned.
- ✚ The NGOs, and religious, social organizations working in the area be included in rescue-relief, rehabilitation work (roles well defined)
- ✚ The companies undertaking major construction work, mining or Industrial production be forewarned to keep complete documentation of work force, Group Insurance be made mandatory for them, this will reduce not only burden on State exchequer but even -social costs shall go down .
 - ✚ Laws, legislations and Rules involving public safety norms be well documented, pronounced and implemented.

5.5. : PRE-DISASTER PERIOD (HEAVY RAINS/FLOOD/LAND SLIDES/DROUGHT/CYCLONE & OTHER NATURAL CALAMITIES)

PREPARATION	OBJECTIVE	ACTION
Convening District Level Committee on Natural Calamity – in the month of May/June	• To suggest the list of Relief work to be undertaken, advise on the precautionary measures to be taken, for stocking of food articles in strategic or key points	District Control Room (DCR).

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Identification of vulnerable points	- Repairing of pullies. - Cleaning of drains etc . - Stocking of the sand bags - Alerting people near highly vulnerable pocket like banks of rivers etc.	Action by SDMs, SDPOs & DFOs and PWD authorities [Reporting & Monitoring]
Identification & Indent of essential commodities the inaccessible/ scarcity pockets	Stocking of Food grains in Fair Price Shops at GP Head quarter.	Action DFSC & BDOs
Arrangement of gliders and Power Boat at Flood points	To keep regular vigil on water level.	Action by SDMs, SDPOs, Fire & XENs (I&PH and PWD authorities as the case may be [Reporting & Monitoring]
Selection of Shelters	Connecting road maps, served villages with capacity, suitable management	SDMs, Deputy Director of Education and BDOs through PRIs and to manage the shelters through local management
Requirement of medicine, life saving drugs, earmarking mobile teams, identifying probable epidemic area	Stocking of Medicines	CMO/BMOs.
Arrangement of Food and fodder for Animals	Stocking of the same	SDMs and Deputy Director of Animal Husbandry.
Checking operation of already installed VHF system		Technocrat of Police signals/forest department.
Monitoring	To take stock of overall situation	Deputy Commissioner/ ADC/ADM

5.6 : IMMEDIATE PRE-DISASTER :

PREPARATION	OBJECTIVE	ACTION
Receipt of Information	- From IMD/ SRC control room/ Rev. control room by District Control Room - From Sub-Division/Tehsil Control Room. - Also from news bulletin of All India Radio and Doordarshan	Deputy Commissioner Office.

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	From internet website	
Dissemination of information	From DCR to all SDMs/ Tehsildars/Naib-Tehsildar and All Line Dept.	Deputy Commissioner Office and all the field offices.
Immediate setting of Control Room round the clock & making it functional.	All SDMs/ Tehsildars/Naib-Tehsildar and All Line Dept.	-do-
Rescue and evacuation	To evacuate vulnerable people to identified shelters for the time being and logistic arrangements for the shelters	Civil Defence Unit, Police personnel, (Armed Forces, Naval, Red Cross Team, if required), District Fire Officer, Volunteers of NGOs alongwith rescue equipments available in the departments under over all supervision of concerned DC, SDM, Tehsildar or Naib-Tehsildar as the case may be.
Arrangement of Free kitchen	To provide immediate Fooding to the evacuees.	SDMs/DFSC
Sanitation and medicine		CMO / Executive Engineers of PWD / I&PH
Requisition of sufficient numbers of vehicle, Light / Medium/ Heavy.	To be kept in readiness with POL	RTO/SDMs
Immediate freezing of 75% stock of POL Bunkers in the district.	POL is tube used during the time Disaster followed by scarcity.	DFSC
Arrangement of Road Cleaners / Power saw etc.	To clean the road, cut the fallen trees and remove the garbage.	XEN, HPPWD.
Search Lights/ Generators	To move to the field immediately after the disaster is over.	SDMs/Police

5.7 : DURING DISASTER :

PREPARATION	OBJECTIVE	ACTION
Alertness & Remain in readiness to gear up in action immediately after the disaster is over.	Listing to Radio, watch Television etc.	ADM/DPRO
Control Room to Functioning Day & Night	All the deptt.	District Control Room, all Line Deptt. All SDMs/

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		Tehsildars/Naib-Tehsildars.
Monitoring	To stake of overall situation	DC/ADC/ADM/SDM.

5.8 : POST DISASTER :

FOLLOW UP ACTION	OBJECTIVE	ACTION
Distribution of Relief/ Emergent Relief as per the provision of Himachal Pradesh Emergency Relief Manual.	To provide immediate Fooding to save affected people from starvation	SDMs concerned.
Assessment & enumeration of damage.	To ascertain the exact loss of projection before Govt.	All SDM / Tehsildars/ Naib-Tehsildars / line Departments concerned.
Monitoring Relief Operation organized by outside agencies / UN Agencies Red Cross / NGOs / PSUs / Other states etc through District Administration.	To maintain uniformity of Relief administration	DC/SDM concerned.
Restoration of communication - Roads & Railways	For timely and prompt delivery/ transportation of relief articles/ deployment of rescue team	Executive Engineers of Railways, HPPWD and Police personal.
Restoration of Electronic Communication System	To ensure proper coordination linkage	District Manager of BSNL/ Technocrat of Police signals.
Immediate arrangement of free kitchen in the cut off/ shelter camps and inaccessible areas	To avoid starvation and further deterioration both health and environment	SDMs/EOs of UIBs/NGOs
Ensuring transportation of Relief Materials to affected pockets	To reach immediately after abatement of calamity with helping hands for development of confidence among affected people	SDMs/Tehsildars and Naib-Tehsildars.
Ensuring safeguarding of belongings of evacuees & maintenance of law and order	To prevent anti-social activities	Police/Civil Defence authority/NGOs
Ensuring safe availability of Drinking water, Provision of Medical facilities and minimum sanitation	To check health hazards especially during calamity	CMO/ Executive Engineers of I&PH.
Removal of debris and disposal of carcasses	For environmental equilibrium	Police personnel/XEN (HPPWD) PRIs/EOs of ULBs/NGOs/Animal

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		Husbandry in case of Animals.
Helping the evacuees to return to their homes	For settlement of the evacuees with their belongings after normalcy	SDMs/Tehsildars/Naib-Tehsildars/ NGOs
Special care to children, lactating mothers, old & infirm	To prevent deterioration of health and multiple complicity afterwards affecting humanity	SDMs/BDOs/CDPOs/CMO/BMOs.
Meeting Officers of both District and Field level in every 24 hrs. to take stock of the situation	For better coordination and cordial carrying of every kind of relief operation and to ascertain the progress thereof.	DC/PD, DRDA at District level and SDMs at Sub divisional level
Collection of information by a core group of DCR headed by DC and submission of daily situation report to Govt. through DC keeping liaison with filed and state Govt. and interaction.	Triangular linkage between field, district and state control room and other state level officials for taking further follow up actions on war footing	DC/SDMs/Tehsildars and Naib-Tehsildars as the case may be.
Documentation of the entire event - Black & White/ Audio & Video	To assess/ apprise the situation to different Central/ State level dignitaries of the event and official record.	DC/SDMs/Tehsildars and Naib-Tehsildars as the case may be alongwith DPRO.
Monitoring	To take stock of the day-to-day activities, sort out bottlenecks for proper implementation of relief/ restoration/ rehabilitation programme.	Deputy Commissioner.

5.9 : PREVENTIVE/MITIGATION MEASURES TO BE UNDERTAKEN (OLD AND INFIRM) :

MEASURES	Directly responsible	Sub-Division Monitor	District Monitor
	Tehsildar or Naib-Tehsildar	SDM	ADM being Nodal Officer.
Distribution of Relief be done within 10 days of death	Tehsildar/Naib-Tehsildar.	SDM	ADM
Prompt delivery of assistance.	-do-	-do-	-do-
People not covered under National	-do-	-do-	-do-

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Old Age Pension/ Old Age Pension/ Disabled Pension but old and infirm and in distress to be immediately provided with Gratuitous Relief on Cards. *SDMs will presume the sanction of the DC and go ahead with distribution of GR in anticipation.*

5.10 : PREVENTIVE/ MITIGATION MEASURES TO BE UNDERTAKEN (CHILDREN) :

Activity	Directly responsible	Sub-Division Monitor	District Monitor
ICDS Centers must run without fail	CDPO	SDM	DC

5.11 : DRINKING WATER FOR PEOPLE :

Activity	Action	Directly Responsible	Sub-Division Monitor	District Monitor
Drinking water for people	Repair within 48 hrs of receiving of a complaint.	Concerned SDO of I&PH.	SDM	XEN, I&PH concerned.
New Tube wells	Shall be sunk in order of priority	-do-	-do-	-do-
Drinking water Handpumps.	To be dug at the place of need in consultation with Block/ PRIs.	-do-	-do-	-do-
Renovation of traditional drinking water sources	To be taken up immediately out of departmental fund of I&PH in consultation with BDOs/PRIs.	-do-	-do-	-do-

5.12 : VETERINARY :

DRINKING WATER FOR ANIMALS	Directly Responsible	Sub-Division Monitor	District Monitor
Hand pumps or Tube well should constructed	AE of I&PH	SDM	XEN(I&PH) concerned.

5.13 : PUBLIC DISTRIBUTION SYSTEM :

PDS	PDS	Directly Responsible	Sub-Division Monitor	District Monitor

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Market rates	To keep close watch on rates of essential commodities and report deviations	Inspector of Food & Civil Supplies.	SDM	DC/ADM/DFSC
Off take/ Lifting	Inspector of Food & Supplies must see off taking to retail	-do-	-do-	-do-
Rice, Wheat, Atta.	Concerned Inspector of Supplies of the respective hit area will look after this if situation demands	-do-	-do-	-do-

5.13 : WAGE EMPLOYMENT/ MINIMUM WAGE FOR THE ABLE :

Activity	Directly Responsible	Sub-Division Monitor	District Monitor
50 or more labourers wanting work shall be provided with work. Model estimates of percolation tanks shall be dug	BDO	SDM	PD, DRDA
Minimum wage enforcement	Labour Officer.	SDM	DC/ADM
MNREGA	BDO	SDM	PD, DRDA
Only labour intensive works work shall be taken up all other work requiring labour component shall be stopped	BDO	SDM	PD, DRDA

5.14 : EPIDEMIC CONTROL AND ANIMAL DISEASES:

Activity	Directly Responsible	Sub-Division Monitor	District Monitor
In case of epidemics in a locality, the Health staff must get into action on war footing	Medical Officer	BMO	CMO
Animal disease In case of epidemic of animals in the areas, the CDVO shall act on war footing	Vetrinary Officer	Sub-Divisional Vetrinary Officer.	Deputy Director of Animal Husbandry.

5.15 : DISTRICT MONITOR MEETING :

Activity	Directly Responsible	Sub-Division Monitor	District Monitor
District Monitoring Meeting Every Monday at 11.00 AM Complete feed back	All the HODs of District.	SDMs	DC/ADM

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from the District
Monitor
Any negligence shall
be sternly dealt with

5.16 : PROTECTION OF DRINKING WATER SOURCES :

Activity	Directly Responsible	Sub-Division Monitor	District Monitor
The security of every drinking water supply system shall be thoroughly reviewed and action as deems fit for tightening its security taken. The security of the following drinking water supply systems shall be personally reviewed by the Superintendent of Police - Giri Supply. - Kaushlya Water Supply.	Concerned SDO of I&PH/ OICs Police Station concerned.	SDM/SDPO/XEN(I&PH) concerned	DC/ADM/SP/ASP.

5.17 : POST DISASTER SPECIFIC MEASURES AND APPROCHES :

SECTOR	MITIGATIVE MEASURES	AGENCY RESPONSIBLE
Infrastructure Development	Improving Information Education and Communication activities through walling, posters, street play, volunteers training, village task force training, Mass rallies during normal period	BDOs through PRIs & Leading NGOs
	Repair/ Restoration of vulnerable points on Roads before onset of monsoon	PWD
	Repair/ Restoration of vulnerable points on Embankment during pre flood period	Irrigation & Public Health.
	Ensuring proper maintenance of shelter places.	BDOs/PRIs.
	Ensuring maintenance and proper functioning of electronic communication system	BSNL
	Immediate Response for Repair/ Replacement of Hand pumps/Tube wells/ Pipe water supply system	I&PH.
	Proper maintenances of VHF system.	Head of Office of the concerned location
Health/	By way of IEC activities through walling,	BDOs through PRIs &

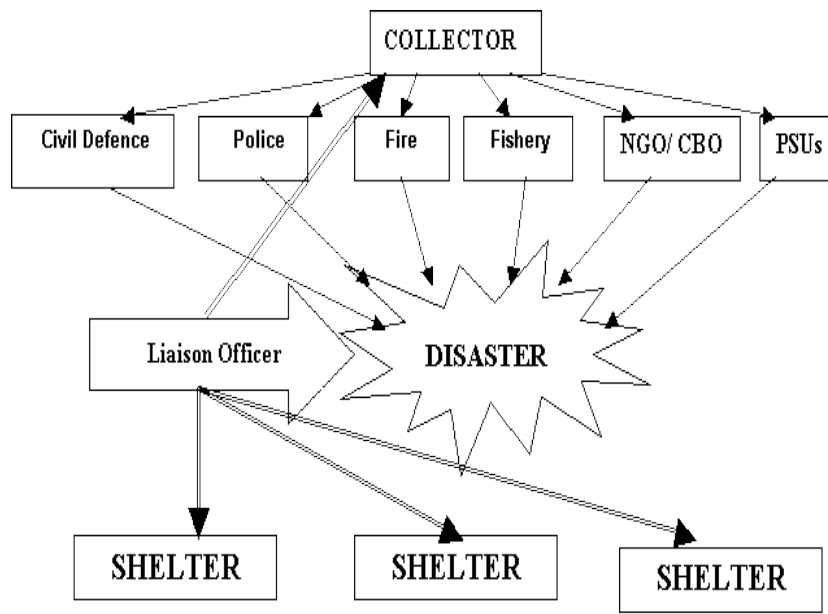
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Animal Husbandry	posters, street play, village task force/ volunteers training, during normal period.	Leading NGOs
	Adequate stock pilling of vaccines should be ensured for vaccination before disaster	CMO/BMOs
	Training Programme of common people should be programmed for health care, sanitation and first aid from village level to district level.	-do-
Livelihood Sector	By way of IEC activities through walling, posters, street play, village task force/ volunteers training, during normal period	BDOs through PRIs & Leading NGOs
	· To reduce adverse impact on Agriculture farmers should be advised alternating cropping pattern/ flood resistance crops · Drought resistance short duration paddy seeds be made available to farmers · Ensuring crop insurance	Dy. Director Agriculture/ Dy. Director Horticulture
	Raising of Nursery in the horticulture farms & insurance coverage of horticultural products	Dy. Director Agriculture/ Dy. Director Horticulture
Insurance	By way of IEC activities through walling, posters, street play, village task force/ volunteers training, during normal period	BDOs through PRIs & Leading NGOs
	Emphasizing on insurance coverage of life stock, crops, industry, workshop etc.	Dy. Director Agriculture.
	Creating awareness among general public during normal time to insured human life.	BDOs through PRIs & Leading NGOs

5.18 : EVACUATION & DISSEMINATION :

5.18.1 : EVACUATION PLAN :

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5.18.2 DISSEMINATION :

DISSEMINATION OF OTHER IEC MATERIALS :

MODE	AGENCY RESPONSIBLE
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DISTRICT CONTROL ROOM Dissemination ALL GOVT. & NON- GOVT. AGENCIES GENERAL PUBLIC THROUGH DIRPO/ REVENUE FIELD OFFICIALS	
Wall Painting, Street Play, Village Task Force/ Volunteers Training	CMO – Through field agencies BDOs - Through CBOs/ Village volunteers NGOs – through Block level NGO network
Slide in Cinema Hall	OIC Judicial, Collectorate
Hand Bills, Paper advertisement	DPRO & BDO
Media & Press release	Information Officer/ DCR
Posters, Cartoons, Charts, Photographs, Folk song	CBOs/ NGOs
Training Camps, Group discussion and special lectures by Community Leaders	DPRO, BDO, DCR

5.19 : TRAINING AND MOCK DRILLS :

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MODE	AGENCY RESPONSIBLE
Training Programme for Rescue & Relief	SP, Dist. Fire Officer, Civil Defence, NGOs, CBOs
Training for common people on Health Care, Sanitation & First Aid	CMO, BDOs & Eos(MC/NP)/CBOs
Disaster Orientation Training of Police/ Fire Personnel/ Medical Teams	SP/Fire/Home Guards/CMO/BMOs.

5.20 : SETTING UP OF DISASTER VOLUNTEER FORCE - IDENTIFICATION & TRAINING :

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

5.21 : Operational readiness of facilities, equipments & Stores :

As the rescue operations are being conducted with the help of concerned departments like Police, Fire, Civil defense, Health, HPPWD, I&PH etc. and all necessary equipments are carried out by them during such operations, which are always kept ready.

5.22 : Setting up of EOC or Control Room :

Control Rooms are being set up during any disasters/on requirement in all the Sub-Divisions, Tehsil and Sub-Tehsils of District Solan including HQ on following telephone numbers as per detail given below :

Sr. No.	Office	Phone number

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

1.	DC Office, Solan	01792-223702 & 223703 Toll free Number 1077 with SP Solan.
2.	SDM Solan	01792-223707
3.	SDM Nalagarh	01795-223024
4.	SDM Kandaghat	01792-256100
5.	SDM Arki	01796-220666
6.	Tehsildar and Naib-Tehsildar Solan.	01792-223708
7.	Tehsildar and Naib-Tehsildar Kasauli.	01792-272037
8.	Naib-Tehsildar Krishangarh.	01792-284556
9.	Tehsildar and Naib-Tehsildar Nalagarh.	01795-223044
10.	Naib-Tehsildar Ramshahar	01795-258533
11.	Tehsildar and Naib-Tehsildar Kandaghat.	01792-256143
12.	Tehsildar and Naib-Tehsildar Arki.	01796-220888

5.23 : Updation of Resource Inventory :

The resource inventory is being updated regularly.

5.24 : Management Skill simulation training :

Training on various aspects of Disaster Management Plan is being imparted to all the Revenue Officers from time to time.

5.25 : Community Awareness :

Mock drills are being conducted from time to time with the help of Police, fire, civil defense & Health department in various parts of the district.

5.26 : Assistance from other organizations during Disasters/Rescue operation**5.26.1 : NATIONAL DISASTER RESPONSE FORCE (NDRF) :**

For the purpose of specialized response to disasters/ emergencies both natural and manmade NDRF has been constituted comprising of 8 battalions drawn from Central Para-Military Forces. Each NDRF battalion has 18 Specialized Search & Rescue Teams including doctors, paramedics and dog squad. The general direction and control of NDRF is vested with NDMA while the command and supervision of the Force is vested in Director General of Civil Defence and NDRF appointed by the Central Government. **Solan District is covered under NDRF Bhathinda and has recently visited District Solan for familraization of District at various places in January, 2012 viz. UHF, Solan, Kandaghat, Arki, Parwano, Baddi & Nalagarh respectively.**

5.26.2 : Requisitioning of NDRF Teams :

Each NDRF Battalion/Team has been assigned respective areas of responsibility in terms of States/UTs and Districts. The NDRF Battalion/Teams can be requisitioned by the State Governments/ District Administration directly in cases of rapid onset disasters where early warning/alerts is not available and through the Director General, NDRF and NDMA in cases where sufficient lead time is available. The State Governments/ District Administration will maintain close liaison with the NDRF Commanders earmarked to the respective States/Districts for rapid deployment in case of threatening disasters situation/ disasters.

5.26.3 National Disaster Mitigation Resource Centres (NDMRCs) :

The NDMRCs will be co-located with the NDRF battalions. These will also serve as repositories for NDMR bricks of relief stores for the disaster affected people, in each of the eight NDRF locations. These will cater to the emergent requirements especially for the first 72-96 hours. These stores will supplement the reserves maintained by the respective states/UTs. In addition, these centres will assist in running mock drills and capacity development programmes. During disasters, they will act as facilitators to the states/UTs in deployment of central resources and provide much needed additional link to the centre.

5.26.4 : Regional Response Centres (RRCs) :

Regional Response Centres have been set up at various strategic locations across the country by the CPMFs. The RRCs are equipped with minimum Cache of equipment to deal with floods, cyclone, earthquake etc. NDRF Teams can be prepositioned in these RRCs for quick deployment when disaster is imminent. The State Government at the time of need can requisition the assistance from these RRCs. **There are two RRCs in Himachal Pradesh which are located at Kullu, Recong-Peo & Sarahan in Himachal Pradesh being managed by the ITBP.**

5.26.5 : State Disaster Response Force (SDRF) :

State Governments/SDMAs shall be primarily responsible for taking preparedness measures and building response capacity as per their vulnerability to various natural disasters and constitute State Disaster Response Forces on the pattern of NDRF. **But in Himachal Pradesh it has not been constituted so far.**

“Shoolini Fair” HAZARD SPECIFIC EMERGENCY / CONTINGENCY PLAN



DISTRICT SOLAN -2013-14

Prepared and compiled by:-
Deputy Commissioner, Solan.

“Shoolini Fair” HAZARD SPECIFIC EMERGENCY / CONTINGENCY PLAN

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APPENDIX-C	Important Telephone/mobile numbers of Various Departments : District Administration :	
APPENDIX-D	EMERGENCY TELEPHONE NUMBERS OF SOLAN DISTRICT	

“Shoolini Fair” HAZARD SPECIFIC EMERGENCY / CONTINGENCY PLAN

1.1 : Objective of Plan :

Three days “Shoolini Mela” event is a unique situation that has the potential to develop into an emergency incident. Therefore, it is prudent for the District administration to identify conditions that could lead to on-site and off-site related emergency situations or disasters to minimize the effects of potential emergency incidents. A specific plan is required to be prepared for meeting exigencies to be developed during the fair with following reasons:

1. To define the coordination of necessary emergency actions by the District administration and emergency responders. These coordinated actions ultimately provide for timely communication, warning, and evacuation of residents or participants in the event of an emergency incident.
2. To initiate emergency measures to reduce the risk of loss of life and property damage resulting from an emergency.

The goal of contingency planning is to protect life and property by identifying the risks associated with the event and developing a plan of action to minimize those risks. Such activities can place a strain on community resources and impede their ability to respond effectively. The event permits and requires the district administration to take the necessary steps to reduce the impact on the community and its resources, and address the safety requirements of the participants and spectators and this will be effective only for Shoolini Mela and the document will be revised annually or on requirement by the District Authorities.

1.2 : Overview :

The three day state level “Shoolini fair” is celebrated in last week of June every year (i.e. before last Sunday including Friday, Saturday & last Sunday of June) in Solan Town. Thousands of pilgrims gathered at the famous Shoolini temple and participated in the auspicious “Shobha Yatra”. The fair give the right pedestal to the state’s artisans by organizing handloom art exhibition, woodwork exhibition and several other competitions like baby show, flower show & dogs show etc. including wrestling & traditional play on “THODA” along with three cultural nights. ‘ **Shoolini Mata is the main deity of the place and the city derives its name from this Goddess. The temple is one of the most famous temples of Solan and attracts a lot of tourists and devotees. The idol of the Goddess is carried in a Palki (a small carriage lifted and carried by men) and a huge procession is carried out around the town. The temple looks beautiful in the night when it is completely illuminated during the festival.**’



“overview of shoolini fair in thodo ground at Solan”

1.3 : Potential risks to participants and spectators:

- (i) Injuries on occurrence of stampede.
- (ii) Mass illness on spread of epidemic on use of edible and drinking water by the visitors/pilgrims.
- (iii) Fire.
- (iv) LPG Cylinder blast.
- (v) Bomb blast/tear gas.
- (vi) Social group struggle/riots
- (vii) Security needs; and the emergency support required to help promote a safe and enjoyable event.

Normally, such events take place with little or no problems. However, the emergency can be natural or man-made. But, the district administration and its allied agencies including police, health, fire, home guards, PWD/IPH, municipal council are legally and morally obligated to ensure that necessary and appropriate actions will be taken to minimize the harm to public. As such every effort to ensure the safety of public at large is the main objective behind this Contingency Plan.

1.4 : Emergency Response Agencies :

It is the responsibility of following local agencies to ensure that the necessary resources and personnel are available to help and make the fair a successful one.

- (i) District administration with its staff for guiding visitors and guests for their stay and various other duties for receiving VVIPs/VIPs, Artists, sportsmen etc. Setting up of Mela Control Room.
- (ii) Superintendent of Police with District Police and special police force for successful organizing/completion of fair alongwith protection and security of people/pilgrims. Besides this the SP Solan will also keep vigil on the blast of cylinders being used by the confectioners/sweet owners alongwith the anti social elements who can use the festival for their own motive. The Police will also keep special check on drunken people so that they can not create any law and order problem during the fair. A special group of sniffer dogs and bomb diffusion experts may also be kept ready. He will also keep special check on rumors in the town during the fair and also issue alert to the police authorities in different places of the district and should direct all the barriers of this district to be vigilant and keep special check on anti social elements at least before one month. Setting up of Police assistance, control room and arrangement of necessary rescue operation equipments in mela sight to meet any eventuality. Besides, they will also make necessary arrangements for traffic control, barriers, ceremonial, anti-sabotage, QRT, bomb-disposal squad and reserve police force to meet any adverse situation.
- (iii) The Sub-Divisional Magistrate, Solan will co-ordinate with all the departments and ensure the successful completion of fair. He will also issue necessary alerts/warnings after consulting the Deputy Commissioner/Superintendent of police, Solan, if required or the situation warrants. As per past practice whole of the area will be divided into various sectors for monitoring under overall supervision of concerned Sector Magistrate (SDM/Tehsildar/ Naib-Tehsildar etc.) who will ensure the law and order position in their sector.
- (iv) The Chief Medical Officer Solan, Medical Superintendent (RH) Solan and Health Department official by constituting special health teams alongwith adequate number of ambulances, special duty officials to meet any eventuality **on-site and off-site**. Adequate number of beds be kept for meeting any situation during the fair. Setting up of Medical assistance & Control Room.
- (v) Chairman, Councilors, Chief Executive Officer (MC) Solan and its staff, vehicles for supply of clean and purified drinking water and adequate sweepers for cleaning the municipal council area, paths, drains and city roads etc.
- (vi) District Information and public Relations Officer, Solan alongwith staff & equipments for transmitting giving actual informations to media and publicizing in the town to avoid any rumour.
- (vii) Executive Engineer, I&PH Solan and his staff for providing clean and purified drinking water and will be ready with his staff, material and machinery for meeting any eventuality.
- (viii) Executive Engineer, HPPWD(B&R/NH) Solan will be ready with his staff, material and machinery for clearing roads and meeting any eventuality.

- (ix) Commanding Officer, Home Guards & Civil Defense and Fire Officer Solan alongwith adequate filled fire tenders with adequate water and hydrants and other rescue operation material like ladders, stretchers, search lights etc.
- (x) All Dharamshalas, Community Centers, Colleges & Schools etc.

1.5 : Duties and Responsibilities of various Department/organizations :

(For more details regarding duties & responsibilities of various departments please refer to Chapter 8 Para 8.7 of the DDMP).

- (i) Event Organizer : District Administration.
- (ii) Law & Order : Administration & Police.
- (iii) Emergency Medical On-site Facility : Medical superintendent, RH Solan.
- (iv) Emergency Medical Services (EMS) Plan : By CMO Solan with all nearby hospitals.
- (v) Cleanliness : MC Solan/PWD Authorities.
- (vi) Clean Water : MC and XEN (IPH) Solan.
- (vii) Transmitting information : DPRO Solan.
- (viii) Security Check : District Police with special squad will make arrangements for special checking of visitors at various places and special surveillance teams will be constituted for vigilance.
- (ix). Arrangement for the stay of artists, Sportsmen and dignitaries. : Dy. Director of Tourism, Solan and staff from DC Office Solan & other departments.
- (ix) Setting up of control rooms : By district administration, police and health departments.

1.6 : Components of the Plan :

(i) Incident Command :

If any calamity as enlisted above is occurred the Sub-Divisional Magistrate, Solan being “Mela Officer” will be the incident commander and see all the activities regarding law and order, medical facilities (on-site & off-site), evacuation, restoration, rehabilitation and relief process. All concerned officers of revenue, administration, police, health, pwd, iph, mc fire etc. will help him for completing the process.

(ii) Responsibilities :

The Sub-Divisional Magistrate, Solan being “Mela Officer” will assign necessary duties to all the departmental officers/officials immediately and will keep vigil on the whole situation. It is be the responsibility of all the departmental officer to present on the spot voluntarily or keep contact with SDM Solan. Medical Superintendent, RH Solan will ensure immediate medical assistance to all the victims and shifting of all the victims from incident place to Hospital or nearby Hospital/Private Hospital, if the number of victims is higher, as the case may be. The Tehsildar Solan and SHO Solan will prepare the list of victims with their address and the name of Hospital where they are getting medical aid. It will be the first and foremost duty of Local Police to seal the incident place/area, so that no one can get undue benefit or misuse the situation. The Fire Officer, Solan will ready with all manpower, material and equipments for meeting any fire incidents or other eventuality.

(iii) Emergency identification, evaluation and classification;

Mazor triggering events are injuries on occurrence of Stampede or fight among rival groups, mass illness on spread of epidemic or use of edible and drinking water by the visitors and security needs to help promote a safe and enjoyable event. The DSP Solan will ensure to avoid any stampede, fight against groups alongwith plan for proper entry/exit of visitors and deployment of police personnels at various places in the city. Besides, the MC/IPH will ensure the supply of clean drinking water to avoid any epidemic. The CMO Solan and Medical superintendent will ensure the check upon sweet shops and other eatables so that no epidemic is spread in the city. The SDM Solan will also explore and evaluate the possible eventualities and also take suitable action before the fair/festivals and apply all safety measures & precautions during fair. He will also determine the appropriate course of action, the emergency or triggering event should be classified according to its urgency.

(iv) Preventive Action :

The pre-planned and immediate emergency action is necessary which are aimed at preventing and minimizing serious emergencies that could cause loss of life or property. Therefore, regular routine meeting with all concerned officers/officials and stakeholders are necessary before the fair, evaluation of on-site and off-site medical facilities, assessment of security and resources e.g., equipment, personnel, and materials, to reduce the impact of an emergency incident. The Superintendent of Police, Solan will arrange additional police force/personnels from his sources for the safety and security of the pilgrims and people visiting the city during shoolini fair and deploy them at all the sensitive places.

(v) Other arrangements :

Proper planning and adequate arrangements of manpower, material and machineries is necessary for the successful implementation of the festival. Therefore, the District Administration will ensure adequate number of officials and other special magistrates in various locations of the city. The police authorities will also arrange necessary manpower/police personnels well in time and will make a secret plan for their deployment including special squads in civil dress day & night to arrange necessary informations and fir the safety of people. Besides, they will also make necessary arrangements for traffic control, barriers, ceremonial, anti-sabotage, QRT, bomb-disposal squad and reserve police force to meet any adverse situation. The MC authorities will ensure adequate manpower for the cleanliness of town. The Fire authorities will arrange adequate number of fire tenders and also request the adjacent fire offices to keep their vehicle and manpower ready for meeting any exigency on a single call.

(vi) Duty officials of District Administration and Police :

As per information received from the District Administration, Police & Health departments following duty officers/officials are deolployed during shoolini mela in thodo ground for specieifed purpose :

District Administration :

- | | |
|--|--|
| 1. Mela Officer | : 1 (SDM) |
| 2. Sector Magistrates | : 10 (SDMs/Tehsildars/Naib-Tehsildars) |
| 3. Officials with VVIPs | : 1 Officer (AC to DC) and 5 officials. |
| 4. Arrangement of boarding & lodging | : 1 Officer (DRO) and 5 officials. |
| 5. Officers for the welcome of artists | : 1 officer (PO DRDA) with 5 officials |
| 6. Officials with Palki | : 1 Officer (TO-cum-Tehsildars) 5 officials. |
| 7. Control Room Duty | : 24 hours in rotation for three days
(Atleast 4 officials in day/night). |
| 8. Officials at various places | : 50 officials. |

Police Administration :

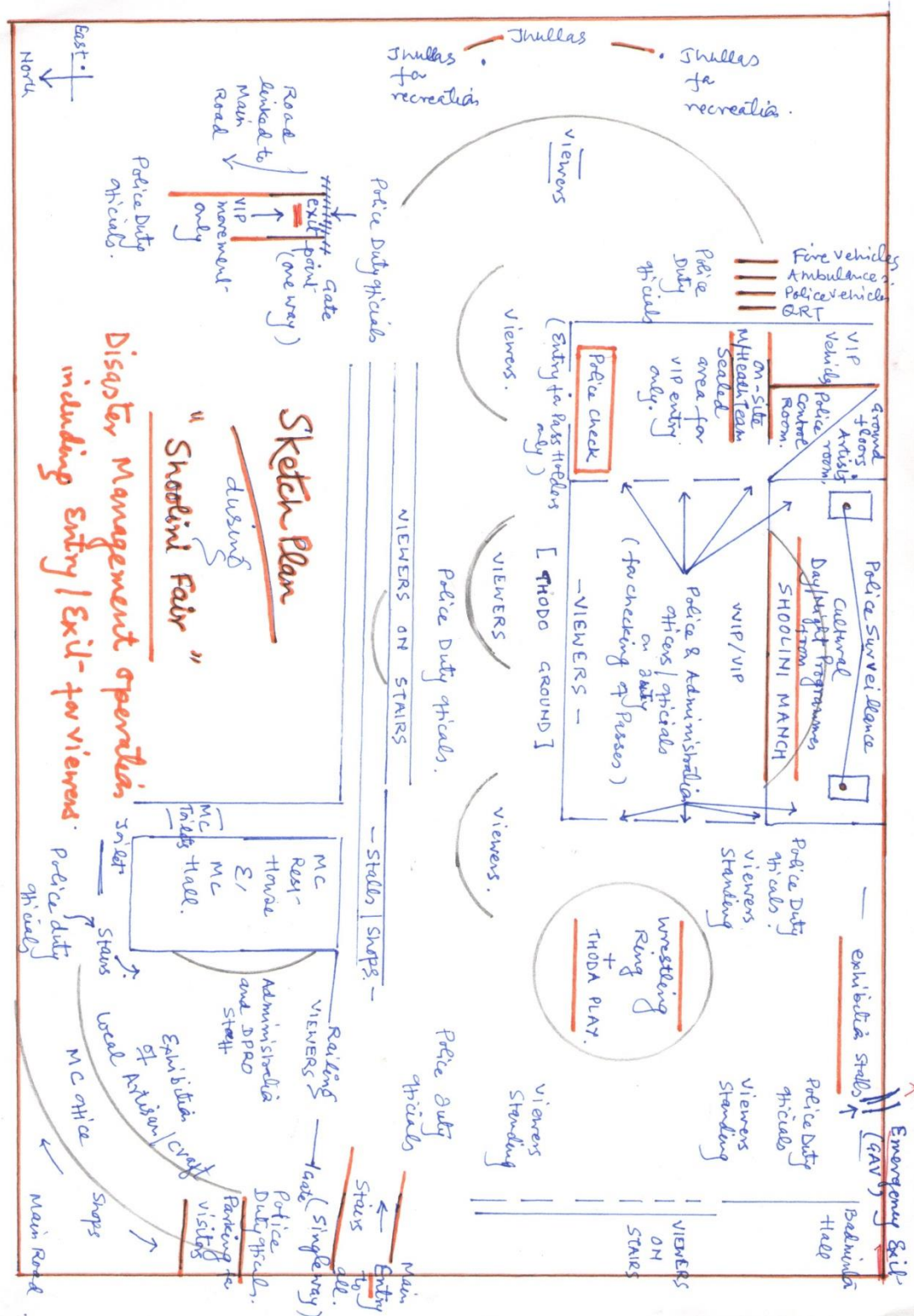
- | | |
|----------------------|--|
| 1. Law & Order | : 3 GOs, 23 NGO, 19 HC, 72 Const, 35 LCs, 29 HHGs. |
| 2. Traffic Duty | : 4 NGO, 18 HC, 58 Const, 60 HHGs. |
| 3. Mobile patrolling | : 4 HCs and 4 Cons. |

Health Administration :

- | | |
|-----------------|--|
| 1. Control Room | : 1 MO, 1 pharmacist, 2 nurses & 2 class IV. |
| 2. Ambulance | : 2 numbers. |

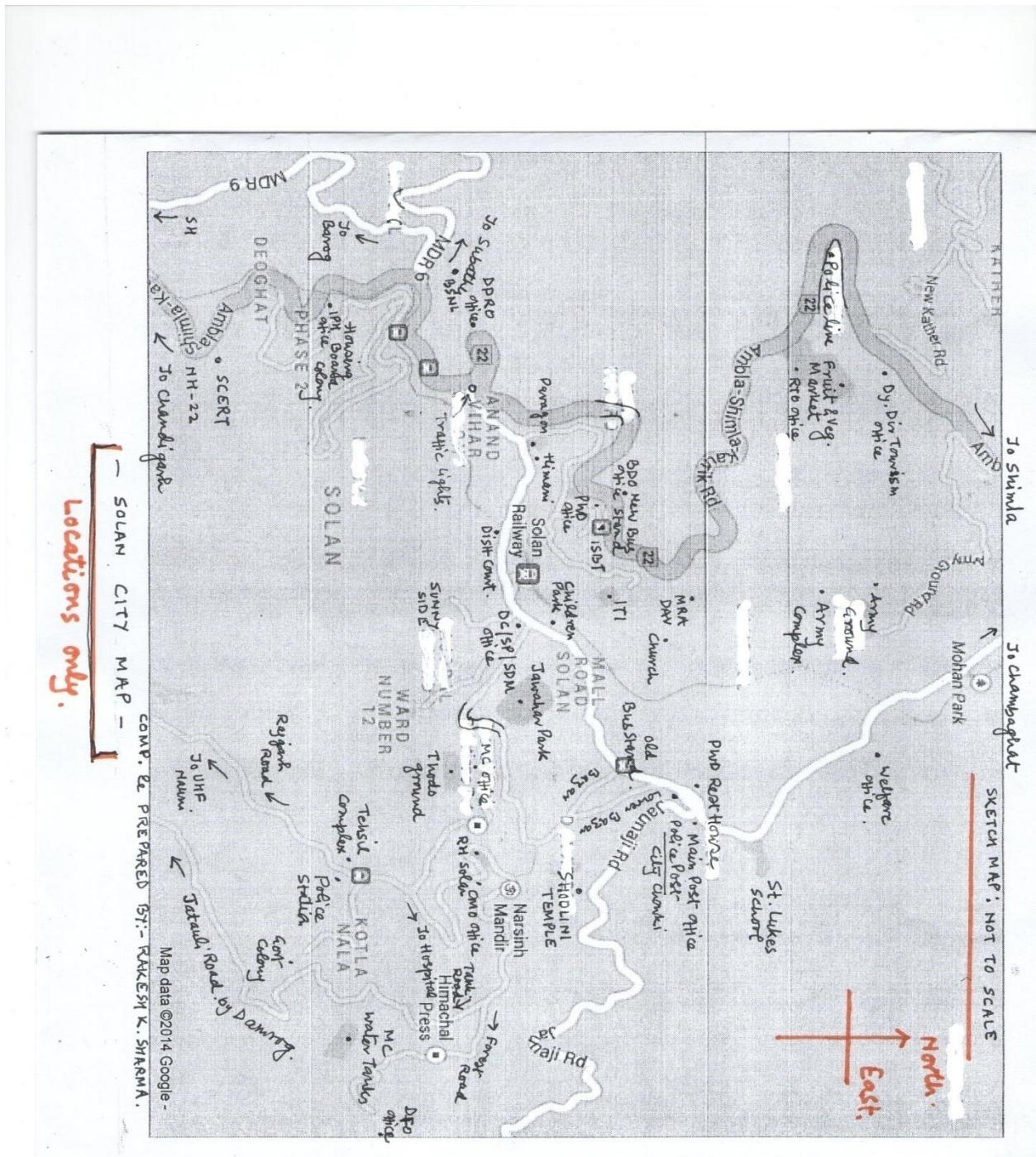
APPENDIX-A

"Shoolini Fair at Thodo Ground, Solan."



APPENDIX-B

“Solan Town various locations.”



District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).**APPENDIX-C****Important Telephone/mobile numbers of Various Departments :****1. District Administration :**

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
Sh.Madan Chauhan, IAS, Deputy Commissioner, Solan	01792-220656	01792-220555	01792-220086 & 223704.	94182-00013
Sh.C.P.Verma, HAS ADM Solan	01792-223705	01792-220076	-do-	94184-92888
Subhash Saklani, HAS, AC to DC Solan.	01792-223706	01792-220610	-do-	94181-64050
Sh.Manoj Kumar Chauhan, HAS, AC to DC (Protocol) Parwanoo	01792- 233165	01792- 233165	-do-	94183-44337
Sh.Narender Chauhan, District Revenue Officer, Solan.	01792-224033	--	-do-	94598-78383
Sh.Bimla Devi, Tehsildar (Recovery) Solan.	01792-223702	--	01792-223704	--

2. SDMs :

Sr. No.	District	Name of Sub-Division	Name of SDM	Office Phone number	Mobile number
5.	Solan	Solan	Sh.Tashi Sandup, HAS	01792-223707	94182-48336
6.	Solan	Nalagarh	Sh.Lalit Jain, IAS	01795-223024	8627913120
7.	Solan	Arki	Sh.L.R.Verma, HAS.	01796-220666	94180-63777
8.	Solan	Kandaghat	Sh. Surender Mohan Sani, HAS	01792-256100	94183-41989

3. Tehsildars and Naib-Tehsildars :

Sr. No.	District	Name of Sub-Division	Name of Tehsil or Sub-Tehsil	Name of Tehsildar and Naib-Tehsildar	Office phone number	Mobile number
16.	Solan	Solan	Solan	Sh.Kavita Thakur, Tehsildar Solan	01792-223708	94184-51110
17.	Solan	Solan	Solan	Sh.Rajinder Zinta	01792-223708	94184-77855
18.	Solan	Solan	Kasauli	Sh.Baldev Sharma, Tehsildar Kasauli.	01792-272037	94180-41545

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

19.	Solan	Solan	Kasauli	Sh.Malkiyat Singh Guleria	01792-272037	98166-21201
20.	Solan	Solan	Krishangarh	Sh.Govind Singh Bali Naib-Tehsildar Krishangarh	01792-284556	98165-81585
21.	Solan	Nalagarh	Nalagarh	Sh.K.S.Lalta, Tehsildar Nalagarh	01795-223044	98163-21954
22.	Solan	Nalagarh	Nalagarh	Sh.T.L.Negi, Naib-Tehsildar, Nalagarh.	01795-223044	98051-87617
23.	Solan	Nalagarh	Ramshahar	Sh.T.L.Negi, Naib-Tehsildar, Nalagarh (officiating)	01795-258533	-do-
24.	Solan	Kandaghat	Kandaghat	Sh.Prem Singh Dulta, Tehsildar Kandaghat	01792-256143	94180-76633
25.	Solan	Kandaghat`	Kandaghat	Sh.Yogender Sain, Naib-Tehsildar Kandaghat	01792-256143	89881-96088
26.	Solan	Arki	Arki	Sh.Girish Saklani, Tehsildar Arki	01796-220888	94180-16600
27.	Solan	Arki	Arki	vacant, Naib-Tehsildar Arki	01796-220888	--
28.	Solan	Nalagarh	Baddi	Sh.Keshav Ram, Tehsildar Baddi.	01795-244620	94181-63780
29.	Solan	Arki	Darlaghat	Sh.Joginder Samba NT Darlaghat.	01796-248101	94188-13299
30.	Solan	Kandaghat`	Mamlig	Sh.Yogender Sain, Naib-Tehsildar Kandaghat (officiating)	--	89881-96088

4. Police Administration :

Sr. No.	Designation of the officer with department.	Office and Residence Phone number alongwith fax number.		
		Office Phone	Residence Phone	Fax No.
1	2	3	4	5
1.	Superintendent of Police, Solan	01792-220567	01792-220568	01792-223576
2.	Addl. Superintendent of Police, Solan	01792-223927	01792-223928	01792-223576
3.	Deputy Superintendent of Police, Solan	01792-223929	01792-223842	01792-223576
4.	SHO Solan	01792-223840	--	--
5.	Police Line Solan	01792-223837		

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

5. Other important departments in Solan Town :

Sr. No.	Designation of the officer with department.	Office and Residence Phone number alongwith fax number.		
		Office Phone	Residence Phone	Fax No.
1	2	3	4	5
1.	Superintending Engineer, HPPWD, 3 rd Circle Solan	01792-220675	01792-220676	01792-223802
2.	Superintending Engineer, HPSEBL Solan.	01792-221481	01792-221557	
3.	RTO Solan	01792-231308		
4.	Deputy Director of Tourism, Solan	01792-		
5.	Registrar, UHF nauni	01792-252219	01792-252365	
6.	Chief Medical Officer, Solan	01792-224181	01792-220532	01792-224151
7.	XEN, HPPWD, B&R Solan.	01792-223811	01792-223720	01792-223811
8.	XEN, HPPWD (NH) Solan	01792-223804	01792-223313	01792-223804
9.	XEN, I&PH Solan	01792-223808	01792-228008	01792-223808
10.	DFO Solan	01792-223751	01792-223796	01792-223751
11.	DPRO Solan	01792-220089	01792-220089	01792-220089
12.	PO, DRDA Solan.	01792-223915	-	01792-220086
13.	DIO(NIC) Solan	01792-224169	01792-220794	01792-220086
14.	Commandant, IVth GTC Subathu.	01792-275044 01792-275045	01792-275044	01792-275044
15.	Commandant, Army Regiment Solan.	01792-223799	-	-
16.	Commandant, Army Wing Dagshai	01792-266123	-	-
17.	Commandant, Home Guards, Solan	01792-223845	01792-222326	
18.	Chief Executive Officer, Dagshai Catonement.	01792-266152	--	01792-266153
19.	Chief Executive Officer, Subathu Catonement.	01792-275025	--	01792-275425
20.	Deputy Director (Agriculture) Solan	01792-230734	01792-230735	01792-231235
21.	Deputy Director (Horticulture) Solan	01792-230741	01792-222403	01792-230741
22.	Assistant Director (Animal Husbandry) Solan	01792-223593	01792-224197	01792-223593
23.	Deputy Director of Education (Secondary) Solan	01792-230825	01792-224025	-
24.	Deputy Director of Education (Primary) Solan	01792-230440	01792-220014	-
25.	BDO Solan.	01792-223871	01792-223871	01792-223871
26.	DFSC Solan.	01792-224114	-	-
27.	Fire Officer, Solan.	01792-223888	01792-223794	-

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

28.	Regional Manager, HRTC, Solan	01792-230219	--	01792-230219
29.	Station House Master, Indian Railway, Solan.	01792-220674	-	-
30.	DGM, BSNL Solan.	01792-220100	01792-	-
31.	Executive Officer, MC Solan.	01792-223532	01792-	-
32.	District Panchayat Officer, Solan	01792-223756	01792-	01792-223756
33.	District Programme Officer, ICDS, Solan	01792-221934	--	--
34.	District Welfare Officer, Solan	01792-223742	--	--
35.	Town & Country Planner, Solan.	01792-228485	01792-220359	-
36.	CO, NCC (Boys) Solan.	01792-223774	01792-224523	-
37.	CO, NCC (Girls) Solan	01792-220459	01792-223698	-
38.	Deputy Director of Sainik Welfare, Solan	01792-223764	--	--
39.	RM HRTC Solan	01792-230219	--	--
40.	Secretary Market Committee, Solan	01792-230458		
41.	SDO, PWD Solan	01792-223805	--	--
42.	SDO (Electricity) Solan-I SDO (Electricity) Solan-II	01792-223414 01792-221236	--	--
43.	Medical superintendent, District Hospital Solan	01792-223638		
44.	Director, National Council of Mushroom Research & Training	01792-230767		

6. Rest Houses Solan Town :

SrNo.	HPPWD Division	Name of locations	Detail of Accommodation available.	Contact number.
1.	Solan	Rest House & Circuit House at Solan	--	01792-223811
		Rest House Kandaghat	--	01792-223811
		Rest House Chail	--	01792-223811

Source : XENs, PWD District Solan.

7. Forest Rest Houses/Huts being managed by the Forest Department :

SrNo.	Forest Division	Name of locations	Contact number.
1.	Solan	Forest Rest House at Kumarhati	01792- 223751
2.	Mid Himalayan Water Shed Development Project, Solan	Rest House at Solan	01792-223043

APPENDIX-D

EMERGENCY TELEPHONE NUMBERS OF SOLAN DISTRICT:-

Sr. No.	Department	Emergency Telephone number						
		Toll free numbers at Solan	Solan	Nalagarh	Arki	Kandaghat	Baddi	Parwanoo
	STD CODES	--	01792	01795	01796	01792	01795	01792
1.	Police Assistance	100	223841	223045	220710	256229	246800	233124
2.	Hospital/ Ambulance	102 & 108	223638	108 & 221204	108 & 220368	108 & 256137	108 &	108 & 234534
3.	Fire	101	223888	223294	Solan 223888	Solan 223888	245352	232233
4.	District Administration	1077	223702	223024	220666	256100	244620	233165
5.	Bus stand	--	226040	223076	220004	--	94184-55483	--
6.	Rest/Circuit house	--	223601	222199	220714	223811	222199	272067
7.	Electricity Complaint	--	223631	223039	220745	256128	01795-244111	233104
8.	Water complaint	--	223657	223083	220872	256282	245183	232359
9.	Railway Station	131	220674	No connectivity	No connectivity	256224	No connectivity	232625



Let's

Together makes

" SOLAN TOWN "

a safer place to

live.....

CHAPTER-6**RESPONSE PLAN****6.1 : Response Plan :**

The Disaster Response Plan represents an important component of the Disaster Management. Which provides some basic information on responding during disasters, its purpose is broader in scope and intent. Believing that it is always better to prevent a disaster than to recover from one, the Manual contains a "Safety and Security Audit" which is designed to help collections avoid situations that could lead to disasters. However, even with the best of precautions, disasters do occur, and the intent of this Disaster Recovery Plan is to aid in responding quickly and effectively to minimize the damage and speed recovery. The Disaster Plan is organized to move from first response through the steps involved in recovering from a minor disaster, followed by steps to be taken in the event of a major disaster.

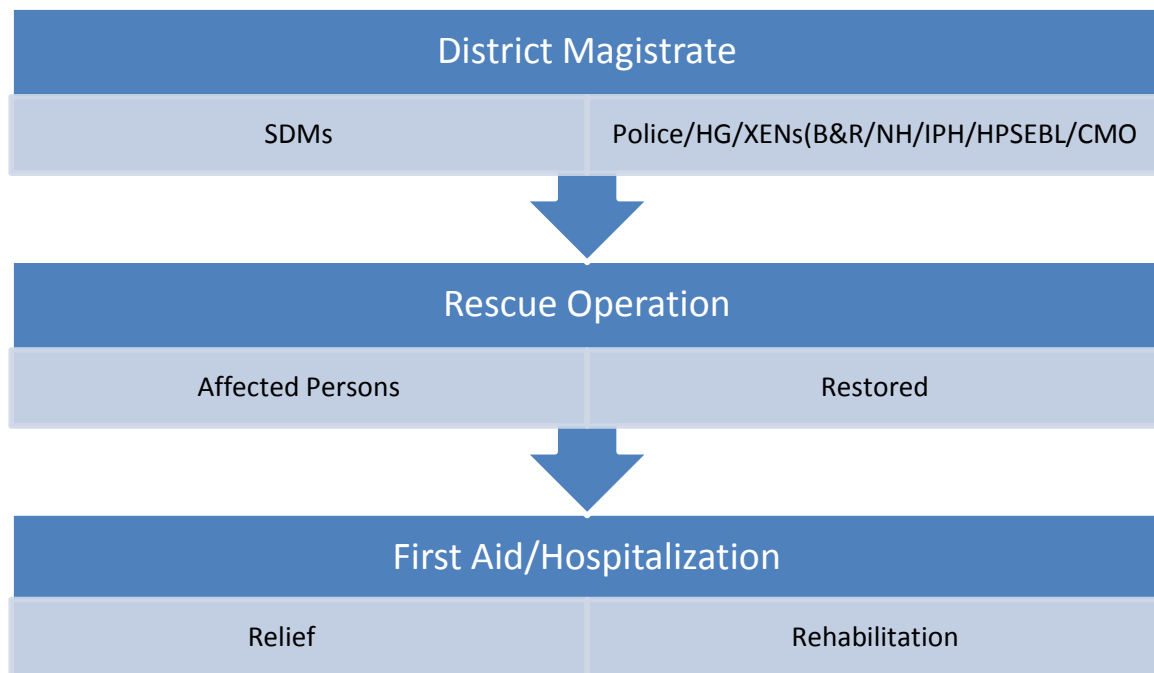
<u>Response Functions :</u> ➤ Search & Rescue ➤ Relief Supplies (Lifeline)	<u>Human Needs Functions :</u> ➤ Food ➤ Drinking Water ➤ Shelter ➤ Cash Relief
<u>Services & Support Functions :</u> ➤ Public health & Sanitation ➤ Power ➤ Transport ➤ Public Works & Engineering	<u>Recovery Functions :</u> ➤ Helplines
<u>Communications Functions :</u> ➤ Communication ➤ Media	<u>Information & Planning Functions :</u> ➤ Information & Planning

6.2 (i) : Response Plan when the warnings/alerts are issued :

Normally, in case when the warning or alerts are issued on heavy rains/snow etc., the main field agencies, like Police, Revenue, PWD (B&R/NH), IPH & Health are directed to careful, vigilant and alert. They are also directed to take necessary precautionary measures in advance and take suitable steps, if any disaster occurs. Set up Control Room for the information of general public and report the details of loss to District Office, for onward transmission to Govt. They are also directed to take up relief and rehabilitation measures immediately.

District Magistrate :

(a) SPs (b) SDMs (C) XENs (B&R/NH/IPH/HPSEBL) (d) CMO



6.2 (ii) Response Plan for sudden incidents :

In case, whenever any sudden incident like road accidents, cloud bursts etc. The DM/SDM/EM, as the case may be, direct the Police, Fire/Home Guards, Revenue & Health functionaries to rush to the spot immediately and start the rescue operation without loss of time, which is monitored by DM/SDM/EM till the operation is over. The Control Rooms are also operationalized, if required.

6.2 : Objective of Response :

Prevent loss of life and property through Preparedness, Prevention and Mitigation.

6.2.1 : Priorities for Action

1. Ensure that disaster risk reduction is a national and a local priority with a strong Institutional basis for implementation.
2. Identify, assess, and monitor disaster risks and enhance early warning.
3. Use knowledge, innovation, and education to build a culture of safety and resilience at all levels.
4. Reduce the underlying risk factors
5. Strengthen disaster preparedness for effective response at all levels.
6. Involve community in being prepared, in preventing and mitigating disasters.

6.2.2 : When Disaster Strikes

- ✚ Activation of DCR (Emergency Operation centre).
- ✚ Assimilate information according to the need of the situation.

- + Collate information regarding approach, alternate routes, water sources, layout of essential services which may be affected, etc.
- + Prepare disaster site map with indications of the extent to which other areas may be affected, etc.
- + Evacuation and Rescue.

6.2.3 : Assess search and rescue requirements :

- + Assign well defined areas of operation.
- + Assign specific response functions to service divisions.
- + Coordinate PRI/NGO activity to ensure community participation.
- + Direct, supervise and provide assistance wherever necessary for relief camps, cattle camps, relief supplies to relief camps or Site Operations Centre.
- + Law and order
- + Set up coordination groups representing different groups.

6.2.4 : Planning Support

- + Communication
- + Disposal of dead animals

6.2.5 : Relief

- + Financial-Manage disbursement of relief funds
- + Food, Water, shelter
- + Sanitation

6.2.6 : Health

- + Coordinate with adjoining districts for supply of Ambulances, access to hospitals for Blood.
- + Medical relief
- + Medical equipment and medicines
- + Ensure Supervision of maintenance of standards in Communities regarding storage of rations, sanitation, water supply, disposal of waste.
- + Transit and relief camps with cooking arrangements, sanitation, water supply, disposal of waste and health services

6.2.7 : Monitor

- + Emergency supply of water and cooked food.
- + First Aid and Post First Aid Medical attention.
- + Identification and disposal of dead.
- + Salvage operations.
- + Security.
- + Transportation.
- + Transit camps.

- ✚ Disposal of death.
- ✚ Disposal of carcasses.
- ✚ Preventive medicine and anti-epidemic precautions.
- ✚ Supply food, water supplies, maintenance of sanitation and disposal of waste
- ✚ Services of investigation laboratories.
- ✚ Treatment of injured and sick.
- ✚ Organize mobile medical teams of specialists for immediate response.
- ✚ Implement procurement/hire/requisition of materials
- ✚ Direct supplies being provided by NGOs/VOs/ other organizations including private donors
- ✚ Ensuring receipt, safe storage and transport of supplies and materials
- ✚ Ensure proper maintenance of vehicles and equipment
- ✚ Respond to reinforcement needs including manpower deployment

6.2.8 : Establish communication links with

- ✚ All state departments
- ✚ Central govt. departments such as defense services, airport authorities, metrological, seismological, remote sensing.
- ✚ State level disaster management committee
- ✚ Information Management

- ✚ Monitor disaster warnings and weather condition
- ✚ Set up media centre to share information with radio, television and print media and community

6.2.9 : Reporting

- ✚ Assimilate preliminary information report received from field
- ✚ Identify specific items for follow-up
- ✚ Report to the chief secretary/SLDMC on deployment of reinforcements of staff and resources
- ✚ Infrastructure Restoration
- ✚ Coordinate with departments for restoration of facilities like roads, power, water, telephones, public buildings, bridges, etc

6.2.10 : Coordinate with departments for construction of facilities like

- ✚ Educational facilities
- ✚ Helipads
- ✚ Medical facilities
- ✚ Postal facilities
- ✚ Provision of hand-pumps
- ✚ Shelters with sanitation facilities
- ✚ Temporary structures of storage

6.2.11 : General

-  Adopt legal and official procedures in relief and compensation dispensation
-  Maintenance of records and accounts

6.3 : Incident Control System :

- (a) Control Centre** : It will activate and control the incident.
- (b) Harbor** : Area where Disaster Management Teams will be stationed before they move for operation. Where they will be briefed before moving & after the incident.
- (C) Staging Area** : Area where Disaster Management Teams are to stop regroup because of obstruction or operational requirement before reaching assembly area.
- (d) Assembly area** : An area near the incident place where the team will assemble for operational briefing by local official and where they will establish their liaison for carrying out their duties.
- (e) EOC/Incident Control Officer:** He will be responsible for Co-ordination of operation at the incident, if damages are large, staff will be provided to operate additional emergency operation centre.
- (f) Helipad (optional)** : if required helipad will be activated provide specific requirement of DMTs evacuation and relief.
- (g) Evacuation camp** : If required to evacuate people from an area evacuation camp will be established till people can safely return to their homes.

6.4 : Commutation Structure :

Co-ordinators of concerned department will ensure to communicate the detailed information related to any incident to the Chairman of DMC before briefing to MEDIA and the communication network of DDMP as elaborated below will be kept functional at all times and if damaged, then be made operational at all cost. At least 10 foot messengers and 15 riders on two wheelers should be available for worst case services.

6.4 (a) Line Communication:

Landline, wireless in local loop telegraph and mobile communication network for DDMP will be as follow, messages can be sent through following means of communication to Incident Control Room Officer, who will further send the communication to concerned Naib-Tehsildar, Tehsildar or SDM and the SDM concerned to Deputy Commissioner:

- T**-Land line Telephone.
- T**-Telegraph/telex.
- M**-Mobile telephone.
- W**-Wireless in local loop Telephone.

Note:- Mobile telephone and wireless in local loop telephone will be private telephones to be utilized for DDMP during rehearsals and during disaster.

Incident Control Officer.

Tehsil Control Room/Centre

Sub Division Control Room/Centre

Deputy Commissioner Office Control Room/Centre

6.4 (b) Radio Communication:

The present radio network will be utilized alongwith the existing police wireless network till separate network for DDMP is established. Police authority will keep frequencies reserved for 3 nets for DDMA control room and keep reserve of radios given below :

- 1. District Control Centre(1 Nos).**
- 2. Sub Division Control Centre (4 Nos)**
- 3. Tehsil Control Room (6 Nos)**
- 4. Sub-Tehsil Control Room (3 Nos).**

Note:- Wireless/Radio network of forest department is also available as reserve however, equipment requires/up gradation.

6.4 (C) Satellite : Internet Communication WAN,LAN,GPS:-

(1). Satellite Phone :

(i) Control Centre : To Communicate with outside agencies.

(ii) District Incident Control Officer : To give first hand information of incident of large scale when any other communication is not available.

Status: Sets yet to be procured.

(2). Internet Communication: Internet facility is being provided by NIC at present which will provide connectivity to control Rooms at Sub Division control centre.

Status: Sub Divisions are covered with BSNL service.

(3). Wide Area Network (WAN)

Partially operational for State headquarter and District Headquarter can be connected to neighboring States by NIC.

Status: - WAN not yet formerly setup in the H.P.State.

(4). Local Area Network (LAN)

Operational at District Headquarter.

Status: - Duly main departments or connected departments in periphery of NIC are yet to be connected.

(5). Ground positioning System (GPS)

For search & rescue teams, incident Control Officer to pin point location.

Status: - Set are yet to be procured.

6.6 : Action at District / Sub Divisional Control Centre and their Operation :

6.5.1 : General :

The Chairman District Disaster Management Authority and its members may control and co-ordinate the rescue & relief operation (action) during major disaster and come to on a quick decisions for the proper deployment of Disaster Management Teams concerned there will be a headquarter where

- (a) They can meet and decide on the action to be taken and where they can be found for consultation with others.
- (b) They have a speedy access to all essential information effecting the situation on.
- (c) There are measures of communicating orders and information to all concerned.
- (d) An alternate is available if main Headquarter is disrupted.

\$ This headquarter will be known as Control Centre of the District.

6.5.2 : Essentials of Control Centre:

- (a) At any time of the day or night for as long as the situation may necessitate receiving and dealing with reports of damage or other message
- (b) A picture of the situation in the area must be maintained as a Map record. Which can give where alerts of DMTs and their availabilities.
- (c) Provision must be made for information which might affect the operations of any service (i.e. road blocks) to be ready by available and notified to all concerned as a routine.
- (d) Circles control group shall take decision regarding deployment of local or in case of out side resources so that they are best employed and also on the order of priority. An agreed decision should be arrived at by the group in case if difference of opinion reference should be made to the Chairman DDMA whose decision will be final.
- (e) Arrangement must be made for the preparation and dispatch of reports (situation reports) required by the higher authorities.

6.5.3 : Layout of Control/Sub Control room:

Control / sub control centre will be located in the ground floor of District Secretariat building room. It will be equipped to function 24 hours by three shifts of staff with

canteen and retiring rooms for staff.

- (i) **Map room:** District Sub-Division large scale Map will be displayed and information plotted on the map with ready reference. The disaster control group /DC/SDM and head of essential rescue will also sit in the room.
- (ii) **Message room:** In this room only receipt and transmission of messages will be dealt for “In” and “out” messages by telephone and wireless operator and message supervisor in the room.
- (iii) **General Media Room:** A room for Media personal for briefing to be name by media co-ordination.

6.5.4 : Staff and equipments:

Following equipments are required for control/Sub-Control Centers for staff requirement of Control/sub Control Centers :

- (i) Time piece, normal office furniture, stationery, cup-board and canteen/rest room furniture.
- (ii) Very large scale map of the town mounted on material through which pins may be easily inserted.
- (iii) Maps showing the layout of different Essential Services for the representative of each service.
- (iv) Damage indicators—Pins with different colored heads to denote type of incident on the map.
 - (a) Incident pins (one and half inches long) different colored heads.
 - Navy blue.....to represent H.E.
 - Red.....to represent fire still burning.
 - Blue with white spot.....to represent UXB
 - Silver white.....to represent crashed air-craft.
 - (b) Two sets of incident tabs, serially numbered small discs.
 - (c) Road block pins, with heads, differently shaped from incident pins.
 - (d) Road closed pins, With black and white heads.
- (v) Personal equipment—one steel Helmet per head.
- (vi) Tally Board---About 5 ft.x_ 8 ft.fixed with small pegs to hold tallies and discs, denoting units of various Services by different colors as given below. Size of tally is 1”x_1_” with a hole at top and disc Is of 1” diameter with a hole. The color code is as given below:-

Rescue parties	:	Blue
F.A. Parties	:	White with light green bar
Mobile F.A.Post	:	White with green bar
Ambulance	:	White with light red bar

Incident Officers : Light blue with white bar
Reconnaissance Parties : Deep gray with white bar
Fire Services : Red
Police Services : Brown
Bomb disposal squads : Blue with red bar
Repair parties of: : Light grey with letter
essential services representing each Service.
(G-----Gas Mains) (WA----Water Mains) (Rd-----Road etc.)

(vii) Telephones.

(viii) Printed message forms and other registers.

6.5.5. : Communication :

- (a) Satellite phone : One.
- (b) Satellite Unit : NIL, Internet link voice and data.
- (c) Line connection : 2 Lines for IN & Out messages.
- (d) Radio Communication --- VHF set to link with Police wireless control room
(separate frequency for disaster management)

6.6. : Duties of staff :

6.6. (a) District Magistrate / Sub Divisional Magistrate:

District Magistrate being Chairperson District Disaster Management Authority will exercise general control of Sub-Divisional Management Planning and operation in the district. He is responsible for the mutual support between various Sub Division Control Centre or from neighboring areas. He will keeps the higher authorities informed of the situation in the District.

6.6. (b) Members DDMA :

They exercise general control supervision and co-ordination over the services under them and will consult each other but do not interfere in the activities of the others. They or their representatives are always available in the control room.

6.6. (c) Representatives of essential services:

The representatives of essential services not covered above that is :

- (i) Food Civil Supplies.
- (ii) Fire Services.
They are available at the control centre

6.7 : Tasks of various Committee :

It will be responsible for disaster management that is Mitigation, response, rehabilitation of their Panchayat and assist neighboring Panchayats if required. The Committee will conduct at least two mock drills in a year and co-ordinate with their .level committee for resource building. It

will also link its plan with adjoining Panchayats and Tehsil. The Committee and its various sub committees will have to carry out major pre-disaster exercise from the moment of constitution i.e. identification of vulnerable areas and population, identification of persons, resources etc. who will be mobilized at the time of disaster keeping equipment in operational readiness during the time i.e. monsoon or accidents etc..

6.7.1 . Pardhan/Chairman (Municipality/Nagar Panchayat/Panchayat) as Co-Ordinator :

He will be the Head of the Disaster Management Committee and will be responsible for all purposes for the Co-ordination Committees mentioned above and the local committee will function under his overall charge and direction. Besides, he will also make Co-ordination with Tehsil level Committee and neighboring Panchayats. The local Police will ensure Law and Order within Panchayat till duties are assigned to special task force. In addition to this he will also intimate all the Incident reports to Tehsil/Sub-Division on following format after fully satisfying himself.

6.7.2 : Format incident report:

- (i) Name and designation of reporting person.
- (ii) Panchayat / Tehsil.
- (iii) Date and time /type of incident.
- (iv) Cause of damages.
- (v) Causality/Dead/injured/type of injury.
- (vi) Type of incident.
- (vii) Type of communication.
- (viii) Type of roads.
- (ix) Damage to mains/Water/electricity/sewers.
- (x) Resources available on spot

6.7.3 : Resources required:

Rescue teams, Medical teams, rations, water, and clothing / blankets.

After first incident report the co-ordinator will update it in every four hours till situation is stabilized and will also ensure judicious distribution of relief.

6.7.4 : Up-Pardhan :

He will assist Pardhan in his task and take his duties if Pardhan is incapacitated. He will also be responsible for following tasks :

- (i) To maintain communication link with in the Panchayat by telephone and messengers for each Ward and outside with nearest Panchayat/Tehsil by landline, mobile phone, wireless stations and messengers etc.
- (ii) To attend to public grievances, search of missing Persons and media/information management.
- (iii) To inform / educate Panchayat people regarding disaster.

- (viii) Take assistance of local volunteers like retirees, teachers etc.
- (ix) He will make plan and be responsible for evacuation if required to nearest relief camp.
- (v) He will also liason with outside relief team, receive them and brief and direct them to perform their task.
- (vi) Earmark one open ground for helipad / air drop of relief material.

6.7.5 : Ward member/Co-Ordinator search & rescue team:

He will head of the Search & Rescue teams of the Panchayat and will be responsible for following tasks :

- (i) Constituting 10-12 men team for search & rescue operations within Panchayat and also to assist neighboring Panchayats if required and each ward/village will have one team and the team will be constituted from the following members of village:-
 - (a) Ex-Service man.
 - (b) Ex-Para military/police/home guards/fire department.
 - (C) NSS volunteers, NYK volunteers NCC volunteers and NGO (if any)
- (ii) He will ensure that the following equipment is always available with above teams in operational conditions in the Panchayat Bhawan:-
 - (a) First-aid box : 1 No.
 - (b) Stretcher : 2 Nos.
 - (c) Pick Axe : 4 Nos.
 - (d) Shovel : 4 Nos.
 - (e) Crow bar : 2 Nos.
 - (f) Axe : 1 No.
 - (h) Bucket : 2 Nos.
 - (i) Rope : 4Nos.(10 mtrs. long)
 - (j) Blanket : 20 Nos.
 - (k) Water bottle : 5 Nos
- (iii) He will ensure availability of team volunteers and their training and rehearsals in each quarter

6.7.6 : Co-Ordinator Shelter Management:

The Pradhan of Gram Panchayat or Chairman of Nagar Panchayat/Municipal Council/Municipal Committee will be the Head of the shelter management team. Major tasks like identification and earmarking resources, volunteers, etc will be done immediately after constitution of team. Pre-disaster tasks are as under :

6.7.6 (a) Pre- Disaster Task:

- (i) To constitute a team of volunteers from school Teachers, Mahila Mandal, MC, NP, Panchayat, Technical assistant, PWD, Masons, Carpenter and plumber.

- (ii) To identify structurally strong building for the shelter of displaced persons and set up medical aid post before and after disaster i.e. community hall, school, Mahila Mandal/Nav Yuvak Mandal Bhawan etc.
- (iii) To identify and earmark one open ground for helipad for evacuation of casualties and landing of relief teams and material.
- (iv) To arrange for at least ten plastic sheet/ tarpuline (15'mtrsx 5 mtrs) in case shelter is to be provided in open.
- (v) To identify and arrange for blankets mattresses etc.,for displaced Persons and reflect demand in case of major disaster.
- (vi) To enlist repair team volunteer masons, plumber, electrician, Carpenters, iron, smith etc. to repair essential services buildings, roads, bridges, water, power lines etc.
- (vii) Team should also be alert to any signs of impending disaster i.e. Surge in epidemic. Blocking of river/nallah artificial lakes, Land slides, suspicious persons.

6.7.6 (b) Post-disaster:

- (i) To identify safe building for shelters mark them and mobilize volunteers to receive displaced persons collect and provide mattress, blankets, clothing etc.
- (ii) To mobilize a repair teams to repair essential/vital structures, if repairable.
- (iii) To get unsafe structures evacuated .
- (iv) To erect temporary shelters , if required in earmarked places.
- (v) To mark/activate helipad of evacuation and to receive relief supplies.

6.7.7 : Co-Ordinator food and water management:

One of Secretary of Gram Panchayat or Executive Officer of Nagar Panchayat/Municipal Council/Municipal Committee will be the Head of the food & water management team. Major tasks like identification and earmarking resources, volunteers, etc will be done immediately after constitution of team. Pre-disaster tasks are as under :

6.7.7 (a) Pre- Disaster Task:

He will lead the food and water management team and will be responsible for following tasks :

- (a) He will identify all co-operative Societies, fair price shop owners, kiriyana shops, kerosene depot holders in the Panchayat area from whom ration can be procured . He will also maintain list of contact numbers.
- (b) To ensure that minimum three days water/dry ration reserve are kept in Panchayat area for the residents at all time.
- (c) He will constitute a team of volunteers like Mahila Mandal, Anganbari worker etc. who can provide utensils and volunteer for cooking.
- (d) He will identify building/area closed to temporary shelter for setting up of kitchens and water points. One kitchen alongwith a volunteer group per ward minimum.
- (e) He will identify and earmark volunteer cooks/helper and cooking utensils for running the mess and distribution of food and water.
- (f) Whenever the committee decides to function the mess, it will established the mess and ensure meals and water to affected people.

6.7.7 (b) Post Disaster:

Whenever the committee decides to start the mess for affected people during any disaster it will ensure following tasks :

- (a) It will activate the mess by identifying volunteers.
- (b) It will ensure rations are made available to the mess and ration if required.
- (c) If the mess has to be run for long period the demand of rations be submitted to Tehsil/Sub-Division.
- (d) It will ensure equitable distribution of food to the affected persons.

6.7.8 : Co-Ordinator Water Management:

It will be carried out by the IPH Department in case of Gram Panchayats and by the concerned officials of MC/NP or HIMUDA etc. in case of local urban bodies/HIMUDA and the concerned official will be responsible for following tasks :

6.7.8 (a) Pre-Disaster Task:

- (a) He will ensure that safe potable water is available at all times with help of IPH representative and volunteers i.e. plumbers, water carrier Swajal Dhara Yojna.
- (b) He will ensure that traditional water sources are maintained and kept functional.
- © He will keep adequate water purification material available with him for the purpose
- (d) He will ensure water supply scheme functional in the area are maintained
- (e) Keep water resource that is water harvesting tanks/pumps for fire fighting and animal.

6.7.8 (b) Post-Disaster Task:

- (a) He will ensure safe drinking water is provided to all including temporary mess, if made operational send his repair team volunteers to repair water supply scheme.
- (b) Demand for potable water supply from Tehsil/Sub-Division, if required and ensure there is equitable distribution of water and rationing if it required.

6.7.9 : Co-Ordinator Disposal of dead and carcass:

The Pradhan of Gram Panchayat or Chairman of Nagar Panchayat/Municipal Council/Municipal Committee will be the Head of the disposal of dead & carcass management team. Major tasks like identification and earmarking resources, volunteers, etc will be done immediately after constitution of team. Pre-disaster tasks are as under :

6.7.9 (a) Pre-Disaster:

- (a) He will head the team to dispose the dead and carcass.
- (b) He will constitute a team of medical representative, police representative, religious leaders, civil defense, Home Guards and volunteers.

- (c) To identify covered buildings, shed etc. for temporary mortuary away from public view in each ward.
- (d) He will ensure that the following equipment is always available with above teams in operational conditions in the Panchayat Bhawan:-
 - (i) Stretcher : 2 Nos.
 - (ii) Pick Axe : 2 Nos.
 - (iii) Shovel : 2 Nos.
 - (iv) Crow bar : 2 Nos.
 - (v) Axe : 1 No.
 - (vi) Rope : 4Nos.(10 mtrs. long)
 - (vii) Blanket : 20 Nos.
 - (viii) Bamboo : as per requirement.
 - (ix) Plastic/fiver sheet : as per requirement.
 - (x) Body bags. : as per requirement.
 - (xi) Face mask : 10 nos.
 - (iii)gloves : 10 pairs
 - (xii) volunteers. : as per requirement.
 - (xiii) Disinfectants ice slabs. : as per requirement.
 - (xiv) Stationery for finger prints and documents: as per requirement.
 - (xv) Camera : 1 no.
- (e) Municipal Committees and Nagar Panchayat will constitute a disposal team and have following equipments :
 - (i) One truck/tempo and dead van.
 - (ii) 20 Safai Karamchari.
 - (iii) All the quipment listed above.
 - (iv) Police representative.
- (f) Adequate trained members/volunteers trained for the disposal from police, Civil Defence and home guards personal.
- (g) To identify places/pits for mass disposal of animal carcass.
- (h) To enlist volunteers to collect, carry and dispose of carcass.

CHAPTER-7

Recovery and reconstruction Plan of Dt. Solan

7.1 : Recovery Plan :

Once the response process is in place the recovery process is activated by resorting to the following actions:

- ✚ Providing and erecting temporary housing to the victims and displaced persons.
- ✚ Facilitating and providing claims and grants as per the relief manual.
- ✚ Providing counseling to the victims
- ✚ Providing and facilitating medical support for the victims requiring long term care.
- ✚ Clearing and disposing off the debris created as a result of collapse of physical infrastructure and elements.
- ✚ Initiating the process of reconstruction by adapting improvised technologies for safe construction.

7.2 : Reconstruction and Resettlement

The approach to the reconstruction process will be aimed at converting adversity into opportunity. Incorporating disaster resilient features to '**build back better**' will be the guiding principal. This phase requires the most patient and painstaking effort by all concerned. The choice of technology will be based on its likely impact on physical, social-cultural or economic environment of the communities in the affected areas or in their neighborhood. Systems for providing psycho-social support and trauma counseling need to be developed for implementation during the reconstruction and recovery phase.

7.3 : Owner Driven Construction:

Reconstruction plans and designing of houses will be a participatory process involving the government, affected community, NGO's and the corporate sector. After the planning process is over, owner driven construction will be preferred. Reconstruction programmes will be within the confines and the specification as laid down by the government. Essential services, social infrastructure and intermediate shelters/camps will be established in the shortest possible time. For permanent reconstruction, the work including the construction of houses will be completed within two to three years. Dedicated project teams will be constituted to speed up the reconstruction process.

7.5 : Rehabilitation and Reconstruction:

In the rehabilitation phase:

- ✚ Provision of emergency relief will be provided by mobilizing human and material resources on a war footing. It would comprise food, temporary shelters and other basic requirements.
- ✚ Rehabilitation of all the displaced people, restoration of basic and alternative means of livelihood; and
- ✚ Initiation of long-term sustainable community-based actions and development interventions will be carried out on priority.

The rehabilitation would comprise housing and infrastructure, economic and social rehabilitation besides psychological rehabilitation. For housing rehabilitation, the existing inhabited settlements may be completely reconstructed at a new site for which, if required, land acquisition will be done. Housing rehabilitation would also be carried out by way of up gradation of existing damaged houses through repairs and retrofits. Infrastructure such as roads, water supply, sewerage, school, health centres will be rehabilitated on priority.

CHAPTER-8

STANDARD OPERATING PROCEDURE

8.8 : SOP :

Detailed SOP is enclosed annexure-M

8.9 : Roles & Responsibility of various departments during calamities :

The roles and responsibilities are given at 8.7 below,

8.10 : Check list for District Collector :

- 1 A meeting of the District Disaster Management Committee should be convened/held in the first week of June/July to review the preparedness for floods and earthquake etc.
- 2 Gather the preparedness reports from all the concerned Government departments this year.
- 3 Concerned departments should submit validated and updated report on the resource inventory in June this year and sent a preparedness report to the Relief Commissioner
- 4 Prepare and update a resource inventory of all the trained manpower, equipment and material needed for different response functions in case of flood and earthquake in the district
- 5 Appoint a Desk Officers for DDCR in consultation with the District Disaster Management Committee members in July.

8.11 : Check list for District Disaster Management Committee :

District Disaster Management Committee plays a vital role during disasters under the operational control of the District Administration with the help of Police, Fire, Home Guards etc. Hazard analysis of the district indicates that there is mainly risk of fires, road accidents and flash flood etc. In view of hazard scenario in the district, the role of DMC will include:

1. Evacuation of the affected people from incident place.
2. To ensure first aid as well as specialised treatment to affected people.
3. Security of the property of affected people and law and order maintenance in affected area.
4. Traffic Management leading to affected area and alternative arrangements etc.
5. To ensure Essential Commodity Act.
6. To arrange temporary shelters, food and clothings, if required.
7. To provide immediate relief and assesment of loss.

8. To ensure the disposal of dead bodies and animals with the help of concerned departments and PRIs/ULBs.

8.12 : Check list & SOPs for District Emergency Operation Centre :

1. To keep in touch with all the field agencies to know the exact details of loss.
2. To keep in contact with state Govt. for necessary budget.
3. To publicise the actual loss through DPRO/Media to avoid any confusion.
4. To give correct information to the individuals enquiring about their relatives.
5. To remain well informed and send correct informations to Govt.

8.13 : Check list for Urban Local Bodies :

Local Urban are responsible for all activities in their jurisdiction and also responsible to provide all necessary help and co-operation to Relief & Rescue operation Team :

1. To enlist the affected persons.
2. To arrange temporary shelters, food and clothings, if required.
3. To ensure the disposal of dead bodies and animals.

8.14 : Duties & Responsibility of various departments :

As per provisions laid down under section 32 of the **Disaster Management Act, 2005 (Act No:53 of 2005) every office of the Govt. of India and the State Govt. at the district level and the local authorities shall, subject to the supervision of District Authority.** The Section 33 of the act ibid empowers the District Authority to order any officer or department at the district level or authority to take such measures for the prevention or mitigation of disaster or to effectively respond to it, as may necessary, and such officer or department shall be bound to carry out such order.

ROLE OF DEPUTY COMMISSIONER/DISTRICT RELIEF COMMISSIONER :-

Deputy Commissioner is the main functionary to co-ordinate with all the departments, committee members and other auxiliary agencies to tackle the situation, mobilize the available resources and to monitor the RESCUE, RELIEF & REHABILITATION OPERATION during any natural calamity as per provisions laid down in the Disaster Management Act, 2005 (Act No:53 of 2005). He has to take up adequate relief measures and also to inform the Government and public regarding the action taken in this behalf by setting up a CONTROL ROOM or through local MEDIA/NEWSPAPERS etc.

DUTIES & RESPONSIBILITIES OF VARIOUS OFFICES/DEPARTMENTS :-

(i) SUPERINTENDENT OF POLICE SOLAN/BADDI:-

Police is the primary agency which is responsible for tackling all type of natural and manmade disasters as specified in Chapter 3 of this plan and also for extending security to an individual,

evacuation, emergency assistance, search & rescue, first aid, law & order, communication, shifting of people to relief camps, traffic management, burial work of dead bodies, fire management etc. The prime duty of the Superintendent of Police is to maintain/monitor law and order, and to keep strict vigil on anti social elements, criminals etc. In addition to above ;

- (a) They are liable for SEARCH & RESCUE OPERATION and to evacuate the injured persons from the incident site through their manpower.
- (b) They should enlist all the affected people with full particulars to provide them relief under various ACTS/RULES/ INSTRUCTIONS of Govt. and keep vigil on rumors and other anti social elements who can get benefit of the situation.
- (c) They should have the information regarding manpower available with them at various levels or parts of the district, so that they can be put to duty at any time during any emergent situation alongwith those who will/are on leave.
- (d) They will also identify, enlist and ensure that adequate police personnel's should proceed/rush to incident sight immediately without loss of time along with necessary material for search and rescue operation in time bound manner and also instruct the field agencies to act quickly.
- (e) The strength of police personnel may also be reviewed from time to time keeping in view the increasing population and criminal activities in their jurisdiction.
- (f) They may also ensure the formation of **Quick Response Teams** to meet any eventuality and equip the team with all possible search and rescue operation equipments.
- (g) They will also ensure the preparation of Departmental Disaster Management Plan and its updation annually.
- (h) Ensure registration of ousters' and keep vigil on their activities to avoid any mishap.
- (i) Organize awareness programmes for safe driving to drivers/general public/departments officials.
- (j) They should also enlist of Govt. approved firms/private vendors supply emergency articals like tents, ladders, ropes, search lights etc.

(ii) ADDITIONAL DEPUTY COMMISSIONER/ADM, SOLAN :-

The ADC/ADM, Solan has to assist the Deputy Commissioner during the rescue operation and to monitor all round activities and to act as NODAL OFFICER by taking all the information from the incident place and to communicate these to Govt. as well as to publish through MEDIA. He will also ensure the preparation of District & Departmental Disaster Management Plans and its updation annually.

(iii) DISTRICT REVENUE OFFICER, SOLAN :-

The DRO, Solan has to assist the Deputy Commissioner and ADC/ADM during any natural calamity and rescue operation and to manage the CONTROL ROOM to monitor all round activities and to act as MEMBER SECRETARY by taking all the information from the incident place and to communicate these to DC/ADC/ADM. He should have the telephone numbers of all the COMMITTEE MEMBERS & OTHER DISTRICT LEVEL OFFICERS for better co-ordination.

(iv) A. SUB-DIVISIONAL MAGISTRATE, SOLAN, ARKI, NALAGARH & KANDAGHAT :

B. TEHSILDAR, SOLAN, ARKI, BADDI, KASALI NALAGARH & KANDAGHAT

C. NAIB-TEHSILDAR DARLAGHAT, RAMSHAHAR, MAMLI & KRISHANGARH

All the SDMs/Tehsildars/Naib-Tehsildars concerned are the first administrator to visit on the incident place alongwith SEARCH, RESCUE, MEDICAL & RELIEF TEAM and direct all concerned departments to start the process immediately and manage/monitor the situation by sending the injured people in proper places like HOSPITALS, TEMPORARY SHELTERS and MEDICAL CAMPS on the spot as per the prevailing condition of the persons. Besides, they have to assist the Deputy Commissioner and ADC/ADM during any natural calamity to manage the CONTROL ROOM to monitor all round activities and collect the information from the incident place and to communicate these to DC/ADC/ADM.

- (a) They should have also the telephone numbers of all the SUB-DIVISIONAL/TEHSIL/SUB-TEHSIL LEVEL COMMITTEE MEMBERS & NGOs for better co-ordination.
- (b) They will also identify and enlist all the harmful structures, heavy dry trees, cracked/fissured retaining walls, high power electric supply lines etc. in their jurisdiction and ensure that necessary corrective measures may be taken up with concerned department in time bound manner to avoid any loss to life and property, as and when the matter came into their notice.
- (c) They should also ensure that the alerts and warnings received from Govt./IMD are disseminated to general public through Local Magistrate (Tehsildars/Naib-Tehsildars), Police (DSPs/SHOs), BDOs to local level authorities like Pradhans, Gram Sewaks, and Patwaries etc.
- (d) They will also ensure the preparation of Sub-Divisional/Tehsil/Sub-Tehsil Level Disaster Management Plan and its updation annually.
- (e) Organize awareness programmes for various stakeholders for the safety of life and property during disasters/calamities to village level functionaries/general public/departments officers/officials etc.
- (f) Enlist detail of building with basic amenities like toilet, bath, drinking water facility alongwith contact numbers and name of official etc. which can be used as rehabilitation centers on requirement.

(v) GENERAL MANAGER (INDUSTRIES) DISTRICT SOLAN, DEPUTY DIRECTOR OF INDUSTRIES, BADDI & SE, POLLUTION CONTROL BOARD, BADDI:-

All these officers will make inventory of all the industries established in district with their telephone numbers with detail of the product made by them and also segregate the industries which are hazard prone like petroleum, chemical, which release toxic gases etc. They will also ensure that no harm is caused to local residents by any industry by releasing harmful gases and shattering industrial waste (liquid or solid) in the vicinity which can lead hazard and if any industry is ignoring the normal code suitable action be taken for negligence and report be sent to Govt. accordingly. They will also ensure the preparation of Departmental Disaster Management Plan and its updation annually. They should also inspect all the industries regularly as per

provisions and see whether they are following the prescribed safety norms and also prepare specific instructions and get them approved from Govt. and circulate among all the industries on following points :-

- (a) The escape plan of each industry to be pasted on each floor in both the languages i.e. Hindi and English (or any other indian language which is easy to most of the workers working in said industry).
- (b) Width of each staircase should be so wide to prevent stampede on occurrence of any disaster.
- (c) Local Administration should be authorized for issuing orders for closure of work during incessant rains and other disasters.
- (d) List of industries interest for humanitarian work should be provided to District Administration.
- (e) Precautions to be adhered by the workers, other officers/officials, search and rescue operation team on accident or damage to said industry alongwith list of gases/liquid so released.
- (f) They will also ensure the updation of Departmental Disaster Management Plan annually.

(vi) CHIEF MEDICAL OFFICER :-

The Chief Medical Officer, Solan has to prepare a comprehensive DEPARTMENTAL DISASTER MANAGEMENT PLAN to tackle any emergent situation and have to arrange the adequate life saving medicines, medical equipments, mini operation theatre, ambulances, para medical staff and doctors, who can be rush to incident place at any time for RESCUE OPERATION. In addition to this ;

- (a) He should have the telephone numbers of all the PHCs/CHCs/HEALTH SUB-CENTRES, whose services can be utilized on requirement alongwith distance from headquarter and nearest CHC/PHC.
- (b) He may also direct all the BMOs/MO Incharge of all CHCs/PHCs to prepare special contingency plans at BLOCK LEVEL with all the telephone numbers and also constitute special MEDICAL TEAMS at all level.
- (c) They should also enlist of Govt. approved firms/private vendors supplying life saving medicines, chlorine tablets etc.
- (d) They will also ensure the updation of Departmental Disaster Management Plan annually.

(vii) A. SE, HPPWD B&R Solan and NH Shimla-9 :

B. EXECUTIVE ENGINEER, HPPWD B&R, Solan, Arki, Nalagarh, Kasauli and NH Solan :

The SE, HPPWD (B&R)/NH all the XENs should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the district alongwith the proposal regarding shifting of vehicular traffic to alternative roads on damage of any road for the time being. On occurrence of any eventuality he should advise the CHAIRMAN and make necessary arrangements to re-open the blocked road immediately.

- (a) They will also identify, enlist all the harmful structures, heavy dry trees, cracked/fissured retaining walls etc. in his jurisdiction and ensure that necessary corrective measures may be taken up in time bound manner to avoid the loss of life and property.
- (b) They should also ensure the cutting of heavy dry trees standing alongside roads well in time after completing all codal formalities under rules and repair of drains, pullies and landsliding parts of the road in time bound manner.
- (c) They should also enlist of Govt. approved firms/private vendors of JCBs, Tippers, Woodcutters, RCC cutters etc.
- (d) They should have the detailed list of accessible and in-accessible list of villages from various types of roads including alternative roads for streamlining the traffic in their jurisdiction.
- (e) They will also ensure the updation of Departmental Disaster Management Plan annually.

(viii) A. SUPERINTENDING ENGINEER, HPSEBL, Solan :

B. XEN, HPSEBL, Solan, Arki, Nalagarh, Parwanoo, Baddi

The SE, HPSEBL & all the XENs should have also a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the district alongwith the proposal regarding alternative supply of electricity for the time being.

- (a) They should ensure to restore uninterrupted electric supply to affected areas for carrying out the RESCUE OPERATION smoothly.
- (b) They will also identify, enlist all the harmful structures, heavy dry trees, cracked/fissured retaining walls etc. in his jurisdiction which can affect the electric supply and ensure that necessary corrective measures may be taken up in time bound manner to avoid the loss of life and property.
- (c) They should also ensure the cutting of heavy dry trees standing alongside transmission lines well in time after completing all codal formalities under rules and repair the transformers, electric supply lines, and land sliding parts in time bound manner.
- (d) The Electric supply line in their jurisdiction should be checked from time to time and ensured that it should not be harmful to general public in any manner.
- (e) They will also ensure the updation of Departmental Disaster Management Plan annually.

(ix) Sr. EXECUTIVE ENGINEER, ELECTRICAL SYSTEM DIVISION TRANSMISSION) HPSEBL, Solan :

The XEN, Electrical System Division (Transmission) HPSEBL should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the district. In addition to this ;

- (a) He will identify, enlist all the harmful structures, heavy dry trees, cracked/fissured retaining walls alongside the Transmission Towers in his jurisdiction which can harm the public/property and ensure that necessary corrective measures may be taken up in time bound manner to avoid the loss of life and property.
- (b) He should also ensure the cutting of heavy dry trees standing alongside transmission lines well in time after completing all codal formalities under rules and repair the transmission line tower and transformers in time bound manner.

- (c) The Transmission line should be checked from time to time and ensured that it should not be harmful to general public in any manner.
- (d) They will also ensure the updation of Departmental Disaster Management Plan annually.

- (x) **A. SUPERINTENDING ENGINEER, I and PH, Nahan & Shimla-9:**
 B. EXECUTIVE ENGINEER, I&PH, Solan, Arki & Nalagarh :

The SE, I&PH and all the XENs I&PH should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the district alongwith the proposal regarding alternative water supply to the affected places without interruption and should try to interlink the SCHEMES or have to arrange to necessary equipments for the supply of potable water, so that no epidemic can spread out due to deteriorated water.

- (a) They will identify, enlist all the harmful structures, heavy dry trees, cracked/fissured retaining walls etc. in his jurisdiction which can affect the water supply and ensure that necessary corrective measures may be taken up in time bound manner to avoid the loss of life and property.
- (b) They should also ensure the cutting of heavy dry trees standing alongside water supply lines well in time after completing all codal formalities under rules.
- (c) The Drinking Water Supply line in their jurisdiction should be checked from time to time and ensured that it should not be harmful to general public in any manner. They should also have list of private vendors of JCBs, Tippers, Woodcutters, RCC cutters etc.
- (d) They should also enlist of Govt. approved firms/private vendors supplying drinking water, water supply pipes, bleaching powder/chlorine tablets, woodcutters, RCC cutters etc.
- (e) They will also ensure the updation of Departmental Disaster Management Plan annually.

- (xi) **DISTRICT INFORMATION & PUBLIC RELATION OFFICER :-**

Communicate warnings to the public, relay announcements issued by SEC, DDMA, telecast special programmes for information and actions, education and awareness messages for preparedness actions and coordinated response. Promote disaster related polices, provide emergency communication systems, enable critical communication links with disaster sites. The DPRO plays a significant role during any natural calamity to give accurate information to MEDIA and also to discourage the rumor regarding occurrence of any eventuality.

- (a) He should ensure that no press briefing is done except after taking prior permission of Deputy Commissioner-cum-Chairman, DMC.
- (b) He will arrange the meeting with press/media or whenever required by the Chairman.
- (c) He will also ensure that the alerts and warnings received from headquarter are disseminated to general public through local channels, media and public address system in respective areas.
- (d) Publish articles in leading newspapers/magazines for the knowledge of various stakeholders for the safety of life and property during disasters/calamities after consulting the fire, police and health specialists.

(xii) DISTRICT FOOD AND SUPPLIES CONTROLLER :-

The DFSC should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the district.

- (a) He will ensure that regular supply of essential commodities in affected areas through FAIR PRICE SHOPS or making TEMPORARY BOOTHS without any delay
- (b) He will also take up the matter with Government regarding special supply of essential commodities in TEMPORARY RELIEF CAMPS keeping in view the number of persons residing there after discussing the matter with concerned SDM.
- (c) He will also prepare a plan to distribute the ration at far flung areas during disasters through labourers, mule or other means of transport and direct field official to enlist such persons with their telephone numbers, so that their services could be activated on requirement.
- (d) He should also enlist of Govt. approved firms/private vendors for supply of edible items, kerosene oil, LPG and petrol etc.
- (e) He will also ensure the updation of Departmental Disaster Management Plan annually.

(xiii) DIVISIONAL FOREST OFFICER, SOLAN, KUNIHAR, NALAGARH & DIVISIONAL FOREST OFFICER (WILD LIFE DIVISION), SHIMLA:-

Natural calamity is a universal phenomenon and calamities can occur any where, as such all the DFO should have also to prepare a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the division alongwith the proposal regarding vulnerable areas/points viz forests which are mostly susceptible to forest fires and land sinking/sliding zone adjacent to public roads and habitations etc.

- (a) They will identify, enlist all the fire prone forests/areas alongwith villages which often affect due to forest fire, year wise detail of forest fires, harmful structures, heavy dry trees in their jurisdiction which can be harmful to public/property and ensure that necessary corrective measures may be taken up in time bound manner to avoid the loss of life and property.
- (b) They should also ensure the cutting of heavy dry trees which can harm to public, well in time after completing all codal formalities under rules.
- (c) They should also take up necessary steps for the safety of general public from wild animals and take up necessary measures well in time.
- (d) They should also ensure the payment of relief to affected persons attacked by wild animals as per provision under Forest Acts.
- (e) They should also enlist the persons having experience in cutting of heavy trees.
- (f) They will also ensure the updation of Departmental Disaster Management Plan annually.

(xiv) COMMANDANT HOME GUARDS & CIVIL DEFENSE Solan :-

The Commandant Home Guards & Civil Defense should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS,

manpower, machinery, material and other equipments available with them alongwith Fire Stations, Solan, Parwanoo, Baddi and Nalagarh in the district, They should be equipped with all emergency equipments like search lights, ladders, ropes etc. meet out any eventuality at any time.

- (a) They will also identify, enlist and ensure the home guard personnel's should proceed to incident sight immediately without loss of time along with necessary material for search and rescue operation in time bound manner.
- (b) They have a list of hydrants with location map in the district.
- (c) They should have an emergency plan for fire fighting in rural areas both alongside roads and beyond road in their jurisdiction.
- (d) They should also have list of natural and other water resources from where they will fill up their vehicles on requirement.
- (e) They should also have a list of fire prone areas of district and consolidate plan for fire fighting in forest as and when required by the DFOs concerned for the safety of general public residing in those areas.
- (e) They should also enlist Govt. approved firms/private vendors supply emergency articles like tents, ladders, ropes, search lights etc.
- (f) Organize awareness programmes for various stakeholders for the safety of life and property during disasters/calamities to village level functionaries/general public/departments officers/officials etc.
- (g) They will also ensure the updation of Departmental Disaster Management Plan annually.

(xv) REGIONAL TRANSPORT OFFICER & REGIONAL MANAGER, HRTC Solan and Nalagarh;-

The RTO & Regional Managers, HRTC should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material, buses, cranes and other equipments available in various parts of the district alongwith the proposal regarding deployment of officials and vehicles to incidental place at any time. RTO should also issue alerts for the heavy vehicles in consultation with PWD Authorities during monsoon. In addition to above;

- (a) Organize awareness programmes for the knowledge of transporter/drivers for safe driving.
- (b) They should also enlist Govt. approved firms/private vendors who can provide light/heavy vehicles to combat the disasters.
- (c) They will also ensure the updation of Departmental Disaster Management Plan annually.

(xvi) COMMANDANT NCC (BOYS & GIRLS) SOLAN :-

The Commandant NCC (Boys & Girls) should have the list of armed personnels with them alongwith NCC VOLUNTEERS, their phone numbers, list of other equipments available with them to be used at any time for rescue operation.

(xvii) BLOCK DEVELOPMENT OFFICER, SOLAN, KUNIHAR, NALAGARH, KANDAGHAT & DHARAMPUR :-

All the BDOs should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all details regarding temporary shelters like PANCHAYAT BHAWANS, COMMUNITY

BHAWANS, MAHILA MANDAL & YUVA MANDAL BHAWANS in their jurisdiction alongwith contact numbers/persons and list of NGOs alongwith manpower, machinery, material and other equipments available in their jurisdiction. In addition to this ;

- (a) They will identify, enlist and ensure regular review of local disasters in monthly quarterly meeting with pradhans and its discussion in the gram sabha meetings and take up necessary precautionary measures in time bound manner.
- (b) They will prepare a programme for the training of local massions to construct earthquake resistant & fire proof buildings.
- (c) They will also identify, enlist and ensure personally through their technical agency that various constructions, check dams and reservoirs so constructed in their jurisdiction are not causing harm to public.
- (d) They will identify, enlist and ensure after taking the reports from panchayats every month that there is no hazard prone building, heavy trees, high tension power lines, mobile towers, landslides etc. which can cause harm to public and if any report is received, they will ensure for its correctness with concerned department or through any of the schemes being operated by him, as the case may be.
- (e) He will also prepare a panchayatwise inventory of woodcutters, RCC cutters, labourers, mule men with their telephone numbers and address etc.
- (f) They should have the detailed list of accessible and in-accessible list of villages from various types of roads.
- (g) They will also ensure the updation of Departmental Disaster Management Plan annually.

(xviii) DISTRICT PANCHAYAT OFFICER/CO-ORDINATOR NYK SOLAN:-

The DPO & CO-Ordinator, NYK Solan should have a list of PANCHAYAT BHAWANS, COMMUNITY BHAWANS alongwith contact numbers and list of VOLUNTARY ORGANISATIONS or NGOs with manpower, machinery, material and other equipments available in various parts of the district for taking their assistance at any time.

(xix) DEPUTY DIRECTOR OF EDUCATION (Higher & Elementary) :-

The Deputy Director of Education (Higher & Elementary) should have a LIST OF ALL THE SCHOOLS, COLLEGES & OTHER EDUCATIONAL INSTITUTIONS in their jurisdiction with the phone numbers of respective INSTITUTION IN CHARGE for the temporary shelters of the affected people with all the details regarding number of rooms with basic amenities like toilets, bath & drinking water facility to be made available for this purpose and other equipments available in various parts of the district. They will also ensure that a Disaster Management Plan be prepared by all the schools/colleges/other educational institutions in the district as per guidelines issued by the Govt. of India and circulated to them to meet any eventuality and vacate the institutions safely during any calamity to avoid stampede and loss of life. Special awareness be made among school children/teachers during school activities from time to time. They will also ensure the updation of their District Level Departmental Disaster Management Plan & Each School Plan annually.

(xx) REGISTRAR (UHF) NAUNI, PRINCIPAL GPGC, SOLAN, ARKI, NALAGARH, ITI SOLAN :-

The Registrar (UHF) Nauni, Principal, GPGC Solan, Nalagarh & Arki, ITI Solan should have a LIST OF ALL THE DEPARTMENT HEADS in their jurisdiction with the phone numbers for the temporary shelters of the affected people with all the details regarding number of rooms to be made available for this purpose and other equipments available in various parts of the district. Besides this a standard Disaster Management Plan be prepared for their institution to vacate the institutions safely during any calamity to avoid stampede and loss of life. In addition to this special awareness be made among students/teachers during institutional activities from time to time. They will also ensure the updation of Departmental Disaster Management Plan annually.

(xxi) DEPUTY DIRECTOR (ANIMAL HUSBANDRY):-

The Deputy Director (Animal Husbandry) has to prepare a comprehensive DEPARTMENTAL DISASTER MANAGEMENT PLAN to tackle any emergent situation and also to the evacuation of animals and disposal from the incidental place immediately, so that no epidemic could break out and has also to arrange the adequate usual medicines in all the HOSPITALS, equipments, mini operation theatre, para staff and doctors, who can be rush to incident place at any time for RESCUE OPERATION. In addition to this he should have the telephone numbers of all the VETERINARY HOSPITALS & DISPENSARIES whose services can be utilized on requirement. Besides he may also constitute special MEDICAL TEAMS at all level. They will also ensure the updation of Departmental Disaster Management Plan annually.

(xxii) DEPUTY DIRECTOR (AGRICULTURE/HORTICULTURE) :-

The Deputy Director (Agriculture and Horticulture) has to prepare a comprehensive DEPARTMENTAL DISASTER MANAGEMENT PLAN to tackle any emergent situation due to failure of crops during natural calamities like DROUGHT, HEAVY RAINS, STORM AND HAIL STORM etc. and have to suggest the ALTERNATIVE CROPS which can be grown in the respective GAP PERIOD to facilitate the FARMERS by organizing seminars and awareness programmes in the district. Besides, they should have a plan to prevent the pest or locust attack or other DISEASES related to various crops and plants etc. They should prepare a TEAM OF EXPERTS who can be rush to incident place at any time for verifying the actual cause and disease and also for special RESCUE OPERATION. In addition to this, they should have the telephone numbers of all the ADOs/HDOs whose services can be utilized on requirement. They will also ensure the updation of Departmental Disaster Management Plan annually.

(xxiii) DEPUTY GENERAL MANAGER, BSNL :-

The DGM, BSNL should have proposal regarding temporary linking of all the telephone lines in affected area alongwith requisite instruments to be installed for the time being, so that there should be NO COMMUNICATION GAP with the people and administration and the RESCUE OPERATION be carried out smoothly. They will also ensure the updation of Departmental Disaster Management Plan annually.

(xxiv) PROJECT OFFICER, DRDA :-

The PO. DRDA should have proposal regarding employment generation scheme to save the farmers or affected people from the STARVATION occurred due to drought or loss of crops etc.

for the time being under any of the scheme launched by the Govt. of India in the district or otherwise prepare special schemes keeping in view the local conditions. They will also ensure the updation of Departmental Disaster Management Plan annually.

(xxv) RAILWAY AUTHORITIES :-

The Incharge Railway Stations at various places of Solan district should have all the details regarding NODAL OFFICERS, manpower, machinery, material, cranes and other equipments available in various parts of the district alongwith the proposal regarding evacuation of material or people and removal of debris from the affected place and also to provide the first aid and medical aid to affected persons. He will also make liason with District administration. They will also ensure the updation of Departmental Disaster Management Plan annually.

(xxvi) EXECUTIVE OFFICERS, MCs/NACs/NPs :-

All the EOs, MCs/NACs/NPs should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN for the temporary shelters of the affected people with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available with them alongwith the proposal regarding deployment of officials and vehicles to incidental place at any time. In addition to above ;

- (a) They are liable for SEARCH & RESCUE OPERATION and to evacuate the injured persons through their manpower in their jurisdiction.
- (b) They should keep regular check on new constructions as per directions of Govt. and as per latest technology regarding safe construction to avoid future mishaps or disasters.
- (c) They will also identify and enlist all the harmful structures, heavy dry trees, cracked/fissured retaining walls, high power electric supply lines etc. in their jurisdiction and ensure that necessary corrective measures may be taken up with concerned department in time bound manner to avoid any loss to life and property
- (d) Enlist the old or deteriorated buildings which can cause hazards at any time to declare them UNSAFE for safe living as per the prescribed norms or GENERAL MANUAL of the institution.
- (e) Repair the municipal rain baseras, paths, roads well in time, clean the drains and pullies from time to time to avoid water logging and loss of property.
- (f) They should also enlist Govt. approved firms/private vendors supply emergency articles like tents, ladders, ropes, search lights etc.
- (g) Organize awareness programmes for general public for cleanliness, fire safety, earthquake resistant buildings etc.
- (h) They will also ensure the updation of Departmental Disaster Management Plan annually.
- (i) Ensure registration of ousters' and keep vigil on their activities to avoid any mishap.
- (j) They should also ensure that the mobile towers installed at various locations in their jurisdiction should not cause harm to general public in any manner.

(xxvii) TOWN AND COUNTRY PLANNER :-

The TOWN AND COUNTRY PLANNER should make awareness in general public regarding safe, fire proof and earthquake resistant construction with the emergence of new technologies in HOUSE CONSTRUCTION in recent years and also advise the people to get benefit of LATEST

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TECHNOLOGY to be safe and happy by organizing SEMINARS and CAMPS at departmental level or with the help of MCs, NPs and Panchayats etc. in addition to this :

- (a) He will chalk out a programme for the training of local massions to construct earthquake resistant & fire proof buildings.
- (b) Organize seminars for the awareness of general public to construct the buildings with safety norms.

(xxviii) DISTRICT WELFARE OFFICER & CDPOs:

This is Primary agency for building capacities and increasing awareness among disabled persons, women and children. Besides, he should organize special camps for the disabled, widows, children and other vulnerable groups. They will also provide necessary help and assistance for socio economic groups and have plan for rehabilitation of these people safely in the district.

CENTRAL GOVT. INSTITUTIONS IN DISTRICT SOLAN & THEIR DUTIES/RESPONSIBILITIES:

(i) VARIOUS ARMED WINGS IN DISTRICT :-

- ❖ BRIGADE COMMANDER, BRIGADE H.Q. KASauli :-
- ❖ COMMANDING OFFICER, 14TH GTC SUBATHU :-
- ❖ COMMANDING OFFICER, ARMY BATTALIAN, SOLAN :-
- ❖ COMMANDING OFFICER, DAGSHAI BATTALIAN, DAGSHAI :-
- ❖ GROUP CAPTAIN, AIR FORCE, KASauli :-

Army/Air Force possess maximum number of specialized personnel in various fields, whether it is normal rescue operation, evacuation process, diffusion of bombs, seas/lake diving, mountaineering and the like. It has been experienced in the recent past that the rescue operations like TIMBER TRAIL MISHAP in this district was completed with the help of ARMY and AIR FORCE wing of the armed forces, which was otherwise not possible to the CIVIL ADMINISTRATION in normal course. As the Natural calamity is a universal phenomenon and calamities can occur at any time any where, as such all the DEFENSE WINGS/UNITS should also have the information regarding the NODAL OFFICERS, manpower, machinery, material and other equipments available with them and the specialized services which they can render to civil administration on requirement.

(ii) CHIEF EXECUTIVE OFFICER (CANTT. BOARD) SUBATHU, KASauli & DAGSHAI.

The CEO (CBs) should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in their jurisdiction in various parts of the district alongwith the proposal regarding shelters for rehabilitating the affected people and other facilities to be provided to them

during any natural calamity. They will also ensure the updation of Departmental Disaster Management Plan annually.

(iii) GENERAL MANAGER, KOL DAM HYDRO POWER PROJECT, P.O. BARMANA, DISTRICT BILASPUR :

The GM, Kol Dam should have also a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in various parts of the district alongwith the proposal regarding shifting of officials and other local residents residing near by the Hydro Power Project Reservoir in case excess water comes across Sutlej River and issue alert from time to time and also intimate the position to local administration of respective area. In addition to this ;

- (a) He should ensure the safety of the people residing alongside Sutlej river from unprecedented excess water level.
- (b) He will ensure the repair of cracked/fissured retaining walls in his jurisdiction and ensure that necessary corrective measures in time bound manner to avoid the loss of life and property.
- (c) The Electric Generation set up in their jurisdiction should be checked from time to time and ensured that it should not be harmful to general public in any manner.
- (d) They will also ensure the updation of Departmental Disaster Management Plan annually.

(iv) DIRECTOR, CENTRAL RESEARCH INSTITUTE, KASAULI :

The CRI should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in their jurisdiction alongwith the proposal for shifting of affected officials, providing them shelters for rehabilitating and other facilities to be provided to them during any natural calamity. They will also ensure the updation of Departmental Disaster Management Plan annually.

(v) DIRECTOR, DOORDARSHAN KENDRA, KASAULI :

The Doordarshan Kendra should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in their jurisdiction alongwith the proposal for shifting of affected officials, providing them shelters for rehabilitating and other facilities to be provided to them during any natural calamity. They will also ensure the updation of Departmental Disaster Management Plan annually.

(vi) National Council of Mashroom Research & Training at Chambaghat:

The Director, national council of Mushroom Resaecrch & Training, Chambaghat should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in their jurisdiction alongwith the proposal for shifting of affected officials, providing them shelters for rehabilitating and other facilities to be provided to them during any natural calamity. They will also ensure the updation of Departmental Disaster Management Plan annually.

(vii) Zoological Survey of India, High Altitude Regional Centre, Saproon, (above DPRO Office, Solan :

The Officer incharge, Zoological Survey of India, High Altitude Regional centre, Saproon, (Above DPRO Office, Solan) should have a DEPARTMENTAL DISASTER MANAGEMENT PLAN with all the details regarding NODAL OFFICERS, manpower, machinery, material and other equipments available in their jurisdiction alongwith the proposal for shifting of affected officials, providing them shelters for rehabilitating and other facilities to be provided to them during any natural calamity. They will also ensure the updation of Departmental Disaster Management Plan *annually*.

CHAPTER-9

LINKING WITH THE DEVELOPMENTAL PLAN OF DISTRICT SOLAN:

The Five Year Plan documents have, historically, not included consideration of issues relating to the management and mitigation of natural disasters. The traditional perception has been limited to the idea of “calamity relief”, which is seen essentially as a non-plan item of expenditure. However, the impact of major disasters cannot be mitigated by the provision of immediate relief alone, which is the primary focus of calamity relief efforts. Disasters can have devastating effects on the economy; they cause huge human and economic losses, and can significantly set back development efforts of a region or a State. Two recent disasters, the Orissa Cyclone and the Gujarat Earthquake, are cases in point. With the kind of economic losses and developmental setbacks that the country has been suffering year after year, the development process needs to be sensitive towards disaster prevention and mitigation aspects. There is thus need to look at disasters from a development perspective as well.

Further, although disaster management is not generally associated with plan financing, there are in fact a number of plan schemes in operation, such as for drought proofing, afforestation, drinking water, etc., which deal with the prevention and mitigation of the impact of natural disasters. External assistance for post-disaster reconstruction and streamlining of management structures also is a part of the Plan. A specific, centrally sponsored scheme on disaster management also exists. The Plan thus already has a defined role in dealing with the subject.

Recently, expert bodies have dwelt on the role of the Planning Commission and the use of plan funds in the context of disaster management. Suggestions have been made in this regard by the Eleventh Finance Commission, and also the High Powered Committee on Disaster Management. An approach on planning for safe development needs to be set out in the light of these suggestions.

9.1 : DISASTER MANAGEMENT: THE DEVELOPMENT PERSPECTIVE :

Natural disasters are not bound by political boundaries and have no social or economic considerations. They are borderless as they affect both developing and developed countries. They are also merciless, and as such the vulnerable tend to suffer more at the impact of natural disasters. For example, the developing countries are much more seriously affected in terms of the loss of lives, hardship borne by population and the percentage of their GNP lost. Since 1991, two-third of the victims of natural disasters were from developing countries, while just 2 per cent were from highly developed nations. Those living in developing countries and especially those with limited resources tend to be more adversely affected. With the alarming rise in the natural disasters and vulnerability per se, the world community is strengthening its efforts to cope with it.

As a number of the most vulnerable regions are in India, natural disaster management has emerged as a high priority for the country. Going beyond the historical focus on relief and rehabilitation after the event, we now have to look ahead and plan for disaster preparedness and mitigation, in order that the periodic shocks to our development efforts are minimized.

9.2 : EXPERIENCE OF SOLAN DISTRICT :

Physical vulnerability relates to the physical location of people, their proximity to the hazard zone and standards of safety maintained to counter the effects. For instance, some people are vulnerable to flood only because they live in a flood prone area. Physical vulnerability also relates to the technical capacity of buildings and structures to resist the forces acting upon them during a hazard event.

The extent to which a population is affected by a calamity does not purely lie in the physical components of vulnerability, but is contextual also to the prevailing social and economic conditions and it's consequential effect on human activities within a given society. Research in areas affected by earthquake indicates that single parent families, women, handicapped people, children and the aged are particularly vulnerable social groups. The geophysical setting with unplanned and inadequate developmental activity is a cause for increased losses during disasters. In the case of India, the contribution of over-population to high population density, which in turn results in escalating losses, deserves to be noted. This factor sometimes tends to be as important as physical vulnerability attributed to geography and infrastructure alone.

9.3 : SOLAN'S KEY VULNERABILITIES

Many parts of Solan District are prone to accidents, besides fire, landslides, floods, heavy rains, drought etc. are other calamities which often causes harm to public & private properties and human/cattle life. The details so noticed and recorded are given in Chapter 3 of the District Disaster Management Plan. These calamities often affect the normalcy and day to day life of the people of the affected areas. The District Administration acts quickly with the help of all concerned departments to streamline the process.

9.4 : INSTITUTIONAL ARRANGEMENTS :

The District Administration plays a vital role during Disasters and the Disaster Management operations are being executed through all concerned departments like Police, Fire, Civil Defense, Health, HPPWD, I&PH to execute the rescue operation. The relief is given to all the affected persons/families as per provisions laid down in H.P. Emergency Relief Manual through Revenue Field Agency.

9.5 : Economic Losses Due to Disasters :

Disasters lead to enormous economic losses that are both immediate as well as long term in nature and demand additional revenues. Also, as an immediate fall-out, disasters reduce revenues from the affected region due to lower levels of economic activity leading to loss of direct and indirect taxes. In addition, unplanned budgetary allocation to disaster recovery can hamper development interventions and lead to unmet developmental targets.

9.6 : State Government :

The responsibility to cope with natural disasters is essentially that of the State Government. The role of the Central Government is supportive in terms of supplementation of physical and financial resources. The Chief Secretary of the State heads a state level committee which is in overall charge of the relief operations in the State and the Relief Commissioners who are in charge of the relief and rehabilitation measures in the wake of natural disasters in their States function under the overall direction and control of the state level committee. In many states, Secretary, Department of Revenue, is also in-charge of relief. State Governments usually have relief manuals and the districts have their contingency plan that is updated from time to time.

9.7 : District and Local Level :

The district administration is the focal point for implementation of all governmental plans and activities. The actual day-to-day function of administering relief is the responsibility of the Collector/ District Magistrate/Deputy Commissioner who exercises coordinating and supervising powers over all departments at the district level. Though it may not be a common phenomenon, there exists by and large in districts also a district level relief committee consisting of officials and non- officials.

The 73rd and 74th constitutional amendments recognise Panchayati Raj Institutions as 'Institutions of self- government'. The amendment has also laid down necessary guidelines for the structure of their composition, powers, functions, devolution of finances, regular holding of elections and reservation of seats for weaker sections including women. These local bodies can be effective instruments in tackling disasters through early warning system, relief distribution, providing shelter to the victims, medical assistance etc. The issue is often discussed during "GRAM SABHA MEETINGS" to promote the dialogues on local concerns related to disaster management as per directions of Govt

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

9.8 : Armed Forces & other Central Govt. Institutions :

The Indian Armed Forces are supposed to be called upon to intervene and take on specific tasks only when the situation is beyond the capability of civil administration. In practice, the Armed Forces are the core of the government's response capacity and tend to be the first responders of the Government of India in a major disaster. Due to their ability to organize action in adverse ground circumstances, 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 such as communications, search and rescue operations, health and medical facilities, transportation, power, food and civil supplies, public works and engineering, especially in the

immediate aftermath of disaster. Necessary guidelines are given in Disaster Management Plan of District Solan for deploying them in a smooth and quick manner.

Following, Central Govt. agencies and Army installations, cantonments are located in district Solan, who are however the member of District Disaster Management Committee and often assist the District Administration on requirement:

1. **Armed Forces Group at Solan.**
2. **Gorkha Rifles at Subathu.**
3. **Brigadier Army HQ at Kasauli.**
4. **Armed Forces Group at Dagshai.**
5. **Indian Air Force station at Kasauli.**
6. **CEO, Cantonment Subathu, Dagshai and Kasauli.**
7. **Central Research Institute at Kasauli.**
8. **Doordarshan Kendra, Kasauli.**
9. **National Council of Mushroom Research & Training at Chambaghat.**
10. **Zoological Survey of India, High Altitude Regional Centre, Saproon, Solan.**

9.9 : External Linkages :

The Government of India is a member of various international organisations in the field of disaster response and relief. While, as a policy, no requests for assistance or appeals are made to the international community in the event of a disaster, assistance offered suo moto is accepted. Linkages exist with the following organisations:

- (a) UN Office for Coordination of Humanitarian Affairs (UN OCHA), which has been made responsible by UN General Assembly mandate for all international disaster response.
- (b) United Nations Development Programme (UNDP), responsible for mitigation and prevention aspects of disaster management.
- (c) UN Disaster Assessment and Coordination (UNDAC) System.

9.10 : Streamlining Institutional Arrangements for Disaster Response :

Institutional arrangements for disaster response are the heart of disaster management systems. There is no dearth of personnel, both civilian and military, experienced in handling situations arising out of natural disasters. However, there certainly is a pressing need for improvement and strengthening of existing institutional arrangements and systems in this regard to make the initial response to a disaster more effective and professional. Most of the resources and expertise needed already exist with the Government. What needs to be streamlined is how they should be integrated, trained and deployed. Some of the areas where improvement is urgently needed are:

- (a) Integrated planning for disasters, including the integration of relevant Armed Forces formations into disaster management planning at all levels from District to State and Central Government.
- (b) Setting up of a modern, permanent national command centre or operations room, with redundant communications and data links to all State capitals. The national command centre or operations room needs to be manned on a 24-hour basis by professionals to cater for instant integrated response. There needs to be a properly equipped operations room at the State level as well.
- (c) Establishment of a national stand by, quick reaction team composed of experienced professionals, both military and civilian, drawn from Central and State Government staff to respond immediately by flying in a matter of hours an experienced response team to the locations when a disaster strikes. This team can be organized and run professionally on the same lines as the United Nations Disaster Assessment and Coordination (UNDAC) teams.
- (d) Creation of urban search and rescue capacity at all levels, by establishing a fully equipped Search and Rescue unit, as part of the fire service in all State capitals, with trained staff and modern equipment such as thermal imagers, acoustic detection devices etc. This is of immediate relevance since a major weakness exposed in the Gujarat earthquake was a lack of specialised urban search and rescue capability in India.
- (e) Media policy geared to handling the growing phenomenon of real time television reporting, which generates enormous political pressures on a government to respond rapidly and efficiently. This needs attention since the effect is going to increase, not decrease in future.
- (f) Closer interface with and better understanding of the international system for disaster response, and putting in place, systems for dealing with international assistance once it comes in e.g., customs, immigration, foreign policy implications etc. A greater appreciation is needed of the speed and automation of modern international response to a natural disaster. Closer interaction is required between of DISASTER MANAGEMENT : THE DEVELOPMENT PERSPECTIVE.
- (g) Standard procedures for dealing with domestic humanitarian and relief assistance from non-government sources. Procedures and systems need to be set out to avoid confusion and ensure best utilisation of the assistance being offered, just as in the case of systems for international assistance.
- (h) Modern unified legislation for disaster management. In view of the current division of responsibilities between the State and Central Government into state, central and concurrent lists, there is a need to create a body of legislation dealing with response to natural disasters and other emergencies, clearly delineating responsibilities and powers of each entity and specifying what powers or actions would need to be triggered on declaration of a disaster by the Government of India or a State Government. This legislation should also incorporate the current legislation dealing with chemical emergencies that has been created by the Ministry of Environment so that all emergencies are dealt with under one law. The legislation should include clear definitions of what constitutes a disaster at a national level.

9.11 : FINANCIAL ARRANGEMENTS :

The policy arrangements for meeting relief expenditure related to natural disasters are, by and large, based on the recommendations of successive finance commissions. The two main windows presently open for meeting such expenditures are the Calamity Relief Fund (CRF) and National

Calamity Contingency Fund (NCCF). The Calamity Relief Fund is used for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood and hailstorm. Expenditure on restoration of damaged capital works should ordinarily be met from the normal budgetary heads, except when it is to be incurred as part of providing immediate relief, such as restoration of drinking water sources or provision of shelters etc., or restoration of communication links for facilitating relief operations. The amount of annual contribution to the CRF of each State for each of the financial years is as indicated by the Finance Commission. Of the total contribution indicated, the Government of India contributes 75 per cent of the total yearly allocation in the form of a non-plan grant, and the balance amount is contributed by the State Government concerned.

Pursuant to the recommendations of the Eleventh Finance Commission, apart from the CRF, a National Calamity Contingency Fund (NCCF) Scheme came into force. NCCF is intended to cover natural calamities like cyclone, drought, earthquake, fire, flood and hailstorm, which are considered to be of severe nature requiring expenditure by the State Government in excess of the balances available in its own Calamity Relief Fund. The assistance from NCCF is available only for immediate relief and rehabilitation. Any reconstruction of assets or restoration of damaged capital should be financed through re-allocation of Plan funds. There is need for defining the arrangements in this regard.

9.12 : PLANNING FOR SAFE NATIONAL DEVELOPMENT :

Development programmes that go into promoting development at the local level have been left to the general exercise of planning. Measures need also to be taken to integrate disaster mitigation efforts at the local level with the general exercise of planning, and a more supportive environment created for initiatives towards managing of disasters

9.13 : DISASTER MANAGEMENT : THE DEVELOPMENT PERSPECTIVE

At all levels: national, state, district and local. The future blue-print for disaster management in India rests on the premise that in today's society while hazards, both natural or otherwise, are inevitable, the disasters that follow need not be so and the society can be prepared to cope with them effectively whenever they occur. The need of the hour is to chalk out a multi-pronged strategy for total risk management, comprising prevention, preparedness, response and recovery on the one hand, and initiate development efforts aimed towards risk reduction and mitigation, on the other. Only then can we look forward to "sustainable development."

9.14 : Disaster Prevention And Preparedness Measures : Information and Research Network :

Disaster prevention is intrinsically linked to preventive planning. Some of the important steps in this regard are:

- (a) Introduction of a comprehensive process of vulnerability analysis and objective risk assessment.
- (b) Building a robust and sound information database: A comprehensive database of the land use, demography, infrastructure developed at the national, state and local levels along with current information on climate, weather and man-made structures is crucial in planning,

warning and assessment of disasters. In addition, resource inventories of governmental and non-governmental systems including personnel and equipment help in efficient mobilisation and optimisation of response measures.

- (c) Creating state-of-the-art infrastructure: The entire disaster mitigation game plan must necessarily be anchored to frontline research and development in a holistic mode. State-of-the-art technologies available worldwide need to be made available in India for upgradation of the disaster management system; at the same time, dedicated research activities should be encouraged, in all frontier areas related to disasters like biological, space applications, information technology, nuclear radiation etc., for a continuous flow of high quality basic information for sound disaster management planning,
- (d) Establishing Linkages between all knowledge-based institutions: A National Disaster Knowledge Network, tuned to the felt needs of a multitude of users like disaster managers, decision makers, community etc., must be developed as the network of networks to cover natural, manmade and biological disasters in all their varied dimensions.

9.15 : Capacity Building, Training & Education :

Personnel involved in the exercise have to draw upon knowledge of best practices and resources available to them. Information and training on ways to better respond to and mitigate disasters to the responders go a long way in building the capacity and resilience of the country to reduce and prevent disasters. Training is an integral part of capacity building as trained personnel respond much better to different disasters and appreciate the need for preventive measures. The directions in this regard are:

- (a) The multi-sectoral and multi-hazard prevention based approach to disaster management requires specific professional inputs. Professional training in disaster management should be built into the existing pedagogic research and education. Specialised courses for disaster management may be developed by universities and professional teaching institutions, and disaster management should be treated as a distinct academic and professional discipline, something that the American education system has done successfully. In addition to separate diploma/degree courses in disaster management, the subject needs to be discussed and taught as a specific component in professional and specialised courses like medicine, nursing, engineering, environmental sciences, architecture, and town and country planning.
- (b) The focus towards preventive disaster management and development of a national ethos of prevention calls for an awareness generation at all levels. An appropriate component of disaster awareness at the school level will help increase awareness among children and, in many cases, parents and other family members through these children. Curriculum development with a focus towards dissemination of disaster related information on a sustained basis, covering junior, middle and high schools may be worked out by the different school boards in the country.
- (c) Training facilities for government personnel involved in disaster management are conducted at the national level by the National Centre for Disaster Management (NCDM) at the Indian Institute of Public Administration, in New Delhi which functions as the nodal institution in the country for training, research and documentation of disasters. At the State level, disaster management cells operating within the State Administrative Training Institutes (ATIs) provide the necessary training. Presently, 24 ATIs have dedicated faculties. There is a need for strengthening specialised training, including training of personnel in disaster response.
- (d) Capacity building should not be limited to professionals and personnel involved in disaster management but should also focus on building the knowledge, attitude and skills of a

community to cope with the effects of disasters. Identification and training of volunteers from the community towards first response measures as well as mitigation measures is an urgent imperative. A programme of periodic drills should be introduced in vulnerable areas to enable prompt and appropriate community response in the event of a disaster, which can help save valuable lives. Capacity building for effective disaster management therefore needs to be grounded and linked to the community and local level responders on the one hand and also to the institutional mechanism of the State and the Nation on the other.

9.16 : Community Level Initiatives :

The goal of any disaster management initiative is to build a disaster resistant/resilient community equipped with safer living and sustainable livelihoods to serve its own development purposes. The community is also the first responder in any disaster situation, thereby emphasising the need for community level initiatives in managing disasters. To encourage such initiatives, the following are required:

- (a) Creating awareness through disaster education and training and information dissemination are necessary steps for empowering the community to cope with disasters.
- (b) Community based approach followed by most NGOs and Community Based Organisations (CBOs) should be incorporated in the disaster management system as an effective vehicle of community participation.
- (c) Within a vulnerable community, there exist groups that are more vulnerable like women and children, aged and infirm and physically challenged people who need special care and attention especially during disaster situations. Efforts are required for identifying such vulnerable groups and providing special assistance in terms of evacuation, relief, aid and medical attention to them in disaster situations. Management of disasters should therefore be an interface between a community effort to mitigate and prevent disasters as also an effort from DISASTER MANAGEMENT : THE DEVELOPMENT PERSPECTIVE the government machinery to buttress and support popular initiatives.

9.17 : Strengthening of Plan Activities :

Given the pervasive nature of disasters and the widespread havoc caused by some of them, planned expenditure on disaster mitigation and prevention measures in addition to the CRF is required. Though limited in scope and outlays, the Scheme has made an impact on the training and research activities in the country. Creation of faculties in disaster management in all 28 states. There is also an urgent need for strengthening the disaster management pedagogy by creating disaster management faculties in universities, rural development institutes and other organisations of premier research. Sustainability is the key word in the development process. Development activities that do not consider the disaster loss perspective fail to be sustainable. The compounded costs of disasters relating to loss of life, loss of assets, economic activities, and cost of reconstruction of not only assets but of lives can scarcely be borne by any community or nation. Therefore, all development schemes in vulnerable areas should include a disaster mitigation analysis, whereby the feasibility of a project is assessed with respect to vulnerability of the area and the mitigation measures required for sustainability. Environmental protection, afforestation programmes, pollution control, construction of earthquake resistant structures etc., should therefore have high priority within the plans.

The aim of a mitigation strategy is to reduce losses in the event of a future occurrence of a hazard. Structural mitigation may comprise construction of individual disaster resistant structures like retrofitted or earthquake-resistant buildings or creation of structures whose function is primarily disaster protection like flood control structures, dykes, levees, infiltration dams etc. Mitigation measures on individual structures can be achieved by design standards, building codes and performance specifications. Building codes, critical front-line defence for achieving stronger engineered structures, need to be drawn up in accordance with the vulnerability of the area and implemented through appropriate techno-legal measures.

Mitigation measures need to be considered in land use and site planning activities. Constructions in hazardous areas like flood plains or steep soft slopes are more vulnerable to disasters. Necessary mitigation measures need to be built into the design and costing of development projects. Insurance is a potentially important mitigation measure in disaster-prone areas as it brings quality in the infrastructure & consciousness and a culture of safety by its insistence on following building codes, norms, guidelines, quality materials in construction etc. Disaster insurance mostly works under the premise of ‘higher the risk higher the premium, lesser the risk lesser the premium’, thus creating awareness towards vulnerable areas and motivating people to settle in relatively safer areas.

9.18 : THE PATH AHEAD

For addressing natural calamities such as floods and drought, there already exist a number of plan schemes under which a lot is being done and can be done. State Governments need to make full use of the existing plan schemes and give priority to implementation of such schemes that will help in overcoming the conditions created by the calamity. In some cases this implies possible diversion of the funds from other schemes to those schemes the implementation of which will help meeting the situation. There may also be need in a crisis situation for certain re-appropriations/reallocations among the different departments. A mechanism should be evolved to take expeditious decisions on proposals which involve transfer of funds from one scheme to another, or any other change which involves departure from the existing schemes/pattern of assistance, new schemes and relaxation in procedures, etc. in the case of natural disasters.

As the first responder in any disaster situation, however, each State needs to build a team of dedicated trained, skilled personnel, make provision for specialised equipments, efficient communication network, and relevant, intelligent and easily accessible database. There is also a need to consider creation of a plan scheme in each state basically to meet the minimum requirements for strengthening communications and emergency control rooms, thereby improving coordination and response to disasters. No new institutional structures need be created in such a scheme.

9.19 : Developmental Activities being carried out by various departments :

A number of development activities are being carried out by many departments in the district, which can be shifted to disaster affected areas to facilitate the affected public without making additional provisions of budget for the restoration process:

1. **MGNREGA**: The activities being carried out through MGNREGA like re-construction of path, rural bowaries, damaged field of local people, damaged orchards etc. can be restored through this schemes.
2. **Agriculture & Horticulture Technology Mission** : Facilities being provided to general public under these schemes can be used for rehabilitating the affected farmers.
3. **Sarv Shiksha Abhiyaan** : New Rooms in affected schools can be constructed under this schems for accelerating the restoration process.
4. **Free Text Book Scheme to Students** : The Scheme launched by the State can be useful for the disaster affected children.
5. **Free Uniform To Students** : The Scheme launched by the State can be useful for the disaster affected children.
6. **Rural Health Mission** : Necessary equipments can be purchased and made available to affected health sub-centres, PHC and CHCs.
7. **Anganbari Buildings**: The Scheme launched by the State for construction of anganbari buildings can be used for restoring the institutions in affected places.
8. **District Development Funds** : Funds can be sanctioned/diverted for restoring the affected Govt. buildings under 5% LADP, MPLADS, MLA Funds etc.
9. **National Rural Livelihood Scheme** : This scheme can be shifted for purchasing milch animals, vegetable growing to BPL families.
10. **Indira & Rajiv Awaas Yojna** : This scheme can be shifted for construting houses by BPL families.
11. **Guru Ravi Dass Civic Ameties Up-gradation Scheme** : This schemes can be implemented fot the upliftment of SC/ST dominated places/areas.
12. **Nirmal Bharat Abhiyan** : This schemes can also be implemented for the making proper sanitation in affected areas.
13. **Integareted Watershed Development Scheme** : This scheme can be implemented for the development of land damaged due to natural calamities.
14. **State Disaster Response Fund (SDRF) & National Disaster Response Funds (NDRF)** : relief on account of damage to life/property is provided under SDRF/NDRF without any discrimination as per norms of Himachal Pradesh Disaster Management & Relief Manual-2012.

CHAPTER-10

Budget & Other financial allocations :

10.1 : Budget Provisions :

As per provisions laid down in Section 48 of Disaster Management Act, 2005 and Rule 10 of Himachal Pradesh State Disaster Management Policy/Rule, 2011, Himachal Pradesh Govt. has notified the “STATE DISASTER RESPONSE FUNDS” for meeting the expenses on account of relief, which are made available to concerned Deputy Commissioners and other departments yearly. Besides, the relief is imparted to affected persons/families as per provisions laid down in Himachal Pradesh Emergency Relief Manual. Brief detail is given hereunder :

10.1 (1). Budget and Financial Allocation.

Year	Budget received and spent	Sub-head wise Allocations and expenses								Total
		Gratuitous Relief	Transportation of drinking water	Transportation subsidy on fodder	Repair & Restoration of damaged works	Installation of hand pumps	Repair of water supply schemes	Procurement of emergency equipments	Relief on account of damage to agri.& Hort. crops	
2007-08	Received	2 Crore	7 lacs	--	3 Crore	--	50 lacs	--	1 Crore	
	Spent	2 Crore	6,96,636	--	3 Crore	--	50 lacs	--	73,960	
	Balance	--	3364 surrendered	--	--	--	--	--	99,26,040 diverted to Gratuitous Relief	--
2008-09	Received	1.30 Crore	70 lacs	5 lacs	1.75 Crore	2 Crore	--	--	--	5.80 Crore
	Spent	1.30 Crore	70 lacs	5 lacs	1.75 Crore	2 Crore	--	--	--	5,90,68,039 i.e Rs.10,68,039 excess

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

										drawl by the SDM Kandag hat.
	Balan ce	--	--	--	--	--	--	--	--	--
2009- 10	Recei ved	1.75 Crore	1.55 Crore	20 lacs	1.50 Crore	5 Crore	--	1 lac	--	9,93,00, 000
	Spent	1.25 Crore	1.55 Crore	1,71,5 00	1.50 Crore	5 Crore	--	98,834	--	9,93,00, 000
	Balan ce	50 lacs surren dered	--	18,28, 500 diverte d to RRD W.	--	--	--	1166 surren dered	--	50,01,1 66 surren dered.
2010- 11	Recei ved	2.50 Crore	75 lacs	10 lacs	1 Crore	--	--	--	--	4,35,00, 000
	Spent	2.50 Crore	75 lacs	1,49,0 17	1 Crore	--	--	--	--	4,26,49, 017
	Balan ce	--	--	8,50,9 83 surren dered	--	--	--	--	--	8,50,98 3 surren dered
2011- 12	Recei ved	2.50 Crore	53 lacs for meeting previou s year liability	--	77 lacs includ ing previo us year liabilit y	--	Rs.1 lac for prepar ation & circul ation of DDM P	7 lacs	Rs.1 lac for Mock Drill and celebe ration of INDE R Day	389 lacs
	Spent	1,17,31 ,498	50,41,8 77	--	77,00, 000	--	NIL	7,00,0 00	73,341	2,47,46, 716
	Balan ce	1,32,68 ,502 surren dered.	2,58,12 3 being used.	--	NIL	--	Being used.	NIL	26659 surren dered	1,41,53, 284
2012- 13	Recei ved	3.45 Crore	9,84,00 0	--	50 lacs	--	--	--	--	4,04,84, 000
	Spent	3 Crore	9,83,98 5	--	50 lacs	--	--	--	--	3,59,83, 985
	Balan ce	45 lacs surrend	Rs.15 surrend	--	NIL	--	--	--	--	45,00,0 15

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

		ered	ered							
2013-14	Recei ved	212 Lacs	--	--	150 lacs i.e. 60 lacs to bldgs, 50 lacs to rads and 40 lacs to water suppl y schem es.	2 lacs capaci ty buildi ng	--	10 lacs	1,56,3 77	--
	Spent	70 lacs	--	--	150	Under proce ss	--	Under proces s	1,56,3 77	--
	Balan ce	142 lacs	--	--	NIL	--	--		--	--

10.1 (2).Emergency Relief :

Relief is being provided to the affected persons and families in accordance with the norms prescribed in **"Himachal Pradesh Disaster Management & Relief Manual 2012"** and earlier instructions circulated by the Govt. from time to time in respect of the calamities prescribed in the Relief Manual.

10.3 (3).District Relief Funds and District Red Cross Funds :

It is well known that the loss caused due to any calamity or eventuality may be in multiple proportions which can not be compensated by the Government or District Administration completely. As such as per the direction of Government DISTRICT RELIEF FUND and DISTRICT RED CROSS FUND are being operated by the DEPUTY COMMISSIONER and the assistance is being granted as per the norms and nature of calamity or ailment to the affected persons from requisite fund. Therefore it is necessary to strengthen the DRF and DRCF by donating maximum possible finances to these funds through SDO(c) concerned who will also issue requisite receipt. This is also a NOBLE cause and true service of mankind. It has been experienced in the recent past that the organizations like RED CROSS SOCIETY has done a lot towards MANKIND by helping the poor and needy persons through limited sources and special efforts and activities like earning by way of organizing RED CROSS FAIRS, selling red cross tickets and plying the AMBULANCE vehicle etc. are also carried out by the DRCF.

CHAPTER-11

Monitoring & Evaluation:

11.1. Proper Monitoring & Evaluation of DM Plan :

The District Disaster Management Plan will be reviewed annually in the month of April every year under the over all Supervision of Deputy Commissioner, Solan. Additional District Magsitarate, Sub-Divisional Magsiistrates and Tehsildars/Naib-Tehsildars of District Solan will be members for submitting suggestions to Deputy Commissioner, Solan and the District Revenue Officer, Solan will assist the Deputy Commissioner, Solan for updating and revising the DDMP annually.

11.2. Post Disaster Evaluation mechanism :

On completion of restoration and relief task the pros & cons of the calamity/disaster will be reviewed immediately under the over all Supervision of Deputy Commissioner, Solan. Additional District Magsitarate will take feedback from concerned Sub-Divisional Magsiistrates and Tehsildars/Naib-Tehsildars of District Solan being Nodal Officer at District Level and he will submit a detailed report & suggestions to Deputy Commissioner, Solan for removing bottlenecks and other problems caused during any relief & rescue operation.

11.5: Regular Updation Process :

The District Disaster Management Plan will be update at least once in a year and all relevant information will be incorporated in the DDMP, if there will be any change.

11.6 : Periodic uploading of updated plans at India Disaster Knowledge Network (IDKN) and resources on India Disaster Resource Network (IDRN) :

The District Disaster Management Plan of Disrict Solan has not been uploaded on above websites till date, which will be uploaded very shortly on updation of DDMP.

11.5 : Periodic Mock Drills :

The Superintendent of Police Solan, Baddi and Commandant Home Guards, District Solan will ensure regular mock drills for the awareness of public of officers/officials of various departments in the district. All concerned departments like, Health, HPPWD, I&PH, Education etc. will assist them for treamlining the process.

11.6 : Whether all the personnel involved in execution of DDMP are trained and updated on the latest skills necessary for Relief & Rescue Operation :

The Deputy Commissioner, Solan will ensure that the Administrative Officers of District like Additional District Magsitarate, Sub-Divisional Magsiistrates and Tehsildars/Naib-Tehsildars of District Solan are being imparted necessary training on relief & rescue operation from time to time alongwith field agencies of the department.

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).**ANNEXURE - A****Important Telephone Numbers****District Administration :**

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
Sh.Madan Chauhan, IAS, Deputy Commissioner, Solan	01792-220656	01792-220555	01792-220086 & 223704.	94182-00013
Sh.C.P.Verma, HAS ADM Solan	01792-223705	01792-220076	-do-	94184-92888
Subhash Saklani, HAS, AC to DC Solan.	01792-223706	01792-220610	-do-	94181-64050
Sh.Manoj Kumar Chauhan, HAS, AC to DC (Protocol) Parwanoo	01792- 233165	01792- 233165	-do-	94183-44337
Sh.Narender Chauhan, District Revenue Officer, Solan.	01792-224033	--	-do-	94598-78383
Sh.Bimla Devi, Tehsildar (Recovery) Solan.	01792-223702	--	01792-223704	--

Information of SDMs :

Sr. No.	District	Name of Sub-Division	Name of SDM	Office Phone number	Mobile number
9.	Solan	Solan	Sh.Tashi Sandup, HAS	01792-223707	94182-48336
10.	Solan	Nalagarh	Sh.Lalit Jain, IAS	01795-223024	86279-13120
11.	Solan	Arki	Sh.L.R.Verma, HAS.	01796-220666	94180-63777
12.	Solan	Kandaghat	Sh. Surender Mohan Sani, HAS	01792-256100	94183-41989

Information of Tehsildars and Naib-Tehsildars :

Sr. No.	District	Name of Sub-Division	Name of Tehsil or Sub-Tehsil	Name of Tehsildar and Naib-Tehsildar	Office phone number	Mobile number
31.	Solan	Solan	Solan	Sh.Kavita Thakur, Tehsildar Solan	01792-223708	94184-51110
32.	Solan	Solan	Solan	Sh.Rajinder Zinta	01792-223708	94184-77855

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33.	Solan	Solan	Kasauli	Sh.Narayan Singh Chauhan, Tehsildar Kasauli.	01792-272037	94180-73572
34.	Solan	Solan	Kasauli	Sh.Sunder Sain Negi	01792-272037	94181-19316
35.	Solan	Solan	Krishangarh	Sh.Govind Singh Bali Naib-Tehsildar Krishangarh	01792-284556	98165-81585
36.	Solan	Nalagarh	Nalagarh	Sh.K.S.Lalta, Tehsildar Nalagarh	01795-223044	98163-21954
37.	Solan	Nalagarh	Nalagarh	Sh.T.L.Negi, Naib-Tehsildar, Nalagarh.	01795-223044	98051-87617
38.	Solan	Nalagarh	Ramshahar	Sh.Dharam Singh, Naib-Tehsildar, Ramshahar.	01795-258533	94185-72480
39.	Solan	Kandaghat	Kandaghat	Sh.Prem Singh Dulta, Tehsildar Kandaghat	01792-256143	94180-76633
40.	Solan	Kandaghat`	Kandaghat	Sh.Yogender Sain, Naib-Tehsildar Kandaghat	01792-256143	89881-96088
41.	Solan	Arki	Arki	Sh.Girish Saklani, Tehsildar Arki	01796-220888	94180-16600
42.	Solan	Arki	Arki	vacant, Naib-Tehsildar Arki	01796-220888	--
43.	Solan	Nalagarh	Baddi	Sh.Keshav Ram, Tehsildar Baddi.	01795-244620	94181-63780
44.	Solan	Arki	Darlaghat	Sh.Joginder Sambra NT Darlaghat.	01796-248101	94188-13299
45.	Solan	Kandaghat`	Mamlig	Sh.Yogender Sain, Naib-Tehsildar Kandaghat (officiating)	--	89881-96088

Sub-Divisional Kanungos, Office Kanungos & AOKs:

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
Sh.Tek Ram, SDK Solan.	01792-223707	--	-do-	94180-07255
Sh.Dev Dutt Sharma, SDK Nalagarh	01795-223024	--	01795-223024	98164-44526
Sh.Basant Ram, SDK Arki	01796-220666	--	01792-220666	94180-66559
Sh.Dharam Pal SDK Kandaghat	01792-256100	--	01792-256100	94180-55038
Sh.Ramesh Chandel, Office Kanungo, Solan	01792-223708	--	--	94181-26594
Sh.Hira Singh, Office Kanungo, Kasauli	01792-272037	--	01792-272037	98161-30972

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Sh.Daya Ram, LRK Kasauli.	01792-272037	--	01792-272037	
Sh.Lekh Ram, Office Kanungo, Krishangarh	01792-284556	--	01792-284556	98163-07094
Sh.Ashwani Kumar, Office Kanungo, Nalagarh	01795-223044	--	01795-223024	98167-53751
Smt. Shakuntla Devi, AOK Nalagarh	01795-223044	--	01795-223024	94180-60131
Sh.Gurucharan Dass, Office Kanungo, Ramshahar.	01795-258533	--	01795-258533	98166-43380
Sh.Sita Ram, Office Kanungo, Kandaghat	01792-256143	--	01792-256100	98165-30392
Land Reforms Kanungo, Kandaghat	01792-256143	--	01792-256100	vacant
Sh.Lekh Ram, Office Kanungo Arki	01796-220888	--	01796-220666	94182-32086
Sh.Nand Lal, Land reforms Kanungo Arki.	01796-220888	--	01796-220666	94180-77774
Sh.Bahadur Singh, AOK Arki	01796-220888	--	01796-220666	98168-20417
Sh.Sawaroo Ram, Office Kanungo, Baddi	01795-244620	--	01795-248600	94181-35394
Sh.Asha Ram, Office Kanungo Sub-Tehsil Darlaghat (officiating)	--	--	--	94189-15873
Sh.Ram Naresh, Office Kanungo, Sub-Tehsil Mamlig(officiating)	--	--	--	94184-48683

ANNEXURE-A1

Telephone Numbers of Adjacent States/Districts DCs :

C. Adjacent District of Himachal Pradesh :

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
5. Dr.Ajay Sharma, IAS, Deputy Commissioner, Bilaspur.	01978-224155	01978-224150	01978-223065	094180-68206
6. Sh.Vikas Labroo, IAS, Deputy Commissioner, Sirmour	01702-225025	01702-225026	01702-223175	94189-00032
7. Sh.Dinesh Malhotra, IAS, Deputy Commissioner, Shimla	0177-2655988	0177-2803400	0177-2653535	094184-00454
8. Sh.Devesh Kumar, IAS, Deputy Commissioner, Mandi.	01905-225201	01905-236202	01905-225213	098055-00005

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D. Adjacent Districts of other States :

Name of & Designation of the Deputy Commissioner.	Phone number Office	Mobile Number.
1. Sh.Mohammad Shayin, IAS, Deputy Commissioner, Chandigarh, Bridge Market, Sector 17, Chandigarh-17 (UT).	0172-2700109 (O). 0172-2784222 (R).	087250- 00786
2. Dr.S.S.Phulia, IAS, Deputy Commissioner, Panchkula, Sector-1 Panchkula (Haryana State)	0172-2585000	095011- 15566
3. Sh.Pradeep Kumar Aggarwal, IAS, Deputy Commissioner, Roopnagar (Punjab State).	01881- 221150 (O) 01881-221250 (R)	094638- 37820
4. Sh.Tejender Pal Singh Sidhu, IAS, Deputy Commissioner, SAS Nagar, Mohali (Punjab State)	0172-2270761	098889- 87867.

ANNEXURE-B**Telephone Numbers of State EOC, NEOC, NDRF, Regional Response Centers, Army Radio & Doordarshan etc. :****(i) Telephone Numbers of State EOC:**

Name of & Designation of the Officer	Phone number		
	Office	Residence	Fax
Mrs.Meera Mohanty, Special Secretary (Revenue) to the Govt. of H.P. Shimla-2.	0177-2628480 & 2880472	0177-2625903	0177-2625657

(ii) Telephone Numbers of NEOC :

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
--	--	--	--	--

(iii) Telephone Numbers of State NDRF :

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
Deputy Commandant, 7 th BN NDRF, P.O. Box No:81, bathinda (Punjab)	01642246570	-	01642246570	09417802063

(iv) Telephone Numbers of Regional Response Centers

Name of & Designation of the Officer	Phone number			
	Office	Residence	Fax	Mobile number
--	--	--	--	--

(i) Telephone Numbers of Radio & Doordarshan Kendras :**(a) Govt. Institutions :**

Address	Phone number
Akasvani Kendra, Chaura Maidam, Shimla-4	0177-26804400, 2657453, 2653050,

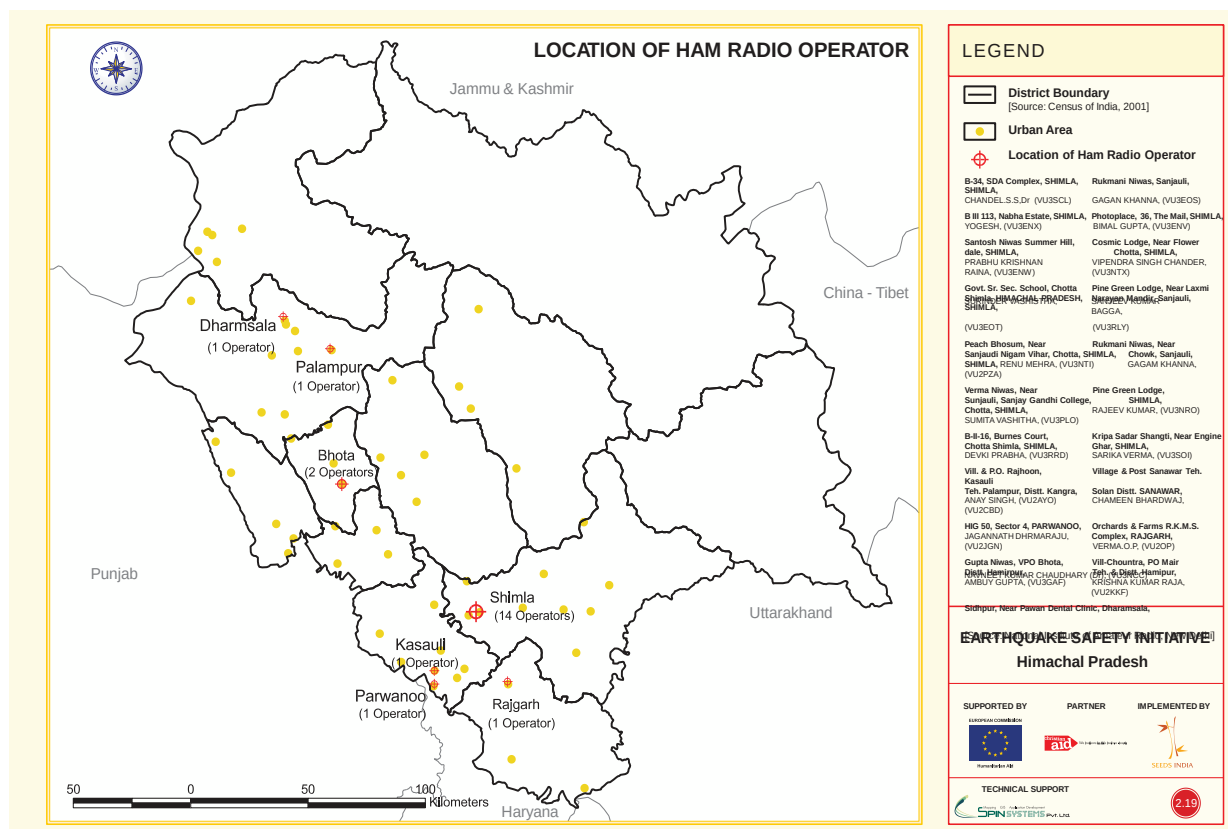
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	2653047, 2657301
Doordarshan Kendra, Chaura maidam, Shimla-4	0177-2811450
Akasvani Kendra, Sector-34 D, Chandigarh	0172-2601847, 2601844, 2601846
Doordarshan Kendra, Sector-37 B, Chandigarh	0172-2623835

(b) Private Institutions :

Address	Phone number
MS Panwar Institute Local Community Radio/FM	01792-229297
Local Cable Network-City Channel	01792-224795 & 224876

(c) Ham Radios with location :



District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).**ANNEXURE-C****Telephone Numbers of Panchayati Raj Institutions :****District/Block Level Offices :**

Name of & Designation of the Officer	Phone number		
	Office	Residence	Fax
District Panchayat Officer, Solan	01792-223756	--	01792-223756
Dy. Director (RD)-cum-Project Officer, DRDA, Solan	01792-223915 225704	--	01792-223915
BDO Solan	01792-223871	--	01792-223871
BDO Kunihar	01796-262230	--	01796-262230
BDO Kandaghat	01792-256238	--	01792-256238
BDO Dharampur	01792-264042	--	01792-264042
BDO Nalagarh	01795-223026	--	01795-223026

ANNEXURE-D**List & Telephone Numbers of NGOs :**

The list of NGOs being obtained from SDMs, Tehsildars and Naib-Tehsildar concerned who really participate in search and rescue operation during wake of disasters. In addition to this following volunteers were imparted special training course at **Water Adventure Academy, R/O Village Banala, P.O. Aut, District Mandi, H.P** in December, 2013 as per direction of Govt., particulars are as under :

Sr. No.	Tehsil	Name and address of volunteer	Educational qualification	Mobile/ Phone number
1.	Nalagarh	Sh.Kunal Gupta S/O Sh.Murli Manohar Gupta, R/O Ward No:8, Near Gurudwara Nalagarh, Tehsil Nalagarh, District Solan	B.Tech	97364-64545
2.	Nalagarh	Sh.Aman S/O Gurnam Singh Chandel R/O Adrash Colony Dattowal, Near Bombay House, Tehsil Nalagarh, District Solan	B.Tech	94184-27400
3.	Nalagarh	Sh.Ajay Vikram S/O Sh.Joginder Singh R/O House No:4, Type-II General pool Colony, ward No:2, Tehsil Nalagarh, District Solan	B.Tech	97367-05499

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4.	Baddi	Sh.Yogesh Kumar S/o Sh.Babu Ram R/o Village Saraj Majra Labana, Ward No:3, P.O. and Tehsil Baddi	12 th	98160-46433
5.	Baddi	Sh.Sukhvinder Singh S/O Sh.Dalwara Singh R/o Village Saraj Majra Labana, Ward No:3, P.O. and Tehsil Baddi	12 th	80912-26990
6.	Baddi	Sh.Pradeep Kumar S/o Sh.Bant Ram R/o Village Chakkan, P.O. Karoana, Tehsil Baddi, District Solan (H.P.)	12 th	98821-46484
7.	Sub-Tehsil Ramshahar	Sh.Naresh Kumar S/O Sh.Bhag Singh R/O Village Jabal, P.O. Dharmana, Sub-Tehsil Ramshahar.	Graduate	88944-22727
8.	Sub-Tehsil Ramshahar	Sh.Rajeev Kumar S/O Sh.Nand Lal R/O Village Ghamsana, P.O. Dharmana, Sub-Tehsil Ramshahar.	12 th	88942-48662
9.	Sub-Tehsil Darlaghat	Sh.Harish Kumar S/O Sh.Narender kumar R/O Village Gawah, P.O. Darlaghat, Sub-Tehsil Darlaghat	12 th	98822-38338
10	Sub-Tehsil Darlaghat	Sh.Vinod Kumar S/O Sh.Mansa Ram R/O Village Gawah, P.O. Darlaghat, Sub-Tehsil Darlaghat	12 th	88941-30600
11.	Arki	Sh.Pramod Kumar Pal S/O sh.Muni Lal R/O Village and p.O. Dumehar, Tehsil Arki, District Solan	Graduate	94598-6463
12.	Arki	Sh.Deepak Shandil S/O Sh.Nath Kumar R/O Village and P.O. Dumehar, Tehsil Arki, District Solan	Graduate	88946-77907
13.	Solan	Sh.Pradeep Thakur S/O Sh.Hira Singh C/O Boys School, Solan	10+2	94181-01406
14.	Solan	Sh.Sanjeev Sharma S/O Sh Amar Singh C/O Sanatan Dharam Mandir, Rabon, Tehsil & District Solan.	10+2	98575-76400
15.	Kandaghat	Sh.Sahil Verma S/O Sh.Hem Raj R/O Main Bazar Kandaghat, Tehsil Kandaghat, District Solan	BA 1st Year	97366-52532
16.	Kandaghat	Sh.Lal Chand S/O Sh.Kanhaiya Ram R/O Village Mahog, P.O. Dhayawla, Tehsil Kandaghat, District Solan	10 th	94185-13394

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The Superintendent of Police, Baddi & Solan, Commandant, Home Guards and Fire Services, District Solan will prepare a joint SAR Team including resource persons for each unit and pulchize it alongwith their telephone numbers and a copy of the same will be sent to this office for record and adding in District Disaster management Plan. Which will be reviewed annually by concerned departments and revised copy will be sent to this office for updation.

ANNEXURE-F**List & Telephone Numbers of NYKs :**

Name of & Designation of the Officer	Phone number	
	Office	Mobile No.
Smt Ira Prabhat, District Youth Co-ordinator, Nehru Yuva Kendra, Solan	01792-220544	94188-18512

ANNEXURE-G**Contact Numbers of NCC and NSS :****Contact Numbers of NCC**

Sr. No.	Designation of the officer with department.	Office /Mobile number.
1	CO, NCC (Boys) Solan.	01792-223774
2.	CO, NCC (Girls) Solan	01792-220459
3.	Prof.Prem Sharma, Nodal Officer, NCC (Girls), GPGC Nalagarh	94182-85300
4	Prof.Naresh , Nodal Officer, NCC (Boys), GPGC nalagarh	98164-19397
5.	Sh.Devender Sharma, GSSS Sai	94180-69259
6.	Sh.Baufla Sharma, GSSS Nalagarh (B)	98160-90497
7.	Smt. Monika Sharma, GSSS Gullarwala	94180-02168
8.	Smt.Meenakshi Sapru, GSSS Solan (G)	94180-39611
9.	Sh.Ajay Kumar, GSSS Kandaghat	98173-19151
10.	Sh.Mohinder Singh, GSSS Solan (B)	94185-69057
11.	Sh.Kamal Kishore Sharma, GSSS Kasauli	94180-29184
12.	Sh.Sabir Mohammad, GSSS Barotiwala.	94186-72298
13.	Smt. Surender Kaur, GSSS Parwanoo	94180-55877
14.	Smt. Vij Kumari, GSSS Arki (G)	98169-27934
15.	Sh.Lekh Raj Sharma, GSSS Bhumti	94184-60824
16.	Sh.Lal Chand Pal, GSSS Darlaghat	94595-14291

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17.	Sh.Mahender Pal, GSSS Chandi (A)	98171-09076
18.	Sh.Devender Kumar, GSSS Navgaon.	98164-12858
19.	Smt.Sudesh Kumari, GSSS Rajri-Jabli.	98161-12192
20.	Sh.Navender Gupta, GSSS Kunihar	94188-94168
21.	Sh.Kamleshwar Gupta, GSSS Sayari	94181-63919
22.	Smt.Punam saini, GSSS Oachghat.	94182-28611
23.	Smt.Sunita Gautam, GSSS Chaichhi	94591-55387
24.	Smt.Tarun Nesta, GSSS Arki (B)	94184-76944
25.	Sh.Jagdish Bhardwaj, GSSS mamlig	94181-74966
26.	Sh.Surinder Thakur, GSSS Ramshahar	98160-28606
27.	Sh.Sunil Kumar, GSSS Diggall	94186-30106
28.	Sh.Ramesh Sharma, GSSS Manjholi.	94183-21079
29.	Sh.Madan Lal, GSSS Chail.	94188-42887
30.	Sh.R.K.Kaushal, GSSS Dhundan	94185-30875
31.	Adesh Kumar, GSSS Badhalag.	94186-81550
32.	Sh.Anil Kumar, GSSS Nalagarh (B)	94160-49225
33.	Sh.Balak Ram, GSSS Manpura	94181-00354
34.	Sh.Yashwant Singh, GSSS Dharampur.	98166-16767
35.	Sh.Arvind Kumar, GSSS Patta Mehalog.	94592-43611
36.	Sh.Ranbir Chand, GSSS Dabhota.	94186-49405
37.	Sh.Manish dev, GSSS Joghon.	97368-53535
38.	Sh.Payre lal, GSSS Baruna	94182-17450
39.	Sh.Dharam Lal Thakur, GSSS Nand	97361-94790
40.	Sh.Ravinder Verma, GSSS Chamiyan.	94180-67833
41.	Sh.Bhupinder Pal, GSSS Chandi (A)	94597-89220
42.	Sh.Sohan lal, GSSS Goela	94183-23900
43.	Sh.Chander Dev, GSSS Chhausa	94184-60884
44.	Sh.Prem Dutt, GSSS Kuthar	94170-06017
45.	Sh.Rakesh Kumar, GSSS Sultanpur.	94185-48962
46.	Sh.Bhupinder Gupta, GSSS Bhumti.	94184-72166
47.	Sh.Sudheer Sharma, GSSS Gaura.	94180-79002
48.	Smt. Nirmal Kumari, GSSS Kuftu.	94183-42344
49.	Sh.Gopal Singh, GSSS Salogra	98170-68082
50.	Sh.Subhash Chand, GSSS Navgaon	94184-21520
51.	Smt. Kanchan, GSSS Subathu	94181-54251
52.	Sh.Kuldeep Gautam, St. Lukes SSS Solan.	94183-58519
53.	Sh.Sushil Kumar, GSSS Chinmya Vidalaya Nauni	94181-53981

Contact Numbers of NSS

Sr. No.	Designation of the officer with department.	Mobile number.
1	Sh.Chet Ram, Associate Professor in Geography, GDC Arki, District Solan (H.P.).	92187-81146
2.	Sh.Joginder Singh Saklani, GPGC Solan , District Solan (H.P.).	94184-52390
3.	Sh.Tulsi Raman Sharma, GPGC Solan , District Solan (H.P.).	94181-10012
4.	Prof.Satwinder Singh, Nodal Officer, NSS, GPGC Nalagarh	98162-39933

ANNEXURE-H**List of Nodal Officer (DM) :**

Sr. No.	Office	Phone number	Tehsil/Sub-Tehsil	Phone number
1.	ADM Solan	01792-223705	As detailed below	--
2.	SDM Solan	01792-223707	1. Tehsildar and Naib-Tehsildar Solan.	01792-223708
			2. Tehsildar and Naib-Tehsildar Kasauli.	01792-272037
			3. Naib-Tehsildar Krishangarh.	01792-284556
3.	SDM Nalagarh	01795-223024	4. Tehsildar and Naib-Tehsildar Nalagarh.	01795-223044
			5. Naib-Tehsildar Ramshahar	01795-258533
4.	SDM Kandaghat	01792-256100	6. Tehsildar and Naib-Tehsildar Kandaghat.	01792-256143
5.	SDM Arki	01796-220666	7. Tehsildar and Naib-Tehsildar Arki.	01796-220888

ANNEXURE-I

Resource Inventory:

Departmentwise full detail is uploaded on www.idrn.nic.in, however brief detail of some important equipments is as under :

General	Item	Contact person	Telephone number	Address.
	• Rope	AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		5 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi
		5 Numbers with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
		300 mtrs with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
	• Shovel	4 numbers	01792-230837	Police Line Solan
		190 number	01792-272067	XEN HPPWD Kasauli
		3 numbers	01792-256232	Krishi Vigyan Kendra, Dedgharat
		AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		120 number XEN HPPWD Nalagarh	01795-222199	XEN HPPWD Nalagarh
		3 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi
		230 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
		190 number XEN HPPWD Kasauli	01792-272067	XEN HPPWD Kasauli
		2 Numbers with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
		6 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
	• Pickaxe	AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		275 number	01792-272067	XEN HPPWD Kasauli
		8 numbers	Police Line Solan	01792-230837
		6 numbers	01792-256232	Krishi Vigyan Kendra, Dedgharat
		100 number XEN HPPWD Nalagarh	01795-222199	XEN HPPWD Nalagarh
		2 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi

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		300 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
		3 Numbers with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
		275 number XEN HPPWD Kasauli	01792-272067	XEN HPPWD Kasauli
	• Axe	AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		5 number	01792-272067	XEN HPPWD Kasauli
		3 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
		1 number	01792-256232	Krishi Vigyan Kendra, Dedgharat
		EO MC Nalagarh	01795-223028	EO MC Nalagarh
		12 + 5 large Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
		2 Numbers with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
		2 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi
		10 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
		5 number XEN HPPWD Kasauli	01792-272067	XEN HPPWD Kasauli
	• Hacksaw	AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		1 Number with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
	• Hammer	AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		20 number	01795-222199	XEN HPPWD Nalagarh
		19 number	01792-272067	XEN HPPWD Kasauli
		1 number	01792-256232	Krishi Vigyan Kendra, Dedgharat
		5 Numbers with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
		2 Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
		3 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi
		3 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur

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		25 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
		19 number XEN HPPWD Kasauli	01792-272067	XEN HPPWD Kasauli

Rescue	Item	Contact person	Telephone number	Address.
	• Searchlight	6 numbers	01792-230837	Police Line Solan
		3 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
		15 numbers with all the SDMs, Tehsildars and NTs in the District.	As envisaged in Para 2 above manpower	As envisaged in Para 2 above manpower
		3 Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
		2 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi
	• Portable public address system	3 numbers	Police Line Solan	01792-230837
		1 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
		1 number	01792-256232	Krishi Vigyan Kendra, Dedgharat
		1 Number with Fire Officer Baddi	01795-245352	Fire Officer Baddi
	• Siren or hooter	2 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
	• Stretchers	4 numbers	Police Line Solan	01792-230837
		3 Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
		2 Numbers with Fire Officer Parwanoo	01792-233223	Fire Officer Parwanoo
		2 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

		2 Numbers with Fire Officer Baddi	01795-245352	Fire Officer Baddi
	• Two way communication system	--	--	--
	• Portable generator.	3 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur

Specialized/Heavy	Item	Contact person	Telephone number	Address.
	• Earth moving Equip	3 JCBs	94184-65688	AE,HPPWD Arki
		6 number JCBs	01795-222199	XEN HPPWD Nalagarh
		5 number JCBs	01792-272067	XEN HPPWD Kasauli
		5 number JCBs	01792-223811	XEN HPPWD Solan
		3 numbers of JCBs	01792-223804	XEN(NH) Div. Solan stationed at Sub-Div. Nalagarh, Chambaghat, Darlaghat.
	• Crane	1 numbers	Police Line Solan	01792-230837
	• Rigs	--	--	--
	• Gas cutter	1 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
	• Bolt Cutter	2 Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
	• Welding machine	1 AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
		2 Numbers RM HRTC Office Solan.	01792-230813	RM HRTC Office Solan.
		1 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
		2 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
	• Steel cables.	--	--	--

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

	•	Jacks	2 Numbers RM HRTC Office Solan.	01792- 230813	RM HRTC Office Solan.
			3 Numbers with Fire Officer Solan	01792- 223888	Fire Officer Solan
			8 with RTC CRPF Dharampur	01792- 265479	RTC CRPF Dharampur
			7 number XEN HPPWD Solan	01792- 223811	XEN HPPWD Solan
	•	Boats	--	--	--
	•	Life Jackets	5 Numbers with Fire Officer Solan	01792- 223888	Fire Officer Solan
	•	Water Tankers	1 Number with Fire Officer Solan	01792- 223888	Fire Officer Solan
			3 Numbers with Fire Officer Parwanoo	01792- 233223	Fire Officer Parwanoo
			1 with RTC CRPF Dharampur	01792- 265479	RTC CRPF Dharampur
			3 Numbers with Fire Officer Baddi	01795- 245352	Fire Officer Baddi
	•	Fire Tenders	4 water tenders with Fire Officer Solan	01792- 223888	Fire Officer Solan
			1 water bouser with Fire Officer at Solan	01792- 223888	Fire Officer Solan
			3 Numbers 1 small and 2 standard water Tender with Fire Officer Parwanoo	01792- 233223	Fire Officer Parwanoo
			2 water tenders with Fire Officer	01795- 245352	Fire Officer at Baddi

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

		at Baddi			
		2 water bouser with Fire Officer at Baddi	01795-245352	Fire Officer at Baddi	
		4 water 2 small and 2 standard water Tender with Fire Officer at Nalagarh	01795-245352	Fire Officer at Nalagarh	
		2 water bouser with Fire Officer at Nalagarh	01795-245352	Fire Officer at Nalagarh	
	• Tenders	Foam	1 Number with Fire Officer Solan	01792-223888	Fire Officer Solan
	•	Ambulance	1 numbers	Police Line Solan	01792-230837
			1 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
	•	Transport Vehicles.	83 Numbers Buses, 1 tanker and 1 cab	01792-230813	RM HRTC Office Solan.
			10 numbers with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
			2 number XEN HPPWD Solan	01792-223811	XEN HPPWD Solan
	•	Tippers.	3 tippers AE,HPPWD Arki	94184-65688	AE,HPPWD Arki
			3 number XEN HPPWD Nalagarh	01795-222199	XEN HPPWD Nalagarh
			1 tipper Secretary NP Arki	01796-220803	Secretary NP Arki

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		4 number XEN HPPWD Kasauli	01792- 272067	XEN HPPWD Kasauli
		3 number XEN HPPWD Solan	01792- 223811	XEN HPPWD Solan
	• Tractors.	1 number	01795- 223028	EO MC Nalagarh
		1 number	01792- 256232	Krishi Vigyan Kendra, Dedgharat
	• Dumper placers	1 number	01795- 223028	EO MC Nalagarh
	• Tricycle	1 number	01795- 223028	EO MC Nalagarh
	• Trucks	2 Numbers with XEN, HPSEB Solan	01792- 221418	XEN, HPSEB Solan
		2 Numbers with XEN, HPSEB Parwanoo	01792- 233104	XEN, HPSEB Parwanoo
		2 Numbers with XEN, HPSEB Nalagarh	01795- 223097	XEN, HPSEB Nalagarh
		2 Numbers with XEN, HPSEB Arki	01796- 220745	XEN, HPSEB Arki

Office	Phone number	Strength of Staff	Fire Engines/ Vehicles	Number of Fire Hydrants.
Fire Officer Solan	01792-223888	18 Trained personnels & 11 Home Guards.	5	27 at various location in Solan Town.
Fire Officer, Parwanoo	01792-232233	19 Trained personnels & 5 Home Guards.	3	25 at various location in Parwanoo Town.
Fire Officer, Baddi	01795-245352	15 Trained personnels & 8 Home Guards.	4	16 at various location in BaddiTown.
Fire Officer, Nalagarh	01795-223294	13 Trained	5	20 at various locations of

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

	01795-223175	personnels & 9 Home Guards.		Nalagarh Town.
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Materials	Item	Contact person	Telephone number	Address.
	• GI Sheets	--	--	--
	• Asbestos sheets	--	---	--
	• Tarpaulin	20 Numbers RM HRTC Office Solan.	01792-230813	RM HRTC Office Solan.
		2 number	01792-256232	Krishi Vigyan Kendra, Dedgharat
		16 Numbers Tehsildar Solan	01792-223708	Tehsildar Solan
		10 Numbers Tehsildar Kasauli	01792-272037	Tehsildar Kasauli
		10 Numbers NT Krishangarh	01792-284556	NT Krishangarh
		10 Numbers SDM Arki	01796-220666	SDM Arki
		10 Numbers SDM Kandaghat	01792-256100	SDM Kandaghat
		30 Numbers SDM Nalagarh.	01795-223024	SDM Nalagarh.
		4 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
		5 Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
		1 Number with GM Industries, Solan	01792-230528	GM Industries, Solan
	• Plastic sheets	2 Numbers with Fire Officer Solan	01792-223888	Fire Officer Solan
	• Tents	7 numbers	Police Line Solan	01792-230837
		20 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
	• Bedding	30 number	01792-256232	Krishi Vigyan Kendra, Dedgharat
	• Blankets	130 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
	• Beds	140 with RTC CRPF Dharampur	01792-265479	RTC CRPF Dharampur
		20 numbers	01792-256232	Krishi Vigyan Kendra, Dedgharat

District Disaster Management Authority, District Solan, Solan (Himachal Pradesh).

	• Ration	DFSC Solan through 6 whole sale centers and 307 fair Price shops/Depots:	01792-224114	DFSC Solan
		Centre		
		Solan		
		Arki		
		Kandaghat		
		Dharampur		
		Nalagarh		
		Ramshahar		
		6 Centers		
	• Drinking Water	--	--	--
	• Poly houses	4 number	01792-256232	Krishi Vigyan Kendra, Dedgharat

Infrastructure	Item	Contact person	Telephone number	Address.
	• Buildings	1064 School Buildings Deputy Director of Higher and Elementary Education Solan District at Chambaghat	01792-230825 & 01792-230440	Deputy Director of Higher and Elementary Education Solan District at Chambaghat
		58 buildings in CRPF Complex at Dharampur	01792-265479	RTC CRPF Dharampur
		4 number	01792-256232	Krishi Vigyan Kendra, Dedgharat
	• Number of Rooms	54665 room in 1064 Govt. Schools in allover the District.	As above	As above.
		210 rooms in CRPF Complex at Dharampur	01792-265479	RTC CRPF Dharampur
	• Temporary camps	As above	As above	As above

Transportation	Item	source	Telephone number	Address.
	• Vehicle	1 Scorpio Jeep EO MC Baddi	01795-246957	EO MC Baddi

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	• Trucks	One Truck I&PH Division Arki	01796-220774	XEN, I&PH Arki
		3 Trucks HPPWD Division Arki	01796-220714	XEN, HPPWD Arki
		5 Trucks with CRPF at Dharampur	01792-265479	RTC CRPF Dharampur
		1 number	Police Line Solan	01792-230837
	• s Tractor	1 with MC Nalagarh	01795-223028	EO MC Nalagarh
	• Buses	83 HRTC	01792-230219	RM HRTC Solan
		1 number	Police Line Solan	01792-230837
		3 buses with CRPF at Dharampur	01792-265479	RTC CRPF Dharampur
	• Taxi			
	• ances Ambul	1 number	Police Line Solan	01792-230837
	• Pack Animals	--	--	--
	• ys Railwa	--	--	--

Medical	Distance from HQ	Address/Contact number	Ambulance	Surgery	Bed Strength
• Regional Hospital.	Solan Town	Medical Superintendent, RH Solan. 01792-223638 and 102	Yes	Yes	162
• Civil Hospitals	Arki 65 KMs	Medical Officer 01796-220368	Yes	--	24
	Kandaghat 17 KMs	Medical Officer 01792-256137	Yes	--	15
	Chail 35 KMs	Medical Officer 01792-248329	Yes	--	18
• CHCs	Sayari 75 KMs	Medical officer 01792-288056	Yes	Yes	6
	Dharampur 20 KMs	Medical officer 01792-264025	Yes	Yes	10
	Nalagarh 90 KMs	Medical Officer 01795-221204	yes	yes	104
	Kunihar 40 KMs	Medical Officer 01795-221204	yes	--	30
	Darlaghat 80 KMs	Medical Officer 01795-221204	Yes	--	6
• ESIs	2 KMs	ESI Dispensary at Chambaghat	--	--	
	42 KMs	ESI Hospital at Parwanoo	Yes	Yes	50

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	67KMs	ESI Jhadmajri	--	--	0
	25KMs	ESI Jabli	--	--	0
	76KMs	ESI Bhud (Baddi)	--	--	10
	90KMs	ESI Manjholi	--	--	0
	72 KMs	ESI Hospital Katha (CGHS)	--	Yes	
• PHCs	60 KMs	1. Chandi	yes	--	10
	10 KMs	2. Deothi	--	--	2
	20 KMs	3. Sultanpur	Yes	--	6
	22 KMs	4. Subathu	--	--	0
	20 KMs	5. Thadi	--	--	6
	80 KMs	6. Pratha	--	--	0
	42KMs	7. Jangeshu	--	--	2
	31 KMs	8. Kasauli	--	--	2
	103KMs	9. Chandi(arki block)	--	--	0
	45 KM	10. Chaussa	--	--	6
	\34KMs	11. Kurgal	--	--	6
	32 KMs	12. Kuthar	--	--	2
	57 KMs	13. Patta Mahlog	yes	--	6
	51 KMs	14. Dhardi	--	--	0
	52 KMs	15. Kot Beja	--	--	1
	62 KMs	16. Bhumti	--	--	6
	91 KMs	17. Navgaon	--	--	6
	72 KMs	18. Dhundan	--	--	6
	68 KMs	19. Dumehar	--	--	1
	65 KMs	20. Bainj Ki Hatti	--	--	0
	58 KMs	21. Batal	--	--	6
	71 KMS	22. Baddi	Yes	--	6
	103 KMs	23. Joghon	--	--	6
	81 KMs	24. Ramshahar	--	--	6
	92 KMs	25. Sai	--	--	6
	98 KMs	26. Loharghat	--	--	0
	97 KMs	27. Nand	--	--	2
	106 KMs	28. Goyala Panner	--	--	0
	62 KMs	29. Diggall	--	--	0
	89 KMs	30. Kawarni	--	--	0
	98 KMs	31. Baruna	--	--	0
	107 KMs	32. Kali Bari	--	--	0
	105 KMs	33. Dabhota	--	--	2
	66 KMs	34. Barotiwala	--	--	0
Health Sub-Centers under	Not provided by	1. Bharti	--	--	
		2. Patta Brawari	--	--	

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PHC Subathu.	Heatlh Deptt.	3. Samlech	--	--	
Health Sub-Centers under PHC Deothi		4. Parag	--	--	
		5. Salogra	--	--	
		6. Shilly	--	--	
		7. Kanah	--	--	
		8. Kotla Mashiver	--	--	
		9. Ghatti	--	--	
		10. Chamat	--	--	
		11. Gughaghat	--	--	
Health Sub-Centers under PHC Sultanpur.		12. Shamti	--	--	
		13. Jatoli	--	--	
	14. Dharja	--	--		
Health Sub-Centers under CHC Sayari		15. Kahla	--	--	
		16. Daunti	--	--	
		17. Mamlig	--	--	
		18. Bhaseel	--	--	
		19. Sharda Ghat	--	--	
20. Rugra		--	--		
Health Sub-Centers under PHC Chausa.		21. Bisha	--	--	
		22. Basha	--	--	
		23. Kador	--	--	
		24. Kashmari	--	--	
		25. Domehar	--	--	
		26. Paplol	--	--	
		27. Kawarag	--	--	
		28. Sichra	--	--	
		29. Paleech	--	--	
		30. Kiartoo	--	--	
		Health Sub-Centers under PHC Kurgal.	31. Kurgal	--	--
32. Dhangeel			--	--	
33. Bakhori			--	--	
34. Thana			--	--	
35. Shillai			--	--	
36. Nagali			--	--	
Health Sub-Centers under CHC Nalagarh.		37. Manjholi	--	--	
		38. Dhang		--	
		39. Dhana	--	--	
		40. Rampur	--	--	
		41. Bhogpur	--	--	
		42. Barian	--	--	
		43. Tirla	--	--	
		44. Rajpura	--	--	
	45. Rehru	--	--		
	46. Maithal	--	--		
Health Sub-Centers under PHC Joghon.	47. Ved-Ka-Jor	--	--		
	48. Bairchha	--	--		
	49. Kundlu	--	--		
	50. Nagheri	--	--		

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Health Sub-Centers under PHC Baddi.		51. Panjhera	--	--	
		52. Karsoli	--	--	
		53. Kotla	--	--	
		54. Nava Gaon	--	--	
		55. Kashmirpur	--	--	
		56. Baglehar	--	--	
		57. Mastanpur	--	--	
		58. Palli	--	--	
		59. Rajwani	--	--	
		60. Untpur Thana	--	--	
Health Sub-Centers under PHC Ramshahar.		61. Nagar	--	--	
		62. Malehi	--	--	
		63. Jukhari	--	--	
		64. Kohu	--	--	
		65. Sai Charag	--	--	
		66. Rajwan	--	--	
		67. Kunjhal	--	--	
Health Sub-Centers under PHC Baddi.		68. Patith-Da-Ghat.	--	--	
		69. Lunas	--	--	
		70. Bhiyunkhari	--	--	
		71. Behali	--	--	
		72. Kumar Hatti	--	--	
		73. Sunna	--	--	
		74. Ukhoo	--	--	
		75. Kangawal	--	--	
		76. Bangla	--	--	
		77. Narsing	--	--	
		78. Khera	--	--	
		79. Jamun-Da Dora	--	--	
		80. Swaraj Majra	--	--	
		81. Gullarwala	--	--	
		82. Thana	--	--	
		83. Dharampur	--	--	
		84. Dhela	--	--	
Health Sub-Centers under PHC Ramshahar.		85. Nandpur	--	--	
		86. Manpura	--	--	
		87. Sauri	--	--	
		88. Abharni.	--	--	
		89. Bhatauli Kalan	--	--	
		90. Makhnoo Majra	--	--	
		91. Chhaichi	--	--	
		92. Manlog Kalan	--	--	
		93. Matuli	--	--	
		94. Behri	--	--	
		95. Jubakhar	--	--	
		96. Gadon	--	--	
		97. Bhatlog	--	--	

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		98. Badokhari	--	--	
Health Sub-Centers under PHC Chandi.		99. Gharsi	--	--	
		100. Goyala	--	--	
		101. Trangla	--	--	
		102. Dhar Mehta	--	--	
		103. Badhalag	--	--	
		104. Rampur	--	--	
Health Sub-Centers under PHC Patta.		105. Haripur	--	--	
		106. Sheran	--	--	
		107. Sherla	--	--	
		108. Ghared	--	--	
		109. Badhauni-ghat	--	--	
		109. Kharota	--	--	
		110. Chadiyar	--	--	
		111. Bhauguri	--	--	
		112. Darwa	--	--	
		113. Naya Nagar	--	--	
		114. Baniyara	--	--	
		115. Rauri	--	--	
		116. Sadiana	--	--	
		117. Kakarhatti	--	--	
		118. Haripur	--	--	
		119. Koti	--	--	
		120. Kot	--	--	
		121. Ganol	--	--	
		122. Chamian	--	--	
		123. Garkhal	--	--	
		124. Sanawar	--	--	
		125. Gulhari	--	--	
		126. Dhar Anji	--	--	
		127. Sanana	--	--	
		128. Chamon	--	--	
		129. Suji	--	--	
		130. Jabli	--	--	
		131. Sandhog	--	--	
		132. Taksal	--	--	
		133. Naraini	--	--	
		134. Pratha	--	--	
		135. Neri	--	--	
136. Anech	--	--			
137. Bohali	--	--			
138. Kaba Kalan	--	--			
139. Chewa	--	--			
140. Jagjeet-nagar	--	--			
141. Gunain	--	--			

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	142. Ballkhalag	--	--	
	143. manjoo	--	--	
	144. Shalaghat	--	--	
	145. Koon	--	--	
	146. Bangora	--	--	
	147. Palaniya	--	--	
	148. Danoghat	--	--	
	149. Bathalag	--	--	
	150. Ghanagu- ghat	--	--	
	151. Parnu	--	--	
	152. Chandi	--	--	
	153. Sanghoi	--	--	
	154. Sera	--	--	
	155. Giana	--	--	
	156. Piplughat	--	--	
	157. Hanuman Barog	--	--	
	158. Koyla Sanaog	--	--	
	159. Saryanj	--	--	
	160. Kunhar	--	--	
	161. Bhararighat	--	--	
	162. Bagga	--	--	
	163. Beral	--	--	
	164. Chakhar	--	--	
	165. Darlamor	--	--	
	166. Hawani-Kol	--	--	
	167. Bhumti/ Jamroti.	--	--	
	168. Sai	--	--	
	169. Sarli	--	--	
	170. Sehrol	--	--	
	171. Basantpur	--	--	
	172. Materni	--	--	
	173. Panjpiplu	--	--	
	174. Khararhatti	--	--	
	175. Jubla	--	--	
	176. Ghagar	--	--	
	177. Maan	--	--	

PRIVATE INSTITUTIONS IN DISTRICT SOLAN :

Name of institution with address	Distance from Distt.H.Q.	Type of specialty	Contact No.	Ambulance
Akash Hospital, Opposite to Satsang Radha Swami Bhawan, Nalagarh	88Km	Gynae & Radiology with CT Scan with 30 beds	9418060013	Yes
Shrikant Hospital at Bus	84km	Gynae , Ortho,		Yes

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Stand Kirpalpur Nalagarh		General Surgery		
Lord Mahavira Hospital Village Datowal Nalagarh	92Km	G. Surgery , Gyane, G. Medicine & Radiology with CT Scan with 50 beds		Yes
Bhardwaj Hospital Baddi	74Km	Gynae, G. Surgery 20beds	9816046020	No
NRI Hospital Baddi	74Km	Multispecialty 100beds		Yes
Malhotra Hospital Baddi	74km	-do- 30 beds		Yes
Virendra Mohan Nursing Home Dharampur	14km	Psychiatry with General medicine 30 beds		No
Lamba Nursing Home Dharampur	15km	Medicine OPD		No
Simgla Nursing Home Solan	Local	Ortho		No
Malan Clinic Solan	-do-	Gynea with 10 beds		No
Navjeevan Nursing Home Solan	-do-	G.Surgery & Gynea with 30 beds		No
Ahuja Hospital Solan	-do-	Gynea/ Pediatrics with 20 beds		Yes
Shiva Hospital & clinic Solan	-do-	ENT & Gynea With 20 beds		No
City Hospital Solan	-do-	Multispecialty only OPD		No
Bhardwaj Dental Clinic, Solan	-do-	Dental services		No
Dr.Prashar Clinic Solan	-do-	G.Medicine& Gynea with 20 beds		No
Solan Nursing Home Solan	-do-			
Dr.Bansal Clinic Solan	-do-	Ortho with 10 beds		No
Rishi Clinic Solan	-do-	G.medicine OPD		No
Sanjeevani Hospital solan.	-do-	G. Surgery with 50 beds	9418087597	No
Dr.Singla clinic Solan	-do-	Medicine		No
Dr.Kapoor Nursing Home	-do-	Gynea with 20 beds	9418029067	No
Dr.Grover Clinic	-do-	Eye & ENT beds 10 beds		No
Dr. Bist	-do-	Child specialist 10 beded	9418088778	No

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Presently there is no trauma centre in the District Solan, however RH Solan, CHC Nalagarh and ESI Katha have all the facilities of a Trauma centre, as reported by the CMO Solan.

Roads	Nodal Officer	Contact number
• NH22 67/200 to 165/0	Er.Sita Ram Yadav, AE Chambaghat	93185-67482 & 01792-230806
• NH 21 PBNS Road 17/200 to 66/275	Er.D.K.Aggarwal, AE Nalagarh	94184-69004 & 01796-220211
• NH-88 Shima-Kangra road 0/0 to 58/600	Er.Gurdas Ram, AE Shalaghat	94183-19468 & 01796-255550
• Parwanoo Section	Er.Diwan Chand, JE	94184-63766
• Dharampur & Solan Section	Er.Joginder Singh, JE	58054-20233
• Kandaghat Section	Er.Yash Pal Chandel	94181-27850
• Baddi Section	Er.Surkjeet Kumar	94180-76511
• Nalagarh-I	Er.Jitesh Kumar, JE	94184-50854
• Nalagarh-II`	Er.Raj Kumar Dhiman, JE	90410-84251
• Joghon Section	Er.Mahinder Pal, JE	94180-20140
• Shalaghat section	Er.Bali Ram, JE	94595-88283
• Bhararighat Section	Er.Raman Kumar Dhiman, JE	94184-28013

Communication	Department	Location	Contact number	Address.
• Wireless	Police	Control Room SO Office	01792-223836	Control Room SO Office
		PS Sadar	01792-223840	PS Sadar
		PP Saproon	01792-224010	PP Saproon
		PP City Solan	01792-223841	PP City Solan
		PS Kandaghat	01792-256229	PS Kandaghat
		PP Chail	01792-248348	PP Chail
		PP Sairi	01792-288042	PP Sairi
		PS Dharampur	01792-264032	PS Dharampur
		PP Dahshai	01792-266141	PP Dahshai
		PP Subathu	01792-275001	PP Subathu
		PS Kasauli	01792-272002	PS Kasauli
		PP Garkhal	01792-272034	PP Garkhal
		PP Kuthar	01792-284503	PP Kuthar
		PS Parwanoo	01792-233124	PS Parwanoo
		PP Bhojnagar	01792-269247	PP Bhojnagar
		PS Arki	01796-220710	PS Arki
		PP Kunihar	01796-220710	PP Kunihar
		PS Darlaghat	01796-248340	PS Darlaghat
		PS Bagga	--	PS Bagga

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		TB Parwanoo	01792-233268	TB Parwanoo
		CP Sector-4 Parwanoo	--	CP Sector-4 Parwanoo
		PAB Shalaghat	--	PAB Shalaghat
		PAB Jabli	--	PAB Jabli
		PL Solan	01792-230837	PL Solan
	Forest	DFO Solan,	01792-223751,	DFO Solan,
		DFO Kunihar and	01796-262228,	DFO Kunihar and
		DFO Nalagarh	01795-223124.	DFO Nalagarh
	Electricity Board	XEN, HPSEB Solan	01792-221418	XEN, HPSEB Solan
		XEN, HPSEB Parwanoo	01792-233104	XEN, HPSEB Parwanoo
		XEN, HPSEB Nalagarh	01795-223097	XEN, HPSEB Nalagarh
		XEN, HPSEB Arki	01796-220745	XEN, HPSEB Arki

ANNEXURE-J

Flow Chart for Disposal of Dead Bodies at the District Level :

In any eventuality the local police concerned will get the postmortem of the deads and handover the dead bodies to following agencies for proper disposal, as the case may be :

- i. EO MC/NP Solan, Baddi, Parwanoo, Nalagarh and Arki
- ii. Pradhan/Up-Pradhan of concerned Gram Panchayat.

ANNEXURE-K

Guidelines for Disposal of Animal carcass :

The department of animal husbandry will take initiative for the safe disposal of the dead bodies of animals with the help of local Panchayat/municipality, so as to prevent the outbreak of any disease/epidemic.

ANNEXURE-L

Emergency Support Functions (ESFs) :

EMERGENCY SUPPORT FUNCTIONS (ESF) :

Purpose :

Emergency Support Functions provides an overview of the structure, common elements of each of the ESFs, and the basic content contained in each. It includes the roles and responsibilities of all the line departments and agencies as ESF coordinators, primary agencies, or support agencies.

Background :

The ESFs provide the structure for coordinating inter agency support for a response to an incident. They are mechanisms for grouping functions most frequently used to provide support to District Administration from line for declared disasters and emergencies as per the provisions laid down in Disaster Management Act, 2005. The Incident Command System provides for the flexibility to assign ESF and other stakeholder resources according to their capabilities, taskings, and requirements to augment and support the other sections of Field Office/Regional Response Coordination Center (RRCC) or National Response Coordination Center (NRCC) in order to respond to incidents in a more collaborative and cross-cutting manner. While ESFs are typically assigned to a specific section at the NRCC or in the FO/RRCC for management purposes, resources may be assigned anywhere within the Coordination structure. Regardless of the section in which an ESF may reside, that entity works in conjunction with other Field Office/sections to ensure that appropriate planning and execution of missions occur.

ANNEXURE-M

Standard Operating Procedures for Departments to perform :

The world over it has been experienced that a prompt, well-coordinated and effective response mounted in the aftermath of disasters not only minimizes loss of life and property but also facilitates early recovery. The important ingredients of an effective response system are integrated institutional arrangements, state of the art forecasting and early warning systems, safe communication system, rapid evacuation of threatened communities, quick deployment of specialized response forces and coordination and synergy among various agencies at various levels in dealing with any disaster. Most importantly, all the agencies and their functionaries must clearly understand their roles and responsibilities and the specific actions they have to take for responding to disaster or threatening disaster situations. As such the District Administration, Revenue, Police, Home Guards, Fire, Health authorities of respective area will act quickly on occurrence of any calamity and other departments like PWD, I&PH, HPSEBL, BSNL, Transport, Panchayati Raj Institutions, Blocks etc. will assist them on requirement.

All natural disasters except drought, pest attacks and hailstorm will be handled by the District Administration and Police. Drought, pest- attacks and hailstorm will be dealt with by the Department of Agriculture & Horticulture. This SOP will deal with natural disasters such as accidents, flood, cyclone, earthquake, landslides etc.

This SOP lays down, in a comprehensive manner, the specific actions required to be taken by various Departments of Government at the District level and the district administration for responding to natural disasters of any magnitude and dimension.

The objectives of the SOP are :

- (a) To provide, in a concise and convenient form, a list of major executive actions involved in responding to natural disasters and necessary measures for preparedness, response and relief required to be taken;
- (b) To ensure that all concerned Departments and Organisations of the District know the precise measures required of them at each stage of the process and also to ensure that all actions are closely and continuously coordinated; and
- b. To indicate various actions which would be required by the District Administrations to prepare and review the Contingency Action Plans accordingly.
- c. The instructions contained in this SOP should not be regarded as exhaustive of all the actions that might be considered necessary. It will also be necessary for each Department and Organization which are required to provide Emergency Support Functions (ESF) during natural disasters to prepare detailed SOPs so as to translate each action point in a number of steps required to be taken by each of them.
- d. The organizations concerned at the State level will be as under:-

- i. State Disaster Management Authority
- ii. Relief/ Disaster Management Department
- iii. District Disaster Management Authority
- iv. District Magistrate
- v. Police
- vi. Forest Department
- vii. Fire and Civil Defence Services
- viii. Health Services
- ix. Transport Department
- x. Public Works Department
- xi. Veterinary Services
- xii. Food & Civil Supplies Department

e. District Authorities and other stakeholders will prepare detailed SOPs in consonance with this SOP, National Policy, and various Guidelines issued by NDMA. These SOPs shall prescribe the manner in which various response and relief activities like evacuation, search and rescue, casualty & emergency health management, food, drinking water, sanitation & hygiene, clothing shelter, management of relief camps and restoration of essential services etc. have to be undertaken

f. The SOP encompasses the following five phases of disaster management for effective and efficient response to natural disasters.

(i) **Preparedness Phase** – This phase will include taking all necessary measures for planning, capacity building and other preparedness so as to be in a state of readiness to respond, in the event of a natural disaster. This Stage will also include development of Search & Rescue Teams, mobilization of resources and taking measures in terms of equipping, providing training, conducting mock drills/exercises etc.

(ii) **Early Warning Phase** – This phase will include all necessary measures to provide timely, qualitative and quantitative warnings to the disaster managers to enable them to take preemptive measures for preventing loss of life and reducing loss/damage to the property. On the occurrence of a natural disaster or imminent threat thereof, all the concerned Agencies will be informed/notified for initiating immediate necessary follow up action.

(iii) **Response Phase** – This phase will include all necessary measures to provide immediate succor to the affected people by undertaking search, rescue and evacuation measures.

(iv) **Relief Phase** - This phase will include all necessary measures to provide immediate relief and succor to the affected people in terms of their essential needs of food, drinking water, health & hygiene, clothing, shelter,

(v) **Restoration Stage** – This phase will include all necessary measures to stabilize the situation and restore the utilities.

g. This SOP does not cover long-term measures needed either for mitigation or for rehabilitation/recovery of the affected people and reconstruction of the area.

h. This SOP will be reviewed annually.

STANDARD OPERATING PROCEDURE for VARIOUS DEPARTMENTS

The vulnerability of disasters at village level is very high, therefore to reduce the risk associated with various hazards/calamities it is imperative and responsibility of all the Govt. departments and people at village level to work out in well planned and integrated manner to reduce the drastic affects and mitigate the situation effectively. Therefore, it is necessary to follow proper procedure for streamlining the Disaster Management Process at all level i.e. Pre-Disaster, During Disasters Rescue, Relief & Rehabilitation, and Post Disaster etc. Keeping in view the importance to mitigate any eventuality the SOP for all concerned departments at Village level as follow:

1. DEPARTMENT OF REVENUE

Department of Revenue will be NODAL DEPARTMENT for interacting with DDMA :

PREPAREDNESS :

- ✚ To co-ordinate the preparedness function of all the departments.
- ✚ Establish communication link with all the stakeholders at village level for the purpose of receiving and sending the warning and information.

MITIGATION :

- ✚ Ensure that the structural and non-structural measures are being taken by all concerned departments.
- ✚ Monitor the implementation of the construction norms for all types of construction and building.
- ✚ Ensure that the departmental plans at the village level are prepared by all the departments.

RESPONSE :

- ✚ To set up relief camp at respective Patwarkhana at village level at the time of disaster.
- ✚ To declare the disaster at village level keeping in view the damage assessment report received from the Rapid Damage Assessment Team.
- ✚ To distribute the relief to the affected families and rehabilitation in the shelters homes.
- ✚ Convene meeting with Panchayats/NGOs for co-ordinating the search and rescue operations.

RECOVERY & REHABILITATION :

- ✚ Ensure preparation of the recovery and rehabilitation plan as per Guidelines issued by the DDMA.
- ✚ Keep DDMA informed about situation through concerned SDM/Tehsildar/Naib-Tehsildar.

2. DEPARTMENT OF PUBLIC WORKS (PWD)

PRIMARY TASK :

- ✚ To ensure the roads are repaired and well maintained, drains and pullies are cleaned to avoid choking.
- ✚ To identify the critical and lifeline building and their retrofitting so as to be made earthquake resistant and compliant.

PREPAREDNESS :

- ✚ To enlist the mitigation measures for all the construction activities so as to make infrastructure less vulnerable to the disasters.
- ✚ To prepare the departmental disaster management plan at village level.
- ✚ To make the resources inventory of manpower and material available with them at various locations alongwith telephone numbers, so that they can be used on requirement.
- ✚ To procure/requisition the resources which are needed for the better management of disaster, rescue and evacuation of people from damaged buildings.
- ✚ To notify Officer Incharge for respective areas i.e. SDO/AAE/JE for particular area.

MITIGATION :

- ✚ To implement the mitigation strategy criteria in the development plans of department at village level to make future constructions earthquake and disaster resistant.
- ✚ To identify the equipments/manpower required for mitigating the disasters as per requirement of area viz. iron cutters, divers, lifters, wood cutters etc.

WARNINGS/ALERTS :

- ✚ To issue warning and alert in respective area alongwith the manpower and material to respond effectively.
- ✚ Positioning the manpower and material in such a way to optimize the transportation to affected area.

RESPONSE :

- ✚ Deploy the restoration team to affected areas to ensure quick restoration in affected area.
- ✚ To deploy resources to assist the search and rescue team in order to expedite the rescue and evacuation of the affected person (s)/peoples.
- ✚ To restore the roads immediately or streamline the traffic on alternative roads by placing notice on diversion as soon as possible.

RECOVERY & REHABILITATION :

- ✚ Carry out the detailed assessment of the affected areas and prepare the recovery plan and implement it in toto.
- ✚ To construct temporary shelters in affected area(s), if needed.
- ✚ Repair the Govt. buildings and reconstruct these as directed.
- ✚ To remove the debris in affected area and deploy the manpower and machines.

3. IRRIGATION & PUBLIC HEALTH DEPARTMENT (IPH)

PRIMARY TASK :

- ✚ To act as Nodal Agency for flood warnings
- ✚ To ensure the water supply in the affected areas or make alternative arrangement.
- ✚ To make action plan for mitigating and vulnerable and disaster like situation so that drinking water supply may not be disturbed in any area.
- ✚ To prepare the Departmental Disaster Management Plan at village level.

PREPAREDNESS :

- ✚ To identify flood prone and water scarce areas.
- ✚ To constitute a dedicated team to ensure drinking water supply during disasters and scarcity/drought.
- ✚ To ensure drinking water supply.
- ✚ To start repair and restoration and make alternative arrangements.

RECOVERY & REHABILITATION :

- ✚ Repair and restore the drinking water supply and sewerage system immediately after disasters.

4. DEPARTMENT OF ANIMAL HUSBANDRY

PRIMARY TASK :

- ✚ To prepare the plan for the safety of the live stocks at village level.
- ✚ Prepare plan for the disposal of dead animals and carcasses during disasters to avoid further spread of epidemics.

PREPAREDNESS :

- ✚ To enlist areas which are likely affected or often affected due to disasters.
- ✚ To prepare the inventory of manpower and material available at various locations.
- ✚ Capacity building and train the veterinary health team at every level.
- ✚ Identify the places for camping of animals during disasters.

WARNINGS/ALERTS :

- + To issue alert to public on spread of epidemics and to alert the Veterinary Health Team in respective areas.
- + Positioning the manpower and material in such a way to optimize the transportation to affected area.

RESPONSE :

- + Ensure proper medication and control over the epidemics during disasters.

POST DISASTER :

- + Make proper assessment of the losses.
- + To arrange good quality animals to the farmers by organizing special camps.

5. DEPARTMENT OF FOREST

PRIMARY TASK :

- + Plantation of fodder trees.
- + Prevention of forest fires.

PREPAREDNESS :

- + To enlist and identify fire prone areas.
- + Preparation of Action plan to mitigate fires and safety plan to prevent the fires.
- + Organize community awareness for the prevention of fire.
- + Rush the forest fire team to the affected areas.

WARNINGS/ALERTS :

- + To issue alert to public on spread of fire.
- + To organize THIKERI PAHARAs by involving local people.
- + Positioning the manpower and material in such a way to optimize the transportation to affected area.

RESPONSE :

- + Ensure proper plantation.
- + Ensure safety of human being and animals during forest fires.

POST DISASTER :

- + Make proper assessment of the losses.

- ✚ Ensure plantation of fodder trees on priority in all the affected areas.
- ✚ To provide wood for reconstruction of houses to public as per policy and norms of Govt.

6. DEPARTMENT OF HEALTH & FAMILY WELFARE

PRIMARY TASK :

- ✚ To ensure first aid immediately.
- ✚ To provide best health services at village level.
- ✚ To make adequate stock of all life saving medicines at village level.

PREPAREDNESS :

- ✚ To identify and enlist the areas prone to epidemics and water/air borne diseases.
- ✚ Make action plan for the safety and conduct mock drills.
- ✚ To train human resources for providing medical aid.
- ✚ To make action plan to prevent/mitigate the epidemics.
- ✚ To constitute medical health team to rush to the spot.

WARNINGS/ALERTS :

- ✚ To issue alert to public on spread of epidemics and do's/don'ts .

RESPONSE :

- ✚ To provide immediate medication to affected people through special camps.
- ✚ Mobilize medical teams alongwith resources to affected area.
- ✚ Ensure safe/adequate blood in all the relief camps, if required.

POST DISASTER :

- ✚ Run special camp in disaster affected area.
- ✚ To ensure prevention of epidemics.
- ✚ To establish a check post at entry/exit point of disaster affected area to prevent spread of epidemic.
- ✚ Establish Public Helpline for the redressal of queries.

7. DEPARTMENT OF POLICE/HOME GUARDS

PRIMARY TASK :

- ✚ To maintain law & order.
- ✚ To co-ordinate in search and rescue operations.
- ✚ To ensure the protection of valuable during disasters and property during disasters.

PREPAREDNESS :

- ✚ Make action plan for the safety and conduct mock drills.

- ✚ To constitute search and rescue teams.
- ✚ To prepare inventory of manpower, material and machines available with department at various locations.
- ✚ Make action plan to avoid stampede by earmarking proper entry/exit to any place.

WARNINGS/ALERTS :

- ✚ To issue alert to public to avoid rumors and contact the Administrative Offices for the redressal of their queries.

RESPONSE :

- ✚ To maintain law and order in affected areas.
- ✚ To ensure the safety of people, valuables and property during disasters.

RECOVERY & REHABILITATION :

- ✚ To assist local administration for removing dead bodies and making proper data.
- ✚ Ensure participation in relief and rehabilitation activities on requirement.

8. DEPARTMENT OF FIRE

PRIMARY TASK :

- ✚ To rush to spot immediately and to ensure the protection of human lives and valuables from fire.

PREPAREDNESS :

- ✚ Make action plan for the safety and conduct mock drills.
- ✚ To constitute fire teams.
- ✚ To prepare inventory of manpower, material and machines available with department at various locations.

RESPONSE :

- ✚ Act quickly on receiving any call.
- ✚ To ensure the safety of people, valuables and property during fire.

RECOVER & REHABILITATION :

- ✚ To assist local administration for removing dead bodies.
- ✚ Ensure participation in relief and rehabilitation activities on requirement.

9. DEPARTMENT OF AGRICULTURE/HORTICULTURE

PREPAREDNESS :

- + To enlist and identify flood/drought prone areas.
- + Preparation of Action plan to mitigate drought.
- + Organize farmers camp and advise them to grow short term crops on damage to crops.

WARNINGS/ALERTS :

- + To issue alert to public on spread of crop epidemics.

RESPONSE :

- + Ensure supply of seeds, plants, inputs, pesticides, insecticides etc. (whichever applicable) on subsidized rate.
- + Make assessment of losses to crops/fruit crops to intimate the Govt.
- + Organizing camps to aware the farmers.

STANDARD OPERATING PROCEDURE for VILLAGE LEVEL INCIDENT RESPONSE TEAM

Sr. No.	Action	Feedback
1.	Incident Response Teams i.e. official as notified will assemble at Patwarkhana or Central Point as soon as possible on receipt of information of disaster.	
2.	VLIRT will rush to incident site immediately on occurrence.	
3.	Start the search and rescue operation.	
4.	VLIRT will report the incident to Tehsil/Sub-Tehsil Control Room alongwith SDM concerned and DDMA.	
5.	Incident response System will be activated at Sub-Division.	
6.	Tehsildar/Naib-Tehsildar will rush to concerned Patwarkhana/incident site.	
7.	Setup relief camp in respective Patwarkhana immediately after 2 hours of occurrence of disaster.	
8.	Incident Response Team will submit report from the incident site to Sub-Divisional Disaster Management Authority.	
9.	The Sub-Divisional Disaster Management Authority will activate the resources for mitigating the situation from PWD, IPH, Animal Husbandry, Forest, Health, Police, Fire, Home Guards etc.	

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10.	The Sub-Divisional Disaster Management Authority will report the incident to DDMA.	
11	The DDMA will co-ordinate with Sub-Divisional Disaster Management Authority and also activate the available resources.	
12	The DDMA will also report to SDMA and if the situation is Severe or out of Control will request the SDMA for more resources.	

First Information Format :

FORMAT FOR PRELIMINARY REPORT ON THE DISASTER

(To be sent by the Collector immediately on the receipt of the occurrence of the Disaster Event to State Level Disaster management Committee)

Sr. No.	Particulars	Detail
1.	Name & address of reporting officer alongwith Deptt.	
2.	<u>Detail of damage with name of locality.</u> * Estimated persons affected * Estimated loss of lives * Estimated number of injury * Estimated loss of crops * Estimated loss of houses * Estimated loss of livestock <u>Damage to Infrastructure:</u> * Road transport * Power supply * Water supply * Telecommunication * Irrigation systems	
3.	Approximate loss assessed	
4.	Action taken and Immediate requirements: * Assistance for search and Rescue * Food * Clothing * Water * Medical Assistance * Ambulances * Fire Brigades * Police * Transport * Manpower	
5.	* Action taken of DCR (Y/N) * Evacuation vulnerable population	
6.	Completed underway: * Transit shelters provided to evacuees (Y/N) * Location of evacuees	
7.	Supplies of the following arranged: * Food (Y/N) * Fuel (Y/N)	

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	* Water (Y/N) * Lighting (Y/N) * Medicine (Y/N)	
8.	Established contact with: * Superintendent of Police (Y/N) * Sub-Divisional Magistrate (Y/N) * Fire Brigade (Y/N) * Civil Surgeon (Y/N) * Defence Services (Y/N) * Railways (Y/N) * Tehsil (Y/N) * Superintendent Engineer (I&PH) (Y/N) * Public Works Department (Y/N) * R.T.O/R.M, HRTC (Y/N) Other action taken:	
9.	Other action taken:	

ANNEXURE-O

Damage and Need of Assessment Format :

DAMAGE ASSESSMENT :

Formats for reporting on various losses such as loss of life, injuries, property, live stock, crops and plantations have been evolved to monitor on a day to day basis the impact of the disaster. Efforts have also been made to capture the damage done to infrastructure. It is assumed that all these information would give a fairly good account of not jut the losses but the requirements for relief and recovery as also the compensation. Damage assessment report will be submitted after the relief activities are over.

FORMAT: REPORT ON DETAILS ON LOSS OF LIFE AND INJURIES :

Sr. No.	Particulars	Detail
1.	Name of Village/town	
2.	Type of calamity	
3.	Name and address(es) of the Victims with Age, Sex, cause of injury/death alongwith Date and Time of Accicent Total:	
4.	Name & address of reporting officer alongwith Deptt.	

FORMAT:STATEMENT OF TOTAL EXPENDITURE ON PAYMENT OF RELIEF

Sr.	Particulars	Detail
-----	-------------	--------

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No.		
1.	Name of Tehsil/District	
2.	Type of calamity	
3.	Duration of Disaster with Date and Time etc.	
4.	Nature of Compensation Number of beneficiaries Amount Spent	
5.	Loss of life Permanently incapacitated Temporary injured and payment made	
6.	Loss of crop and Loss of plantation and payment made	
7.	Loss of cattle and Loss of other livestock and payment made	
8.	Fully destroyed house/Partially damaged house And Loss of tools of trade/business and payment made	
9.	Name & Designatin of Reporting Officer	

FORMAT: DISTRICT LEVEL INFORMATION ON CAMP SITE :

(for all transit and relief camp sites to be filled in District Collector and forwarded to Emergency operations Centre)

Sr. No.	Particulars	Detail
1.	Name of Tehsil/District	
2.	Name of the Camp Site	
3.	Managed By	
4.	Type of calamity	
5.	Duration of Disaster with Date and Time etc.	
6.	Number of households Number of the persons in the household in the camp (including head of household) Adults Children (M /F)	
7.	Name & Designatin of Reporting Officer	

Format : Information on the deceased :

(to be filled in for each deceased person)

Sr. No.	Particulars	Detail
1.	Name of Tehsil/District	
2.	Name of the Camp Site	
3.	Name of village /Town	
4.	Type of calamity	
5.	Duration of Disaster with Date and Time etc.	

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6.	Identification Number	
7.	Name & Designatin of Reporting Officer	
8.	Name and address of the deceased	
9.	Age and Sex (F/M)	
10.	Occupation	
11.	Annual family Income	
12.	Whether Himachali or Non-Himachali	
13.	Day, time, date when the body was recovered	
14.	Location where the body was found	
15.	Identified by	
16.	Panchnama Done (Y/N)	
17.	Postmortem Done (Y/N)	
18.	Postmortem Done (Y/N)	
19.	Handed over to relatives (Y/N) (Name and address of the relative to recorded)	
20.	Disposal of as unclaimed (Y/N)	
21.	Reported to Police (Y/N)	
22.	Name & Designatin of Reporting Officer	

HEALTH DEPARTMENT REPORT :

Format;Information on the injured :

Sr. No.	Particulars	Detail
1.	Name of Tehsil/District	
2.	Name of the Camp Site	
3.	Name of village /Town	
4.	Type of calamity	
5.	Duration of Disaster with Date and Time etc.	
6.	Name & Address of the injured	
7.	Age, Sex, occupation and caste	
8.	Annual family income	
9.	Whether Himachali or Non-Himachali	
10.	Day, time & date when the body was recovered	
11.	Location where reported	
12.	Nature of injury	
13.	First aid given	
14.	Whether admitted as indoor patient	
15.	Admission number	
16.	Date and time of admission	
17.	Date & time of discharge	
18.	Whether referred to other higher level Hospital	
19.	Particulars of Hospital	
20.	Admission number	

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21.	Date and time of admission	
22.	Date & time of discharge	
23.	Remarks, if any.	
24.	Name & Designatin of Reporting Officer	

Format;For submission of weekly/daily reports to be submitted by the Deputy Commissioner :

WEEKLY STATEMENT SHOWING FLOOD DAMAGES, RAIN DAMAGES, LAND SLIDES AND FLASH FLOOD IN RESPECT OF DISTRICT SOLAN (H.P.) FOR THE WEEK ENDING _____ (FN) WEDNESDAY.

S. N	Distt .	Area affected	Popu latio n affec ted	Damage to Crops		Damage to houses		Cattle/Cow s/ox lost		Huma n lives lost	Dam age to publi c utiliti es	Total damages crops houses & public utilities.
				Area (Ha)	Valu e	Are a (Ha)	Val ue	Area (Ha)	Val ue			
1	2	3	4	5	6	7	8	9	10	11	12	13

DAILY STATEMENT :

S. N	Item	Details of loss	
		During the 24 hours or reported today.	Cumulative since 1 st June of concerned year
1.	Total number of districts in the State		
2.	Number and names of districts affected		
3.	Number of villages affected		
4.	Population affected (in lacs)		
5.	Total land area affected (in lakh hectares).		
6.	Cropped area affected (In lakh hect).		
	(i) Total crop area affected		
	(ii) Estimated loss to crops (Rs.in lakhs)		
	(iii) Area where cropped damage was more than 50%		
7.	Percentage of area held by SMF :		
	(i) In the State as a whole		
	(ii) In the affected districts		
8.	Houses damaged :-		
	(a) Number of houses damaged :		
	(i) Fully damaged pucca house house		
	(ii) Fully damaged kutcha house		

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	(iii) Severally damaged pucca houses		
	(iv) Severally damaged kutcha house		
	(v) Partly damaged houses (Pucca+Kutcha)		
	(vi) Number of huts/cowsheds damaged.		
	(b) Estimated value of damage to houses (Rs. in lakh)		
9.	Number of human lives lost		
10	Number of persons with grievous injuries		
11	Number of persons with minor injuries.		
12	Animals lost		
	(a) No. of big animals lost		
	(b) No. of small animals lost		
	(c) No. of poultry (birds) lost		
13	Damage to public properties :- (a) In physical terms (sector wise details should be given –e.g. length of State roads damaged, length of district roads damaged, length of village roads damaged, no. of bridges	1.HPPWD (B&R).	
		2.HPPWD (NH)	
		3.HP I&PH Deptt.	
		4. Revenue Deptt.	
		5. HPSEB	
		6. Health Deptt.	
		7. Deptt. of Education and Technical Education.	
		8. Forest Deptt.	
		9. Animal Husb.	
		10. Hort. Department.	
		11. Police Department.	
		12. HRTC	
		12. Damage to various bridal/village paths, pullies, drains, various river banks, retaining walls, Yuvak Mandal Bhawans, Mahila	

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		m Mandal Bhawanns, Community Centres etc. as reported by Revenue Agency & BDOs.		
		13. Damage to various traditional water sources as reported by Revenue Agency & BDOs.		
		14. Damage to MCs/ Nagar Panchayat link roads, paths, culverts, drains and retaining walls etc.		
	(b) Estimated value of the damage to public properties.			
14	Estimated total damage to houses, crops and public properties.			

ANNEXURE-P

Guidelines for requisitioning Armed Forces :

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 by Headquarters Rajasthan Sub Area :

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

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

Procedure to Requisition Army, Air Force and Naval Assistance :

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 Emergency 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:

- a) Aid from Army: Head quarters Rajasthan Sub Area Commander, Jaipur and Headquarters of South Western Command
- b) Aid from Air Force: Area Officer Command, Jodhpur and South Western Air Command Headquarters.

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

10. Headquarters Rajasthan Sub Area (General Staff) will muster the troops and equipment and exercise operational control over them for relief operation. It will also process the case through Army channels to get the clearance of headquarter Western Command (General Staff). A Joint Operational Centre, with adequate communications to be provided by the State Government, will operate on 24 hourly basis at Headquarters Rajasthan Sub Area under the control of Colonel General Staff. State Relief Commissioner will provide a duty officer and requisite staff at the Joint Operational Centre (JOC) in addition to staff of the armed forces and their own communications.

11. 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.

12. 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 needs 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.

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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
hourse 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.

Signature of Officer with Seal

DE-REQUISITION OF ARMY AID (NATURAL 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 _____.

Signature of Officer with Seal

ANNEXURE-Q**List of helicopter Landing sites in the district :**

Station/ Panchayat	Village	Altitude	Latitude	Longitude	Landmark
Army complex Solan.	Solan town	75X35 mtr	30degree 55' North	77 degree 6' East	North of Solan town.
Army Ground Subathu	Subathu	120X64 meters	30-58 North	76-59 East	--
Army Helipad Kasauli	Kasauli	110X80 meters	30-54 North	76-49 East	--
Army Ground Chail	Chail	200X120	30-57 North	77-12 East	--
Kotli	Kotli (Near Shalaghat)	30 meters	31 degree 12'-04 North	76 degree 57' East	H marked.
Dharampur	GSSS Daharampur	82X42 meters	30-58 North	76-49 East	South of Dharampur town.
Nalagarh	GDC Nalagarh	100X90 meters	31-2 North	76-45 East	--
Barotiwala	GSSS Barotiwala	100X70 meters	30-55 North	76-50 East	--
Chhamkari	GPS Chhamkri	70X22 meters	31-2.33 North	76-52.30 east	--
Nauni	UHF Nauni	150X88 meters	30-52 North	77-10 East	UNF Nauni Complex.
Sultanpur	GSSS Sultanpur	60X50 meters	30-53 North	77-6 East	--
Darlaghat	GACL Complex	--	31-14.47 North	76-56.47 East	--
Balkalag	GSSS Balhalag	25 Meters	31-09 North	76-57 east	--
Kunihar	GSSS Kunihar	--	31-04.50 North	76-57.25 east.	--
Solan	Radhaswami Satsang Beas	230X80 meters	30-53 North	77-6 east	
Dahshai	Cantt Dagshai	89X78.5 meters	33-53 North	77-4 East	--

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ANNEXURE-R

Network Analysis :

1. IMPORTANT PHONE NUMBERS :

Sr.No.	Department	Phone number	
		Toll free	Other
1.	Free Ambulance Service	108	--
2.	Police Assistance	100	01792-223841
3.	District Hospital/Ambulance	102	01792-223638
4.	Fire	101	01792-223888
5.	District Administration	1077	01792-223702
6.	Bus stand	--	01792-226040
7.	Rest/Circuit house	--	01792-223601
8.	Electricity Complaint	--	01792-223631
9.	Water complaint	--	01792-223657
10.	Railway Station	131	01792-220674

2. Administration :

1.	Administrative sub-divisions	4 viz. Solan, Arki, Nalagarh and Kandaghat
2.	Tehsils	6 viz. Solan, Arki, Baddi, Kasauli, Nalagarh and Kandaghat
3.	Sub-Tehsils	4 viz. Krishangarh, Ramshaha, Mamlig & Darlaghat.
4.	Kanungo Circles	13
5.	Patwar Circles	149
6.	Total number of villages	2562

3. Police :

(i) Detail of Police Staff under SP Solan :-

Office	Inspector	Sub-Inspector	ASI	HC	Constable
SP Solan (ECC Staff)	2	2	6	2	2
SP Solan (Executive Staff)	--	--	2	12	26
Police Line	--	1	--	5	7
Magazinne Guard Solan	-	--	--	1	4
Prison Escort Guard	--	--	--	1	2
Mounted Police	--	--	--	1	2
FAR	--	--	--	2	12
Railway Security Staff	--	--	--	--	20
Traffic Staff	--	1	4	1	23
Drivers	--	--	--	--	16
TG Solan	--	--	--	1	4
TG Arki	--	--	--	1	4
TG Kasauli	--	--	--	1	4

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TG Kandaghat	--	--	--	1	4
Power House Gd. Saproon	--	--	--	1	5
Judicial Gd. Kandaghat	--	--	--	1	4
Court Duty HQ	--	--	--	--	8
Court Duty Kandaghat	--	--	--	--	1
Contingency reserve	--	--	--	3	25
HAP Reserve	--	--	--	4	56
PS Solan	1	3	4	11	28
PP City Solan	--	--	1	1	6
PP Saproon	--	--	1	1	4
PS Kandaghat	--	1	3	5	22
PP Chail	--	--	1	--	6
PP Sairi	--	--	1	1	4
PS Dharampur	1	2	3	9	22
PP Dagshai	--	--	1	1	8
PP Subathu	--	--	1	1	6
PS Kasauli	--	1	2	6	24
PP garkhal	--	--	1	1	4
PP Kuthar	--	--	1	1	4
PS Parrwanoo	1	2	4	7	24
PS Arki	--	1	2	7	21
PS darlaghat	--	1	1	6	16
PS Bagga	--	1	--	3	10
TB Parwanoo	--	1	--	3	10

(ii) Detail of Police Staff Under SP Baddi :-

Office	Inspector	Sub-Inspector	ASI	HC	Constable
PS Baddi	1	2	3	5	25
PS Barotiwala	--	1	4	4	23
PS Nalagarh	1	2	4	5	26
PS Ramshahar	--	1	1	2	14
PP Jagon	--	--	1	1	6
PP Dabhota	--	--	1	1	5
CP Bagheri	--	--	--	1	3
TB Dherowal	--	--	--	1	3
TB Baddi	--	--	--	1	3
TB Barotiwala	--	--	--	1	3

Source : SP Solan and Baddi, District Solan.

4. Fire :

Office	Phone number	Strength of Staff	Fire Engines/ Vehicles	Number of Fire Hydrants.
Fire Officer Solan	01792-223888	18 Trained personnels & 11 Home Guards.	6	27 at various location in Solan Town.

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Fire Officer, Parwanoo	01792-232233	19 Trained personnels & 5 Home Guards.	3	25 at various location in Parwanoo Town.
Fire Officer, Baddi	01795-245352	15 Trained personnels & 8 Home Guards.	4	16 at various location in BaddiTown.
Fire Officer, Nalagarh	01795-223294 01795-223175	13 Trained personnels & 9 Home Guards.	5	20 at various locations of Nalagarh Town.

5. Health :

(a) Allopathic :

(i) Regional Hospital	:	1
(ii) Civil Hospitals	:	3
(iii) Community Health Centers	:	5
(iv) Primary Health Centers	:	31
(v) Health Sub-Centers	:	179
(V) ESI Hospitals	:	2
(vi) ESI Dispensaries	:	5
(vii) Private Hospital/Nurshing Homes	:	28

(b) Ayurvedic :

(i) Ayurvedic Hospital	:	2
(ii) Homeopathy Hospital	:	1
(iii) Unani Hospital Kalibadi	:	1
(iv)) Ayurvedic Dispensary	:	75

(c) Veterinary

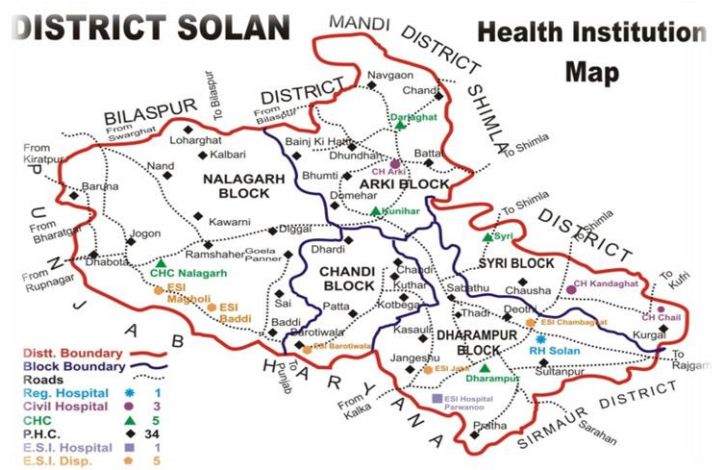
(i) Hospital	:	23
(ii) Poly Clinic	:	1
(iii) Dispensaries	:	131
(iv) CVD	:	1
(v) Seman Bank	:	1
(vi) Mukhayamantri Arogaya Pashudhan Aushdhalayas	:	10 (and 55 on pipeline)

Health Department plays a vital role in disaster management and helps all the affected persons by imparting the necessary medical aid on the spot as well as indoor facilities quickly. Through its quick response teams constituted at various level. Brief detail of various institutions in district Solan is as under

Sr.No.	Name of Hospital	Detail of staff posted		Detail of bedding capacity	
		Medical Officers	Other para staff & allied staff	Sanctioned strength	In position
1.	Regional Hospital Solan	24	108	200	146
2.	CHC Sayari	4	19	30	8
3.	CHC Dharampur	3	20	30	10
4.	CHC Nalagarh	12	49	100	100
5.	CHC Arki	5	41	50	24
6.	ESI Hospital Parwanoo	9	25	50	50
7.	CH Kandaghat	3	22	12	15
8.	CH Chail	3	12	18	18

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9.	PHC Chandi	4	20	10	10
10.	PHC Deothi	2	4	10	10
11.	PHC Sultanpur	2	9	10	6
12.	PHC Subathu	2	9	10	6
13.	PHC Pratha	1	5	10	--
14.	PHC Jangeshu	1	4	10	--
15.	PHC Kasauli	1	4	10	--
16.	PHC Chaussa	--	8	10	6
17.	PHC Kurgal	1	3	10	--
18.	PHC Kuthar	1	5	10	6
19.	PHC Patta Mahlog	1	5	10	6
20.	PHC Dhardi	1	3	10	--
21.	PHC Kot Beja	1	3	10	--
22.	PHC Bhumti	1	7	10	6
23.	PHC Darlaghat	1	10	10	6
24.	PHC Kunihar	2	11	10	6
25.	PHC Navgaon	1	5	10	--
26.	PHC Dhundan	1	7	10	6
27.	PHC Dumehar	1	4	10	1
28.	PHC Baij Ki Hatti	--	4	10	1
29.	PHC Batal	1	3	10	1
30.	PHC Baddi	1	9	10	6
31.	PHC Joghon	2	7	10	6
32.	PHC Ramshahar	1	9	10	6
33.	PHC Sai	1	2	10	--
34.	PHC Loharghat	1	1	10	--
35.	PHC Nand	1	7	10	--
36.	PHC Goyala Panner	1	2	10	--
37.	PHC Diggall	1	2	10	10
38.	PHC Kawarni	--	2	10	--
39.	PHC Baruna	1	3	10	--
40.	PHC Kali Bari	1	3	10	--
41.	PHC Dabhota	1	3	10	2
42.	PHC Barotiwalla	--	--	10	--



Source : CMO Solan.

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6. PWD :

1.	SE Office	1
2.	XEN Offices	4 B&R viz. Solan, Arki, Kasauli, Nalagarh And 1 (NH) Division at Solan.
3.	Sub-Divisions	
4.	Mechanical Sub-Division	1 at Dharampur.

Besides this various rest houses are being managed by the PWD Department as per detail given hereunder

SrNo.	HPPWD Division	Name of locations	Contact number.
1.	Kasauli	Rest House & Circuit House at Kasauli	01792-272067
		Rest House Dharampur	01792-272067
		Rest House at Sultanpur	01792-272067
		Rest House Kuthar	01792-272067
		Rest House at Patta	01792-272067
		Rest House & Circuit House at Parwanoo	01792-272067
		Rest House at Koti	
2.	Solan	Rest House & Circuit House at Solan	01792-223811
		Rest House Kandaghat	01792-223811
		Rest House Chail	01792-223811
3.	Arki	Rest House & Circuit House at Arki	01796-220714
		Rest House Kunihar	01796-220714
4.	Nalagarh	Rest House & Circuit House at Nalagarh	01795-222199
		Rest House Ramshahar	01795-222199
		Rest House Baddi	01795-222199
		Rest House Barotiwala	01795-222199

Source : XENs, PWD District Solan.

7. I&PH :

1.	XEN Offices	3 viz. Solan, Arki and Nalagarh
----	-------------	---------------------------------

8. Electricity :

1.	SE Office	1
2.	XEN Offices	5 viz. Solan, Baddi, Parwanoo, Arki and Nalagarh

9. DFSC :

DFSC Solan through 5 whole sale centers and 307 fair Price shops/Depots:					
Centre	Telephone number	Storage capacity	No. of Depots	No. of families	Population registered with FPS.
Solan	01792-224114	500 MT w/s godown of HPSCSC Solan	51	22761	92362
Arki	01796-220043	800 MT w/s godown of HPSCSC Arki	54	21854	109075
Kandaghat	01792-256100	200 MT w/s godown of HPSCSC Kandaghat	31	9210	42121

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Dharampur	01792-264085	700 MT w/s godown of HPSCSC Dharampur	83	34930	128706
Nalagarh	01795-223024	500 MT Nalagarh & 200 MT Ramshahar w/s godown of HPSCSC Nalagarh	68 Nalagarh 20 Ramshahar	41556	204902
TOTAL : 5 Centers	--	--	307	130311	577166

Source : DFSC, Solan.

10. FOREST :

1.	Forest Divisions	3 viz. Solan Kunihar & Nalagarh.
2.	Forest Training Centers	1 at Chail.

Forest Rest Houses/Huts being managed by the Forest Department :

SrNo.	Forest Division	Name of locations	Contact number.
1.	Solan	Forest Rest House at Kumarhati	01792- 223751
2.	Wild Life Shimla	Forest Hut/Rest House Chail	0177-2623993
3.	Kunihar	Forest Rest House at Kunihar	01796-262228
		Forest Rest House Piplughat	01796-262228
		Forest Rest House at Darlaghat	01796-262228
4.	Nalagarh	Forest Rest House at Nalagarh	01795-223124
5.	Mid Himalayan Water Shed Development Project, Solan	Rest House at Solan	01792-223043

Source : DFOs Solan District

11. INDUSTRIES :

1.	District Industries Centre	1
2.	Small Scale Industries	2,734
3.	Large Scale Industries	2,498
4.	Other Industries	236

Source : GM Industries District Solan

12. HRTC :

(i) R.M. Solan

(a) Buses : 83 (Driver/Conductors:83).

(b) Tankers : 1 Tanker.

(c) Cab : 1 cab. :

13. RTO :

Type of vehicles	RTO Solan	R&LA Solan	R&LA Arki	R&LA Nalagarh	R&LA Kandaghat
(i) Trucks	--*	--*	3442	--*	--*

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(ii) Buses	--*	--*	47	--*	--*
(iii) Pickup Van	--*	--*	424	--*	--*
(iv) Taxies	--*	--*	NIL	--*	--*

(--*information not provided by concerned authority)

14. RAILWAYS :

Sr. No.	Name of Railway Station.	Phone number	Distance from HQ.
1.	Taksal	01792-232625	42 Kms
2.	Gumman	01792-232797	42 Kms
3.	Koti	01792-277636	33 Kms
4.	Sanwara	01792-264053	23 Kms
5.	Dharampur	01792-264302	18 Kms
6.	Kumarhatti	01792-266273	15 Kms
7.	Barog	01792-238814	7 Kms
8.	Solan	01792-220674	At HQ.
9.	Salogra	01792-237173	6 Kms
10.	Kandaghat	01792-256224	15 Kms
11.	Kanoh	01792- 256624	23 Kms
12.	Kaithlighat	0177-2477341	30 Kms

Source : IR, Solan.

15. PWD ROADS :

HPPWD B&R Roads :

(i) Fair Weather 833.834 Kms Number of Bridges 26 Number.

Sr.No.	Division	Length of fair weather road	Number of Bridge
1.	Solan	204.555 Kms.	7 Numbers
2.	Arki	459.834 Kms.	14 Nos.
3.	Kasauli	--	--
4.	Nalagarh	169.445 Kms.	5 Nos.
	Total:-	833.834 Kms	26 Nos.

(ii) Kachha 953.832 Kms. No. of bridges 14 Numbers

Sr. No	Division	Length of Kachha road	Number of Bridge
1.	Solan	201.545 Kms.	3 Nos.
2.	Arki	334.391 kms.	7 Nos.
3.	Kasauli	285.510 kms.	3 Nos.
4.	Nalagarh	132.386 Kms.	1 No.
	Total:-	953.832 Kms.	14 Nos.

(iii) Pacca 1533.612 KMs No. of bridges 69 Numbers.

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Sr.No	Divisiojn	Length of Pucca road	Number of bridge
1.	Solan	204.555 Kms.	7 Nos
2.	Arki	459.834 Kms.	14 Nos
3.	Kasauli	371.665 Kms	15 Nos
4.	Nalagarh	497.558 Kms.	33 Nos
	Total:-	1533.612 Kms.	69 Nos

Source : SE/XENs, PWD District Solan.

HPPWD National Highway Roads :

✚ Pucca 158.081 KMs No. of bridges 33 numbers.

Sr.No.	Division	Length of pucca road	Number of bridge
1.	NH Division Solan	158.081 KMs	33 Numbers

✚ Fair Weather NIL.

Sr.No.	Division	Length of fair weather road	Number of bridge
1.	NH Division Solan	--	--

✚ Kuchha Weather NIL

Sr.No.	Division	Length of kuchha road	Number of bridge
1.	NH Solan	--	--

Source : SE/XENs, PWD District Solan.

16. Bridges :

Detail of Bridges in District Solan under NH Division, HP.PWD. Solan

Sr. No.	Name of bridge (National Highwaywise)	RD/Location.
	NH- 21 A	
1	Balad Khad	17/561
2	Sandholi bridge-1	19/295
3	Sandholi Bridge-II	21/085
4	Sandholi -III	21/512
5	Bhud Naddi	22/033
6	Ratta bridge	24/074
7	ManPura bridge	26/440
8	Kharoni Bridge	27/543
9	Baghbania bridge	28/670
10	Khera bridge	31/315
11	Bridge near Peer Sathan	32/900
12	Chikni bridge-1	37/379
13	Chikni Bridge-II	37/471
14	Chikni bridge-III	37/540 to 570

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15	Chikni bridge-IV	37/722
16	Chikni- bridge -V	37/877
17	Reru Nadi	40/821
18	Bridge Dolowala Nallarh	43/202
19	Mahadev Creak No. 1	43/795
20	Mahadev Creak No. II	44/045
21	Mahadev Creak No. III	44/350
22	Mahadev Creak No. IV	44/435
23	Panjera Khad	47/800
24	Kundlu No. 1	48/818
25	Kundlu No. II	49/168
NH- 22		
26	Sukhana khad Bridge	62/200
27	Jabli Khad	76/400
28	Barog Nallah on Barog Bye Pass	12/255
29	Kather Khad- I bridge	1/660
30	Kather Khad -II bridge	2/260
31	Brewery Khad No.1 bridge	107/670
32	Brewery Khad No-II bridge	108/040
NH- 88		
33	Chamakari bridge on Ali Khud.	50/060 to 50/075

Source : XENs, PWD NH District Solan.

17. Number of accessible villages from various type of roads in Solan District :

Sr.No.	PWD Division	Number of bridge
1.	Arki	686 numbers.
2.	Solan	323 number
3.	Kasauli	392 numbers
4.	Nalagarh	507 number
	TOTAL:	507 numbers.

Source : SE/XENs, PWD District Solan.

18. Number of villages which are still inaccessible from road :

Sr.No.	PWD Division	Number of villages
1.	Arki	103 numbers.
2.	Solan	27 number
3.	Kasauli	65 numbers
4.	Nalagarh	53 number
	TOTAL:	248 numbers.

Sr.No.	PWD Division	Number of villages
1	PWD Division Solan	1. Nadoh 2. Khanog 3. Dharog 4. Diarg Bokher 5. Daran

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		6. Banibara 7. Kothi Kalan 8. Seok Barti 9. Garohong 10. Kalor 11. Payon 12. Badliyana 13. Dharangti 14. Mayhgaon Kalan 15. Katoh 16. Makiyana 17. Kothi 18. Kun 19. Kangati 20. Galai 21. Tharola 22. Narud 23. Salahi 24. Jadhal 25. Bagaid 26. Jelkana 27. Badehat
2	PWD Division Arki	1. Samtyari 2. Lahmon 3. Behli 4. Samlech 5. Shelli 6. Gharnoo 7. Mahol 8. Kothi 9. Magroor Tepra 10. Sanyari 11. Malethi 12. Badhal 13. Chetta 14. Kuiru 15. Dauru 16. Karog 17. Padyar 18. Sanali 19. Thathall 20. Gajrehri 21. Chamba 22. Godhan 23. Chhatera 24. Basyana 25. Dano ka Jubbar 26. Fagwana 27. Banog 28. Malogra 29. Serbala 30. Ser jari

		31. Chakru 32. Paryab 33. Sohra Kaneta 34. Soria 35. Jandreh 36. Jandol 37. Sakore 38. Bambell 39. Pageena 40. Saryall 41. Rudhal 42. Chhola 43. Ghumaru 44. Rouri 45. Badog 46. Thawn 47. Shunger 48. Jungle Chaiyan 49. Khanger 50. Phangi 51. Datti Barhmna 52. Datti Ghamara 53. Sameli 60. Satoti 61. Budmoo 62. Dawaru 63. Kothi 64. Ranoh Khalsa 65. Ali 66. Kandryali 67. Bhurjani 68. Nanun 69. Patti Khalsa 70. Dawars 71. Samoti 72. Kyar 73. Dadwana 74. Dasal 75. Sari 76. Sujalla 77. Syari 78. Dochl 79. Kasyat 80. Chiknara 81. Bajheri 82. Dudana 83. Balang 84. Kurmala 85. Chalama
--	--	---

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		86 Bajeun 87 Magrwari 88 Bajot 89 Jablu 90 Baimon 91 Baimon Bhalera 92 Chanarri 93 Gater 94 Garud Nag 95 Chudwali 96 Mallwali 97 Nali Nal 98. Dholri 99 Batehr 100 Gandhyota 101 Ghiana 102 Kalarn 103. Simun
3	PWD Division Kasauli	1. Durgapur 2. Chauni Kamthanu 3. Chauni Bhattan 4. Harath 5. Bamot 6. Lagog 7. Hara Chadyar 8. Darat 9. San 10. Dhab 11. Thimbar 12. Bajthana 13. Balota 14. Badhu 15. Badhol 16. Lunkyar 17. Baniara 18. Dhandri 19. Bani 20. Bariyan 21. Rawahan 22. Cheota 23. Dhar 24. Konana 25. Mahli 26. Nalag 27. Samal Ka Pani 28. Hara Mehta 29. Serla 30. Path Ruuparla 31. Gandhel 32. Dhart 33. Lohari

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		34. Phophalar 35 Kangi 36 Mundru 37 Gharsi Kukana 38 Dfhali 39 Shilar 40 Bania 41 Shiwa 42 Bagi 43 Banet 44 Paro Paind 45 Chaola 46 Manijher 47 Manjih 48 Kalog 49 Kalhech 50 Dhar 51 Tarol 52 Kainthi 53 Thari 54 Sherla 55 Bayela Balahu 56 Salga 57 Kalth 58 Rathal 59 Bargyana 60 Seola 61 Manjhol 62 Satrol 63 Karwa 64 Auda Uperla 65 Auda Nichla
4	PWD Division Nalagarh	1. Gharer 2. Poanlha 3. Tamoroh 4. Bharur 5. Plate 6. Chamba 7. Dharal 8. Kohla 9. Jagli 10. Jager 11. Badal 12. Bani 13. Kanali 14. Purla 15. Kharak 16. Khobla 17. Thohan 18. Punali 19. Teliwal

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		20. Chandpur 21. Kusri 22. Jagli 23. Randhala 24. Rajwan 25. Banal 26. Aleta 27. Baonta 28. Poploh 29. Chanog 30. Rio 31. Konela uperla 32. Plassi Nathu 33. Bah 34. Talao 35. Patta 36. Bag 37. Barampur 38. Bara 39. Madyarpur 40. Kheri 41. Nahar Singh 42. Beh Kanitan 43. Mandi 44. Rugi Dogi 45. Changer Chiyani 46. Ghat Dochi 47. Khera 48. Tiamu Parla 49. Parsada 50. Bassi 51. Khokharan 52. Nisal 53. Tianuwala
--	--	--

Source : SE/XENs, PWD District Solan.

19. COMMUNICATION :

- (a) Post/Sub Post Office :
 (b) BSNL Line connection. :

20. AVAILABILITY OF CRANES WITH PHONE NUMBERS :

Sr No	Tehsil	Name and address of the crane owner	Phone number	Registration number of the vehicle.
1.	Solan	Superintendent of Police, Solan	223836 & 230837 (Police line)	HP_07A-0358
2.	Nalagarh	M/S Avtar Singh & Co.	94180-33599	HP-12A-7042

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		VPO Rajpura.		
3.	Nalagarh	Saini Boring Co. Village Kharuni, P.O. Manpura.	98160-78190 and 98160-78191	HP-12A-7696
4.	Nalagarh	Satpal Singh Village Sanehar, P.O. Bhatiyani.	98161-00099	HP-12A-9046
5.	Nalagarh	Saini Crane Service. Village Kharuni, P.O. Manpura.	98160-78190	HP-12B-5755
6.	Nalagarh	M/S. Ankur Drugs & Pharma, Village Makhanumajra, P.O. Kharuni.	01795-236900 and 01795-236902	HP-12B-6249
7.	Nalagarh	M/S.Jindal Builtech Pvt. Ltd. Village Manpur, P.O. Kharuni	988200095 and 01795-236593	HP-12B-6890
8.	Nalagarh	M/S Associated Engineering, #222 New HB Colony Baddi. P.O. Baddi.	--	HP-12B-7290
9.	Nalagarh	M/S ISOLLYOD Engg. Village Kishanpura, P.O. Gurumajra.	01795-308177	HP-12C-1881
10.	Nalagarh	H.N.Singh & Co., Bharatgarh Road Chowkiwala.	94180-36116	HP-12C-2274
11.	Nalagarh	M/S Saini Fabrication, Opposite Ind.Swift Ltd. Pinjore Road Makhanumajra.	98160-78190	HP-12C-3171
12.	Baddi	M/S Navi Infrastructure #216 Kunjahal, Baddi	92186-09884	HP-12C-4367
13.	Nalagarh	Superintendent of Police, Baddi	01795-246100	HP-12C-5136
14.	Baddi	M/S Navi Infrastructure #216 Kunjahal, Baddi	92186-09884	HP-12C-5629
15.	Baddi.	Roshan Lal VPO Baddi.	92185-26265 and 9882300065	HP-12C-6260
16.	Parwanoo	M/S Pushp garments Gift Gallary	98168-80022	HP-15A-1125
17.	Parwanoo	M/S Shaan Electrical Company, Village kamli, P.O. Parwanoo, Tehsil Kasauli.	98160-31611	HP-15A-1357
18.	Parwanoo	-do-	98160-31611	HP-15B-1357
19.	Parwanoo	-do-	98161-31611	HP-15B-2357
20.	Arki	M/S Gannon Dunkerly Co. Ltd. C/O JP Associates, Village Bagga, P.O. Kandhar, Tehsil Arki, District Solan.	98050-03121	HP-11-3037
22	Arki	JP Associates, Village Bagga, P.O. Kandhar, Tehsil Arki, District Solan.	98050-03121	HP-11-3238
23	Arki	-do-	98050-03121	HP-11-3241
24	Arki	-do-	98050-03121	HP-11-3244
25	Arki	-do-	98050-03121	HP-11-3491

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26	Arki	-do-	98050-03121	HP-11-3628
27	Arki	-do-	98050-03121	HP-11-3809
28	Arki	-do-	98050-03121	HP-11-3810
29	Arki	Ambuja Cement Ltd. Village Suli, P.O. Darlaghat, Tehsil Arki, District Solan.	98050-51333 Sh.Krisgan Negi	HP-11-3482
30	Arki	-do-	98050-51333 Sh.Krisgan Negi	HP-11-4072
31	Arki	-do-	98050-51333 Sh.Krisgan Negi	HP-11B-9819
32	Arki	-do-	98050-51333 Sh.Krisgan Negi	HP-11B-9820
33	Solan	SP Solan	333836 and 230837	HP-64-1512
34	Nalagarh	Sh.Sahil Bansal S/O Sh.Nirmal Bansal, P.O. Baddi, Tehsil Baddi.	--	HP-64-6665
35	Nalagarh	M/S Bansal Crane Service R/O H.No:490, Housing Board Phase- II, Baddi, P.O. Baddi, Tehsil Baddi, District Solan.	--	HP-64-6865

Source : SP Solan and Baddi, District Solan.

ANNEXURE-S.

Model Code of Conduct for NGOs during disasters :

The Code of Conduct for the various NGOs registered in Solan district will be as under :

Purpose :

This Code of Conduct seeks to guard our standards of behaviour. It is not about operational details, such as how one should calculate food rations or set up a refugee camp. Rather, it seeks to maintain the high standards of independence, effectiveness and impact to which disaster response NGOs and the Red Cross Movement aspires. It is a voluntary code, enforced by the will of the organisation accepting it to maintain the standards laid down in the Code.

In the event of armed conflict, the present Code of Conduct will be interpreted and applied in conformity with international humanitarian law.

The Code of Conduct is presented first. Attached to it are three sub-annexes, describing the working environment that we would like to see created by Host Governments, Donor Governments and Inter-governmental Organisations in order to facilitate the effective delivery of humanitarian assistance.

NGOs: NGOs (Non-Governmental Organisations) refers here to organisations, both national and international, which are constituted separately from the government of the country in which they are founded.

NGHAs: For the purposes of this text, the term Non-Governmental Humanitarian Agencies (NGHAs) has been coined to encompass the components of the International Red Cross and Red Crescent Movement - The International Committee of the Red Cross, The International Federation of Red Cross and Red Crescent Societies and its member National Societies - and the NGOs as defined above. This code refers specifically to those NGHAs who are involved in disaster response.

IGOs: IGOs (Inter-Governmental Organisations) refers to organisations constituted by two or more governments. It thus includes all United Nations Agencies and regional organisations.

Disasters: A disaster is a calamitous event resulting in loss of life, great human suffering and distress, and large-scale material damage.

The Code of Conduct

Principles of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Response Programmes

1. The Humanitarian imperative comes first.

2. Aid is given regardless of the race, creed or nationality of the recipients and without adverse distinction of any kind. Aid priorities are calculated on the basis of need alone
3. Aid will not be used to further a particular political or religious standpoint
4. We shall endeavour not to act as instruments of government foreign policy
5. We shall respect culture and custom.
6. We shall attempt to build disaster response on local capacities
7. Ways shall be found to involve programme beneficiaries in the management of relief aid
8. Relief aid must strive to reduce future vulnerabilities to disaster as well as meeting basic needs
9. We hold ourselves accountable to both those we seek to assist and those from whom we accept resources
10. In our information, publicity and advertising activities, we shall recognise disaster victims as dignified humans, not hopeless objects.

The Working Environment

Having agreed unilaterally to strive to abide by the Code laid out above, we present below some indicative guidelines which describe the working environment we would like to see created by donor governments, host governments and the inter-governmental organisations - principally the agencies of the United Nations - in order to facilitate the effective participation of NGHAs in disaster response.

These guidelines are presented for guidance. They are not legally binding, nor do we expect governments and IGOs to indicate their acceptance of the guidelines through the signature of any document, although this may be a goal to work to in the future. They are presented in a spirit of openness and cooperation so that our partners will become aware of the ideal relationship we would seek with them.

ANNEXURE-T.

Industries Hazards Details :

(a) Chemical/Industrial Disaster/Accidents History of District Solan :

Year/ Date	Name of Industry	Cause	Magn itude	Chemical/ Product	Dea d	Injure d	Evacu ated	Loss of Propert y
26.08.2008	M/S Exicom Telesystem, EC Chambaghat, District Solan	Electrical Short Circuit	NA	Telecom Equipmen ts.	NIL	NIL	NIL	10 Cr. RM & Fur.
11.05.1995	M/S Deepak Spinning Mills, Badi.	Unknown	--	--	--	--	--	15 Crores
02.06.1995	M/S Himachal Fiber Mills, Barotiwal.	Unknown	--	--	--	--	--	1.5 Crore
16.06.1995	M/S Himachal Fiber Mills, Barotiwal.	Unknown	--	--	--	--	--	10 Crore
21.12.1995	M/S Tie Pack Mills, Baddi	Unknown	--	--	--	--	--	4 Crore
02.06.1996	M/S Govind Pharma, Baddi	Unknown	--	--	--	--	--	15 lacs.
29.07.1997	M/S Tie Pack Industries, Baddi.	Unknown	--	--	--	--	--	8 Crore
24.11.1998	Winner Nippon Industries, Baddi.	Unknown	--	--	--	--	--	1.5 Crore
09.07.2006	Asian Asso. Sol. Perfume, Baddi	Unknown	--	--	--	--	--	4 Crore
30.08.2008	Nikhil International, Barotiwal	Unknown	--	--	--	--	--	4 Crore
20.09.2008	PICL, Burawalan	Unknown	--	--	--	--	--	1.5 Crore
14.11.2008	GMT Laboratory, Barotiwal.	Unknown	--	--	--	--	--	2 Crore.
02.09.2009	M/S Cadbuory India Limited, Sandauli	Unknown	--	--	--	--	--	1 Crore.
01.02.2010	M/S Birla Textiles, Barotiwal	Unknown	--	--	--	--	--	1 Crore.
18.05.2010	M/S Windsor Pack Industries, Thana, Baddi	Unknown	--	--	--	--	--	3.5 Crore.
17.06.2010	M/S Depak	Unknown	--	--	--	--	--	1.5

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	Spinning Mills, Baddi							Crore.
06.04.2011	Binaca Polypack Pvt.Ltd	Unknown	--	--	--	--	--	3 Crore.
07.07.2011	C & E Unit I, 129, HPSIDC, Baddi	Unknown	--	--	--	--	--	2.33 Crore.
15.07.2011	Empire Home Appliances, Bhud, Baddi	Unknown	--	--	--	--	--	5 Crore.
17.05.2012	Gopal Life Sons Co. Jhar Majri, Baddi.	Unknown	--	--	--	--	--	1 Crore.

(b) Manufacturing facilities in District Solan :

Industries	Number of location	Number of Major Plants	Output in Tonnes	Number of people employed	Additional Information/ Comments.
Petroleum Refining	Nil	Nil	Nil	Nil	Nil
Agricultural chemicals	BBNDA	19	--	131	Nil
Fertilizers	Nil	Nil	Nil	Nil	Nil
Explosives	Nil	Nil	Nil	Nil	Nil
Plastic	Industrial Estate Chambaghat & BBNDA.	4+139 Total 143	--	40+2270 Total 2310	
Aluminium	BBNDA	15	--	250	Nil
Steel	BBNDA	15	--	462	Nil
Other major metals	Nil	Nil	Nil	Nil	Nil

(c) Major Chemical Storage in District Solan :

Associated Hazardous Chemicals :

Substance	Location	Quantity	Owner and contact details.
LPG	Industrial Area, Baddi.	--	--
Petroleum	Nil	Nil	Nil
Chlorine	Nil	Nil	Nil
Ammonia	M/S Vardhman Group of Industries, Baddi.	--	--
Acids	M/s Base Corporation Ltd., Village Nagali, P.O. Oachghat.	Suphuric Acid 10 tonns.	Sh.Mehar Singh, M#98050-97117

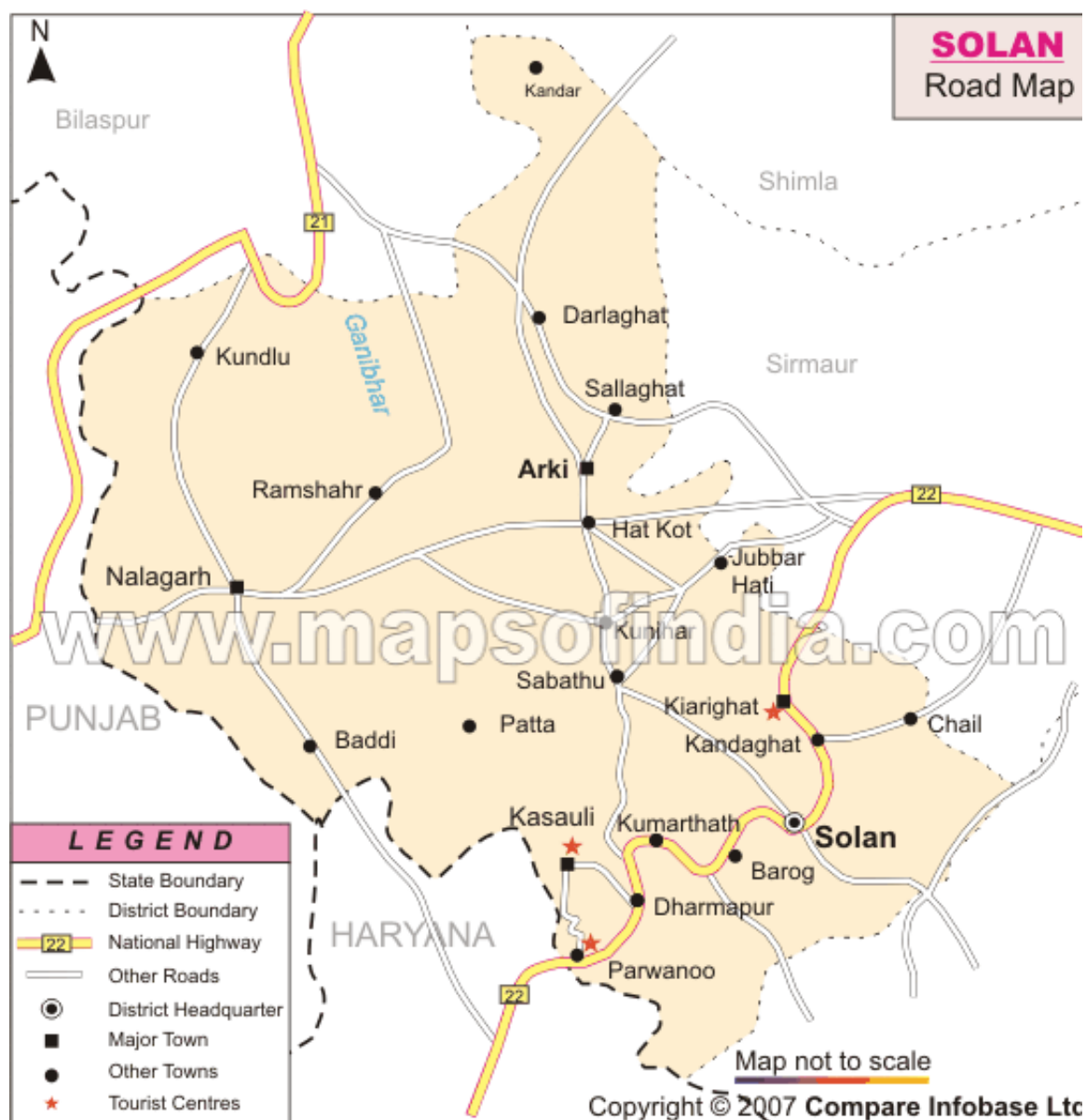
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ANNEXURE-U

Tentative population detail of Census-2011, District Solan :

Sr. N	Name of Charge	Charge No.	Rural/Urban	Population				Literates				
				Persons	Males	Females	Others	Others	Persons	Males	Females	Others
1	2	3	4	5	6	7	8	12	13	14	15	16
1.	Arki	01	Rural	53638	26678	26960	0	0	41401	22176	19225	0
2.	Darlaghat(ST)	02	Rural	36748	19062	17686	0	0	27143	15288	11855	0
3.	Ramshahar	03	Rural	32252	16395	15857	0	0	22330	12789	9541	0
4.	Nalagarh (Tehsil)	04	Rural	103414	54563	48849	2	0	71636	41780	29856	0
5.	Baddi (Tehsil)	05	Rural	58287	31485	26802	0	0	40872	24106	16766	0
6.	Krishangarh(ST)	06	Rural	24484	12335	12149	0	0	17943	9756	8187	0
7.	Kasauli (Tehsil)	07	Rural	54504	29545	24956	3	0	41599	23975	17621	3
8.	Solan (Tehsil)	08	Rural	70466	35900	34566	0	0	54766	29548	25218	0
9.	Kandaghat (Tehsil)	09	Rural	40516	20949	19567	0	0	31827	17503	14324	0
10.	RTC-5 CRPF Dharampur	S1	Rural	283	278	5	0	0	283	278	5	0
	RURAL TOTAL:	--	--	474592	247190	227397	5	0	349800	197199	152598	3
11.	Arki (MC)	10	Urban	3038	1535	1503	0	0	2632	1359	1273	0
12.	Nalagarh (MC)	11	Urban	10702	5719	4976	7	0	8567	4751	3809	7
13.	Baddi (MC)	12	Urban	29917	19356	10561	0	0	22940	15905	7035	0
14.	Parwanoo (MC)	13	Urban	8750	5135	3615	0	0	7109	4194	2915	0
	MC TOTAL:	--	--	52407	31745	20655	7	0	41248	26209	15032	7
15.	Dagshai Cantt.Board	14	Urban	1896	1061	835	0	0	1610	945	665	0
16.	Special Charge Dagshai 2/8 GR	S2	Urban	941	689	252	0	0	811	623	188	0
17.	Special Charge Workshop Dagshai	S3	Urban	69	57	12	0	0	66	54	12	0
	CB & Special Charge Total :	--	--	2906	1807	1099	0	0	2487	1622	865	0
18.	Kasauli Cantt.Board	15	Urban	2884	1520	1364	0	0	2342	1286	1056	0
19.	Special Charge Army Kasauli	S4	Urban	579	415	164	0	0	349	207	142	0
20.	Special Charge AIRFORCE	S5	Urban	417	243	174	0	0	349	207	142	0
	CB & Special Charge Total:	--	--	3880	2178	1702	0	0	3191	1862	1329	0
21.	Subarhu Cantt. Board	16	Urban	2067	1078	989	0	0	1753	951	802	0
22.	Special Charge Army Subarhu	S6	Urban	1614	1041	573	0	0	1389	939	450	0
	CB & Special Charge Total :	--	--	3681	2119	1562	0	0	3142	1890	1252	0
23.	Solan (MC)	17	Urban	37935	20120	17810	5	0	32904	17634	15266	4
24.	Special Charge Kumaun Rgt.	S7	Urban	1269	986	283	0	0	1105	893	212	0
	MC & Special Charge	--	--	39204	21106	18093	5	0	34009	18527	15478	4
	Urban Total:	--	--	102078	58955	43111	12	0	84077	50110	33956	11
	GRAND TOTAL:	--	--	576670	306145	270508	17	0	433877	247309	186554	14

Road Map of Solan District Himachal Pradesh :



EMERGENCY TELEPHONE NUMBERS OF SOLAN DISTRICT:-

Sr. No.	Department	Emergency Telephone number						
		Toll free numbers at Solan	Solan	Nalagarh	Arki	Kandaghat	Baddi	Parwanoo
	STD CODES	--	01792	01795	01796	01792	01795	01792
1.	Police Assistance	100	223841	223045	220710	256229	246800	233124
2.	Hospital/ Ambulance	102 & 108	223638	108 & 221204	108 & 220368	108 & 256137	108 &	108 & 234534
3.	Fire	101	223888	223294	Solan 223888	Solan 223888	245352	232233
4.	District Administration	1077	223702	223024	220666	256100	244620	233165
5.	Bus stand	--	226040	223076	220004	--	94184-55483	--
6.	Rest/Circuit house	--	223601	222199	220714	223811	222199	272067
7.	Electricity Complaint	--	223631	223039	220745	256128	01795-244111	233104
8.	Water complaint	--	223657	223083	220872	256282	245183	232359
9.	Railway Station	131	220674	No connectivity	No connectivity	256224	No connectivity	232625

Let's

together makes

“ SOLAN DISTRICT ”

a safer place to

live.....

