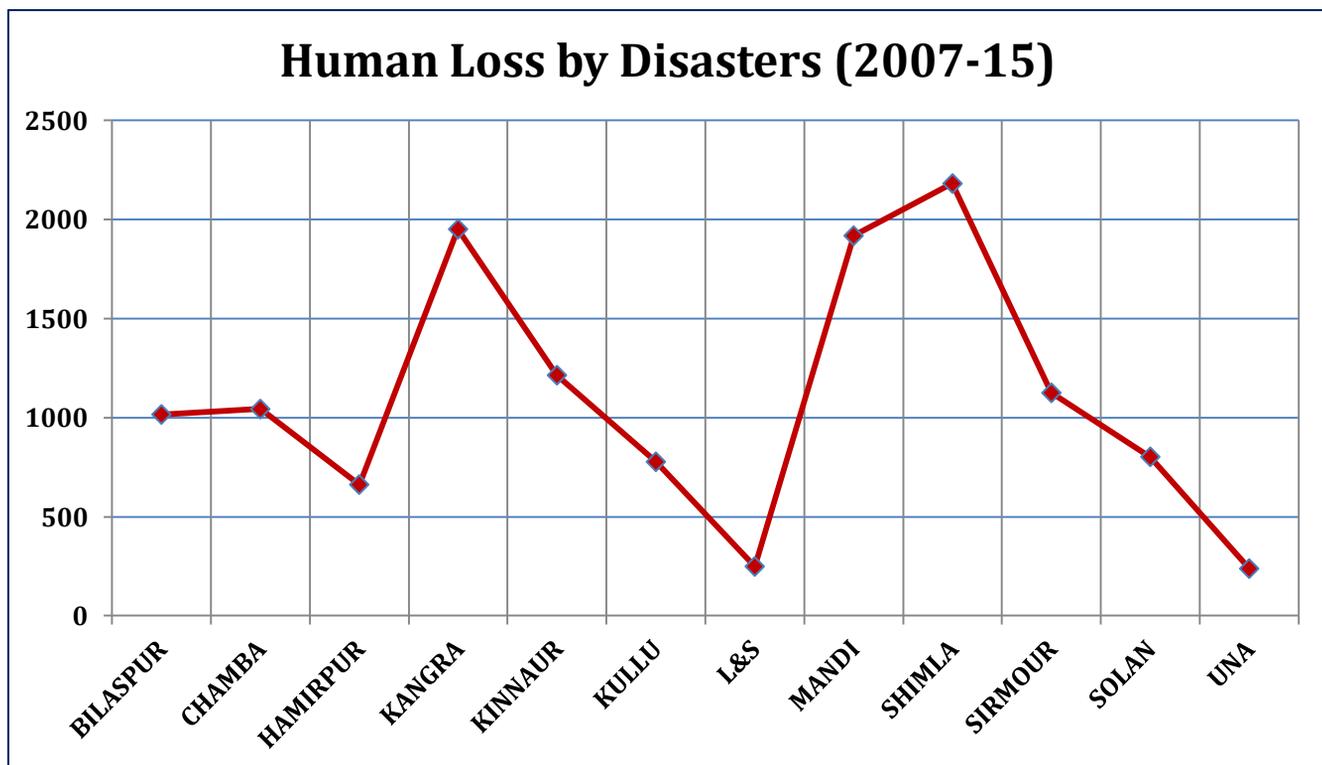




# Disaster Analysis & Management (Loss, Rescue, Relief & Rehabilitation {LR<sup>3</sup>})



**Economics and Statistics Department  
Government of Himachal Pradesh**



## **MESSAGE**

*Systematic disaster data collection and analysis can be used to take informed policy decisions which could help reduce disaster risks and build resilience. It is also important in understanding the impacts and costs of disasters. There is a growing importance and understanding that data collection, analysis, and management can help both short and long-term development goals and help to identify and address disaster risks.*

*I am happy to learn that the Department of Economics and Statistics is bringing out maiden report on "**Disaster Analysis & Management**". The objective of this compilation is to provide policy makers, researchers and other stakeholders comprehensive data on disaster issues which will be of immense use to them.*

*I extend my good wishes to the Department of Economics and Statistics, Himachal Pradesh for taking this initiative and making sincere efforts to provide disaster statistics critical for policy formulation.*

Virbhadra Singh  
Chief Minister  
Himachal Pradesh.

Shimla  
September, 2016.



### **Message**

The prevention of loss to life and property due to natural calamities is being viewed very seriously by the Government of Himachal Pradesh. In the past the main role played by the Government in the case of various disasters was confined mainly to post-disaster activities that included providing relief and organizing rehabilitation.

The implementation of Disaster Management Plans are crucial from the point of view of show-casing Himachal's achievements and successes in putting in place an appropriate institutional, policy and legal framework for disaster management, risk identification, assessment, monitoring and early warning, knowledge management, innovation and education for building a culture of safety and resilience, reducing the underlying risk factors for minimization of vulnerabilities and preparedness for effective response.

I appreciate the efforts being made by the Economics & Statistics Department, Himachal Pradesh in bringing out this valuable document and wish them every success in their endeavour.

**Kaul Singh Thakur  
Revenue Minister  
Himachal Pradesh**

Shimla  
September, 2016



## Message

I am pleased to know that the Department of Economics & Statistics, HP is coming up with a maiden publication titled "*Disaster Analysis & Management*".

This document will be of great help to the policy makers and stakeholders of the State. Besides highlighting the data of key areas, it provides huge statistical information in respect of all districts of the State.

I extend my good wishes to the *Department of Economics & Statistics*, Himachal Pradesh for taking this initiative and making sincere efforts for compiling this useful data base.

V.C.Pharka  
Chief Secretary  
Himachal Pradesh

Shimla  
September, 2016



## Foreword

Preparedness is the key in dealing with disaster before and during the period it strikes. Therefore a need has been felt at the State level for the development of a comprehensive State data base as well as knowledge on disasters which would facilitate formulation of area specific disasters risk profiles, assessment of long term impacts of disasters, development of policies, strategies and frameworks, preparation of proper planning for disaster preparedness and allocation of adequate funds for the prevention and mitigation of disasters.

I am very happy to learn that the Department of Economics & Statistics, Himachal Pradesh is bringing out an maiden Report on *“Disaster Analysis & Management”*, which has comprehensive information on all important aspects of the disaster issues along with statistical data.

I express my deep gratitude to all agencies for their co-operation and assistance in providing the required data and supported our efforts to bring out the publication in its present form. We hope to continue to get the same support of all the agencies in the future too. Comments and suggestions towards improving future reports would be greatly appreciated.

Tarun Shridhar  
Additional Chief Secretary  
Himachal Pradesh

Shimla  
September, 2016

## **Preface**

The prevention of loss to life and property due to natural calamities is being viewed very seriously by the Government of Himachal Pradesh. In the past the main role played by the Government in the case of various disasters was confined mainly to post-disaster activities that included providing relief and organizing rehabilitation.

The implementation of Disaster Management Plans are crucial from the point of view of show-casing Himachal's achievements and successes in putting in place an appropriate institutional, policy and legal framework for Disaster Management, risk identification, assessment, monitoring and early warning, knowledge management, innovation and education for building a culture of safety and resilience, reducing the underlying risk factors for minimization of vulnerabilities and preparedness for effective response.

The Disaster management Plan on disaster reduction is going to be a watershed event at the state level and is likely to significantly influence and determine the course of thinking, strategization and action for ensuing disaster preparedness. Himachal Pradesh needs to position itself prominently to take full advantage from the scheme of things likely to emerge from this.

The data present in this report could be used for preparedness and awareness and to meet the challenges posed in managing pre and post disasters and provide information to strengthen the capacity and capability of various organizations of the state government and other stakeholders entrusted with the responsibility of implementing Disaster Management Plan.

We express our deep gratitude to all agencies for their co-operation and assistance in providing the required data and for having supported our efforts to bring out the publication in its present form. We hope to continue to get the same support of all the agencies in the future too. Comments and suggestions towards improving future reports would be greatly appreciated.

***Pradeep Chauhan***  
***Economic Adviser***

Shimla  
September, 2016

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## **Executive Summary**

Disasters disrupt progress and destroy the hard-earned fruits of painstaking developmental effort, often pushing nations, in quest for progress, back by several decades. Thus, efficient management of disasters, rather than mere response to their occurrence, has in recent times received increased attention both within India and abroad. This is as much a result of the recognition of the increasing frequency and intensity of disasters, as it is an acknowledgement that good governance in a caring and civilized society, needs to deal efficiently with the devastating impact of disaster.

Seismically, the State lies in the great Alpine- Himalayan seismic belt running from Alps mountains through Yugoslavia, Turkey, Iran, Afghanistan, Pakistan, India, Nepal, Bhutan and Burma. The State has not only been shaken by earthquake occurring in its territory but also in the neighbouring areas of J&K in the North, Tibet in the East and Uttrakhand hills in the South East. A number of damaging earthquakes have occurred in the HP territory during 20th century for which information is well recorded. Information about earthquake occurrence before the famous 1905 Kangra earthquake is not, however, available and is a matter of research through historical and archival records. Large earthquakes have occurred in all parts of Himachal Pradesh, the biggest being the Kangra Earthquake of 1905. There were two more big quakes, but they were not nearly as powerful as the 1905 jolt. The first was in 1906, a 6.4 near Kullu and the second was a 6.8 in Lahaul-Kinnaur Spiti in 1975 along the Indo-China Border. There are 250 earthquakes of Magnitude 4.0 and more including more than 60 with Magnitude 5.0 or more, which have rocked the state of HP and adjoining areas of J&K or Uttrakhand in the last about 90 years.

State of Himachal is prone to various hazards both natural and manmade. Main hazards consist of earthquakes, landslides, flash floods, snow storms and avalanches, draughts, dam failures, fires – domestic and wild, accidents – road, rail, air, stampedes, boat capsizing, biological, industrial and hazardous chemicals etc. The hazard which however, poses biggest threat to the State is the earthquake hazard. The State has been shaken by more than 80 times by earthquakes having a magnitude of 4 and above on the

Richter scale as per the recorded history of earthquakes. As per the BIS seismic zoning map five districts of the State, namely Chamba (53.2%), Hamirpur (90.9%), Kangra (98.6%), Kullu (53.1%), Mandi (97.4%) have 53 to 98.6 per cent of their area liable to the severest design intensity of MSK IX or more, the remaining area of these districts being liable to the next severe intensity VIII. Two districts, Bilaspur (25.3%) and Una (37.0%) also have substantial area in MSK IX and rest in MSK VIII. The remaining districts also are liable to intensity VIII

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

The data collection work of Disaster Statistics started from 2007 in all 12 districts of Himachal Pradesh. The present report provide district wise and year wise results based on data collected from 2007-15.

- ❖ During the year 2007-15 the maximum live lost were 2030 during the year 2009-10.
- ❖ The maximum Livestock loss occurred in 2013-14, in district Kinnaur which was 12,246.
- ❖ The maximum number of tree uprooted were 3,43,738 during the year 2012-13. In Mandi district Maximum number of tree uprooted were 1,67,800.
- ❖ A total number of 15,817 Kacha house were damaged in rural area during the year 2008-09.
- ❖ A total number of 2174 Pacca house damaged in rural area during the year 2013-14.

- ❖ The maximum high tension line damaged 1358 kilometer during the year 2013-14 and low tension line damaged 1289 kilometer in the year 2012-13
- ❖ An Assistance of Rs.55 Lakh was provided for Primary Education during the year 2012-13.
- ❖ The loss of sown area affected due to disaster was 317222, hectare in the year 2009-10.
- ❖ The area affected in Horticulture crops were about 154788 Hectare during the year 2014-15.
- ❖ The production loss in Horticulture crops was about 3,72,125 ton out of which 2,021,59 (54.33%) loss in district Shimla.
- ❖ The maximum amount spent on fully damaged house was 3431 lakh in the year 2014-15.
- ❖ The number of village disconnected with transportation facility was 836 in the year 2013-14.
- ❖ The data shows that total 228 days some villages were disconnected with transportation facility in the year 2014-15.
- ❖ The maximum number of Soil works damaged was 2702 number during the year 2013-14.
- ❖ The amount of Rs. 257 lakh assistance was provided for soil works damaged during the year 2013-14.
- ❖ An amount of Rs.106 lakh assistance was provided for forest building damaged during the year 2012-13.
- ❖ An amount of Rs. 25 lakh assistance was provided for provision of fodder in cattle camps.
- ❖ An amount of Rs. 39 lakh assistance was provided for vaccine and medicine for animals during the year 2012-13.
- ❖ 508 Primary School were damaged during the year 2013-14.
- ❖ 11 Dispensaries were damaged in 2012-13.
- ❖ 6 PHC's were damaged during the year 2012-13 and 2013-14.
- ❖ The maximum number of land line telephone disrupted were 150 days in the year 2014-15.

- ❖ The Maximum number of mobile phone disrupted for 120 days in the year 2012-13.
- ❖ The maximum of 134 other commercial building were damaged during the year 2012-13.
- ❖ Rs. 243 lakh were provided for gratuitous relief during the grievous injury requiring hospitalization during the year 2014-15.
- ❖ The assistance of Rs. 1379 lakh were provided during the year 2013-14 for the relief of Old , Infirm, Destitute children.
- ❖ The maximum assistance of Rs. 54 lakh were provided for the clothing, utensils/households goods for affected families during the year 2012-13.
- ❖ An amount of Rs. 6788 lakh assistance was provided for repair and restoration of damaged road and bridges.
- ❖ Rs. 203 lakh were provided for damaged electricity transformer.
- ❖ An amount of Rs. 1694 lakh assistance was provided for supply of drinking water in rural and urban area
- ❖ An amount of Rs. 239 lakh assistance was provided for damaged soil works.

# Chapter-1

## Introduction

### 1. Background

**1.1** India has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. Floods, Droughts, Cyclones, Earthquakes and Landslides have been a recurrent phenomenon. About 60% of the landmass is prone to earthquakes of various intensities; over 40 million hectares is prone to floods; about 8% of the total area is prone to cyclones and 68% of the area is susceptible to drought. In the decade 1990-2000, an average of about 4344 people lost their lives and about 30 million people were affected by disasters every year. The loss in terms of private, community and public assets has been astronomical.

**1.2** At the global level, there has been considerable concern over natural disasters. Even as substantial scientific and material progress is made, the loss of lives and property due to disasters has not decreased. In fact, the human toll and economic losses have mounted. It was in this background that the United Nations General Assembly, in 1989, declared the decade 1990-2000 as the International Decade for Natural Disaster Reduction with the objective to reduce loss of lives and property and restrict socio-economic damage through concerted international action, especially in developing countries.

**1.3** The super cyclone in Orissa in October, 1999 and the Bhuj earthquake in Gujarat in January, 2001 underscored the need to adopt a multi-dimensional endeavor involving diverse scientific, engineering, financial and social processes; the need to adopt multi-disciplinary and multi sectoral approach and incorporation of risk reduction in the developmental plans and strategies.

**1.4** Over the past couple of years, the Government of India has brought about a paradigm shift in the approach to disaster management. The new approach proceeds from the conviction that development cannot be sustainable unless disaster mitigation is built into the development process. Another corner stone of the approach is that mitigation has to be multi-disciplinary spanning across all sectors of development. The new policy also emanates

from the belief that investments in mitigation are much more cost effective than expenditure on relief and rehabilitation.

**1.5** Disaster management occupies an important place in this country's policy framework as it is the poor and the under-privileged who are worst affected on account of calamities/disasters. The steps being taken by the Government emanate from the approach outlined above. The approach has been translated into a National Disaster Framework [a roadmap] covering institutional mechanisms, disaster prevention strategy, early warning system, disaster mitigation, preparedness and response and human resource development. The expected inputs, areas of intervention and agencies to be involved at the National, State and District levels have been identified and listed in the roadmap. This roadmap has been shared with all the State Governments and Union Territory Administrations. Ministries and Departments of Government of India, and the State Governments/UT Administrations have been advised to develop their respective roadmaps taking the national roadmap as a broad guideline. There is, therefore, now a common strategy underpinning the action being taken by all the participating organizations /stakeholders.

## **Chapter-2**

### **State Profile**

#### **2.1 Historical Background**

**2.1.1** Himachal Pradesh came into being on 15th April, 1948 as a centrally administered territory by the integration of 30 erstwhile princely States. With an area of about 25,839 Sq.Kms. the State, at that time had four districts viz; Chamba, Mahasu, Mandi and Sirmaur. In 1951, it became a part 'C' State under a Governor with a 36 Member Legislative Assembly and a three member cabinet. In 1954, Bilaspur, another part 'C' State was merged with Himachal Pradesh thereby adding one more district with an area of 1,168 Sq. Kms. and the strength of its Assembly was raised to 41.

**2.1.2** In 1956, despite, the majority recommendations of the State Re-organisation Commission for its merger with Punjab, Himachal Pradesh retained its separate entity. On November 1, 1956, it again became a Union Territory under an administrator designated as Lieutenant Governor and its Assembly was abolished. In 1960, a new border district of Kinnaur was carved out of Mahasu district. Then in 1963, Assembly was revived and a popular Ministry was formed. Till October, 1966 the old Himachal Pradesh comprised the six hill districts of Bilaspur, Chamba, Kinnaur, Mahasu, Mandi and Sirmaur with an area of 27,007 Sq.Kms. having a population of 13,51,144 persons (1951 Census).

**2.1.3** On 1st November, 1966, with the reorganisation of states it was enlarged by merging the districts of Kangra, Shimla, Kullu, L&S-Spiti, the Nalagarh tehsil of Ambala district, some parts of Una tehsil of Hoshiarpur district and Dalhousie of Gurdaspur district of the then Punjab State. With this merger the total area of Himachal Pradesh increased to 55,673 Sq.Kms. and its population to 28,12,463 (1961 Census). The State consisted of ten districts viz; Bilaspur, Chamba, Kangra, Kinnaur, Kullu, L&S-Spiti, Mahasu, Mandi, Shimla and Sirmaur. Later on, on 25th January, 1971, Himachal Pradesh attained Statehood.

**2.1.4** Re-organisation of the districts took place on 1st September, 1972, and as a consequence whereof two more new districts namely Una and Hamirpur were created mainly as a result of trifurcation of the erstwhile Kangra district. Also from the then existing

districts of Mahasu and Shimla, new districts of Shimla and Solan were formed by re-organising the boundaries of old districts and presently the state comprises of 12 districts with total population of 68.65 lakh having a density of 123 persons per Sq.Kms. (as per 2011 population census) Hamirpur district is the most thickly populated district of the state having a population density of 407 persons per sq.km. followed by Bilaspur 327 persons per sq.km. L&S–Spiti district is having the lowest density of 2 persons per sq.km. Out of total population of 68.65 lakh about 34.82 lakh are males and 33.83 lakh females, about 61.76 lakh persons (89.96%) live in rural areas and only 6.89 lakh (10.04%) in urban areas. 17.29 lakh of the population (25.21%) are Scheduled Castes and 3.92 lakh (5.7%) are Scheduled Tribes.

## **2.2 Physical Features**

**2.2.1** Himachal Pradesh is almost wholly mountainous with altitudes ranging from 350 metres to 6,975 metres above the mean sea level. It is located between Latitude 30° 22' 40'' N and Longitude 75° 45' 55'' E to 79° 04' 20'' E. It has a deeply dissected topography, complex geological structure and a rich temperate flora in the sub-tropical latitudes. Physiographically, the State can be divided into five zones-viz (i) wet Sub-temperate zone, (ii) Humid sub-temperate zone, (iii) Dry temperate-alpine High lands, (iv) Humid Sub-tropical zone and (v) Sub-Humid Sub-tropical zone. Wet Sub-temperate zone comprises Palampur and Dharamshala of Kangra district, Jogindernagar area of Mandi district and Dalhousie area of Chamba District, Humid Sub-temperate zone comprises the district of Kullu, Shimla, Parts of Mandi, Solan, Chamba, Kangra and Sirmaur, Dry temperate-Alpine High lands include major parts of L&S-Spiti, Pangi and Kinnaur, Humid sub-Tropical zone consists of Bilaspur, major parts of district Mandi, Nahan area of district Sirmaur, Bhattiyat valley of district Chamba, Nalagarh area of district Solan, Dehragopipur and Nurpur areas of district Kangra and; sub-humid tropical zone comprises district of Una, Paonta Sahib area of district Sirmaur and Indora area of district Kangra.

**2.2.2** Climatically Himachal Pradesh can be divided into three zones (i) the outer Himalayas, (ii) the inner Himalayas and (iii) Alpine zone. the first zone gets annual rainfall between 150 cms. and 175 cms., in second it varies between 75 cms. to 100 cms. and the Alpine zone remains under snow for about five to six months. The average annual

rainfall in the state is about 160 cms. The climate varies between hot and humid in the valley areas to freezing cold in the home of perpetual snow.

**2.2.3** The soils of Himachal Pradesh can be divided into nine groups on the basis of their development and physiochemical properties. These groups are alluvial soils, Brown hill soils, Brown earths, Brown forest soils, Grey wooded or Podzolic Soils, Grey Brown Podzolic soils, Plansolic soils, Humus and iron podzols and alpine humus mountain skeletal soils.

**2.2.4** Five perennial rivers (Satluj, Beas, Ravi, Chenab and Yamuna) flow through its territory. The utility of these rivers though restricted considerably by the rugged and undulating terrain of the state, nevertheless, these rivers possess immense potential for the generation of hydro-electricity. Thus, what these rivers lack in their potential contribution to agricultural productivity is amply compensated for in the form of hydro-electric potential, the modern engine of overall socio-economic development.

## **2.3 Demographic profile**

**2.3.1** The population of Himachal in 2011 stood at 68,64,602 as per the provisional results of the Census of India 2011. Of which the urban population is 688552 persons and rural population is 6176050 persons. In terms of population it holds the same position (seventeenth position) among States and Union territories as at the previous census. The population of the State rose by 12.9% between 2001–2011. The sex ratio (i.e., the number of females per thousand males) of population was recorded as 972, which has increased from 970 in the previous census. Total literacy of the State rose to 82.8 % from 76.5 % in 2001. Himachal Pradesh has a Total Fertility Rate of 1.7, one of the lowest in India, and below the TFR, of 2.1, required to maintain a stable population. Population density (per Sq. Km.) [2011] of the State was 123.

**2.3.2** The earliest known inhabitants of the region were tribal called Dasas. Later, Aryans came and they assimilated in the tribes. In the later centuries, the hill chieftains accepted suzerainty of the Mauryan empire, the Kaushans, the Guptas and Kanauj rulers.

During the Mughal period, the Rajas of the hill states made some mutually agreed arrangements which governed their relations. In the 19th century, Ranjit Singh annexed/subjugated many of the states. When the British came, they defeated Gorkhas and entered into treaties with some Rajas and annexed the kingdoms of others. The situation more or less remained unchanged till 1947. After Independence, 30 princely states of the area were united and Himachal Pradesh was formed on 15th April, 1948. With the re-organization of Punjab on 1st November, 1966, certain areas belonging to it were also included in Himachal Pradesh. On 25th January, 1971, Himachal Pradesh was made a full-fledged State.

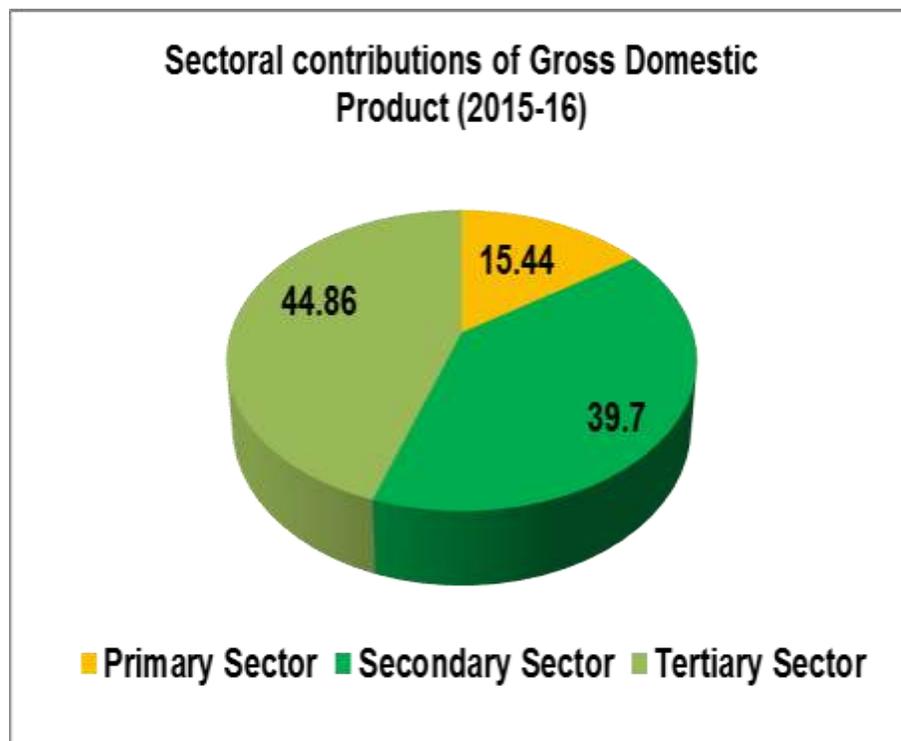
**2.3.3** The State is bordered by Jammu & Kashmir on North, Punjab on West and South-West, Haryana on South, Uttrakhand on South-East and China on the East.

## **2.4 Economic Profile of the State**

2.4.1 The State's economy grew at an average annual rate and slightly higher annual rate than the national average from Seventh Five Year Plan onwards. Eighth Plan and Ninth Plan recorded average annual growth rate of 6.3 percent and 6.4 percent respectively as against the national averages of 6.2 percent and 5.6 percent. Tenth Five Year Plan registered an average annual growth rate of 7.6 percent which is lower than the national average of 7.8 percent. However, Eleventh Five year Plan registered an average annual growth rate of 8 percent which is equal to the national average. During 2015-16, the state has achieved a growth rate of 7.7 percent which is comparatively better than national growth of 7.6 percent. The growth process in Himachal Pradesh is accompanied by structural changes in the State's economy as is evident in the table given below:

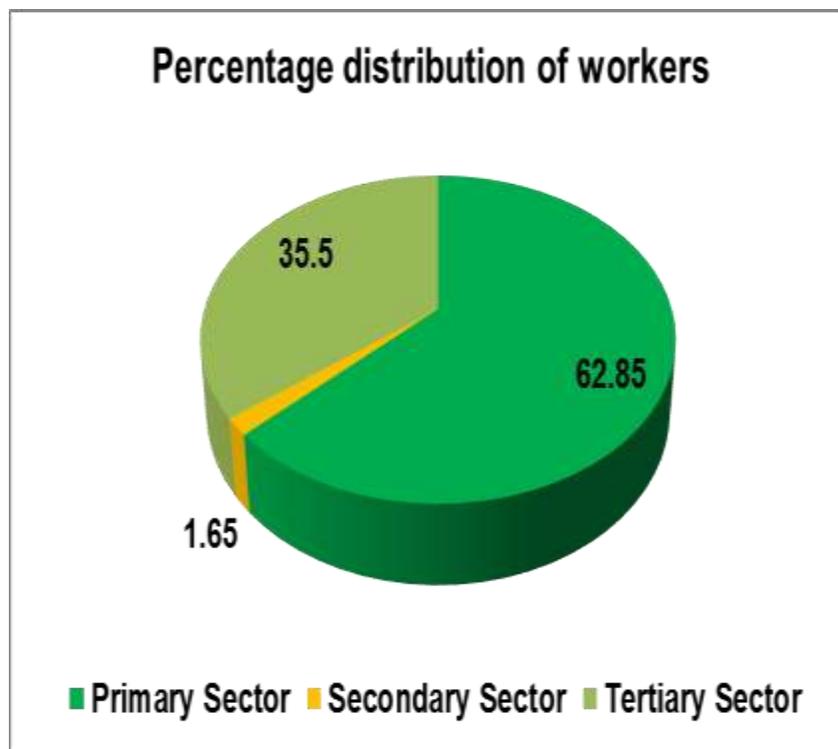
**Table: 2.1**  
**Percentage contributions of sectoral Gross Domestic Product**

<b>Year</b>	<b>Primary Sector</b>	<b>Secondary Sector</b>	<b>Tertiary Sector</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1980-81	50.35	18.69	30.96
1990-91	35.10	26.50	38.40
2000-01	25.25	35.77	38.98
2003-04	25.07	36.04	38.89
2007-08	23.22	39.77	37.01
2011-12	17.16	43.81	39.03
2012-13	17.10	42.80	40.10
2013-14	17.62	42.28	40.10
2014-15	15.91	41.08	43.00
2015-16	15.44	39.70	44.86



**Table: 2.2**  
**Percentage of total workers employed in different sectors**

<b>Year</b>	<b>Primary Sector</b>	<b>Secondary Sector</b>	<b>Tertiary Sector</b>
1	2	3	4
1980-81	73.59	10.71	15.70
1990-91	69.28	9.99	20.73
2000-01	68.47	1.76	29.77
<b>2010-11</b>	<b>62.85</b>	<b>1.65</b>	<b>35.50</b>



Data in the above table indicates the Structural transition that the State's economy has undergone since 1980s. The contribution of the Primary Sector in the State Domestic Product has declined and Secondary and Tertiary sector are now competing with each other for dominant share in the economy. However, the very fact that about 62.85 percent of the total workers are either cultivators or are agriculture labourers (Census 2011) indicates the existence of low productivity per worker in the agriculture sector. Reasons for low productivity in agriculture sector are:

- a. Geographic feature of the State does not support large size holdings  
average size of the holding in the State is just 1.04 hectares
- b. Steep slopes and rugged terrain are not conducive for providing low cost  
irrigation facilities;
- c. Weak market linkages of the farm operations because of large distances to  
the markets for buying necessary inputs and also for disposing of  
marketable surplus adds to the transportation costs.

## **Chapter-3**

### **Current Status of Vulnerability in State**

#### **3.1 District Wise Disaster Vulnerability of the State**

**3.1.1** Considering the proneness of the state towards different kinds of natural hazards, a broad district wise vulnerable status was devised for the state depending upon the vulnerability towards different hazards. Vulnerability matrix was developed based on the qualitative weightage which was given in the scale of 0-5 for different hazards such as earthquakes, landslides, avalanches, industrial hazards, construction type and density of population. District wise matrix was prepared by evaluating the risk severity. The evaluation also gives weightage to the density of population likely to be affected. The matrix also includes the evaluation of hazards likely to be induced on account of development of projects such as hydel projects, roads, industries etc.

**3.1.2** In case of earthquake vulnerability, districts Kangra, Hamirpur and Mandi falls in very high vulnerable category on the basis of the matrix devised. The districts which falls in high earthquake vulnerability are Chamba, Kullu, Kinnaur and part of Kangra and Shimla districts, where as the moderate and low vulnerable districts are Una, Bilaspur ,Sirmour, Solan, Shimla and Lahaul & Spiti districts respectively.

**3.1.3** The landslide vulnerability of Chamba, Kullu, Kinnaur and part of Kangra and Shimla districts is high followed by Kangra, Mandi, Bilaspur, Shimla, Sirmour and Lahaul & Spiti districts falling in moderate vulnerable category. The areas falling in low vulnerable category are Una, Hamirpur and Solan.

**3.1.4** The avalanche hazard vulnerability map suggest that the districts of Lahaul & Spiti and Kinnaur are highly vulnerable followed by Chamba, Kullu and part of Kangra and Shimla as moderately vulnerable to avalanches here as the remaining districts fall in the very low avalanche risk area.

**3.1.5** The flood hazard vulnerability map indicates that the areas falling in the districts of Chamba, Kullu ,Una and Kinnaur are high vulnerable to the hazards of floods

where as L&S, Mandi, Shimla , Kangra, Hamirpur, Bilaspur, Solan and Sirmour fall in moderate and low vulnerability areas.

**3.1.6** The overall vulnerability of the state on the basis of the matrix clearly suggests that overall in all hazards districts Chamba, Kinnaur Kullu and part of Kangra and Shimla fall in very high vulnerable risk. Similarly district Kangra, Mandi, Una ,Shimla and L&S and Spiti falls in high vulnerable risk status. The district Hamirpur, Bilaspur, Solan and Sirmour falls in moderate vulnerable risk status. The disaster management strategies and infrastructure required to be evolved by taking the above factors into consideration.

## **3.2. Earthquake Hazard**

**3.2.1** Though the State is prone to numerous hazards as narrated in the foregoing paras but earthquake hazard poses serious challenge for the State. Hence, this aspect is dealt separately in detail in the succeeding paras.

**3.2.2** The state of HP is located at 33.3-36.0 degree North latitude and 75.6-79.0 degree East longitude in the Western Himalayas. Seismically it lies in the great Alpine-Himalayan seismic belt running from Alps mountains through Yugoslavia, Turkey, Iran, Afghanistan, Pakistan, India, Nepal, Bhutan and Burma. The terrain is hilly all through the state of HP, the ranges varying from the Shivaliks in the south to the tall snow clad Pirpanjals in the North. These are traversed by major rivers Sutlej, Beas, Ravi and other tributaries. The state has not only been shaken by earthquake occurring in its territory but also in the neighboring areas of J&K in the North, Tibet in the East and UP hills in the South East. A number of damaging earthquakes have occurred in the HP territory during 20th century for which information is well recorded. Information about earthquake occurrence before the famous 1905 Kangra earthquake is not, however, available and is a matter of research through historical and archival records.

**3.2.3** The earthquake activity in HP is attributed to the Himalayan orogeny. Based on the latest concept of plate tectonic model of the earth, the Himalayan mountains have formed due to continuous thrashing of the Indian plate with Eurasian plate since cretaceous times. The present geological structure and the tectonics of the Himalayas have been formed as a

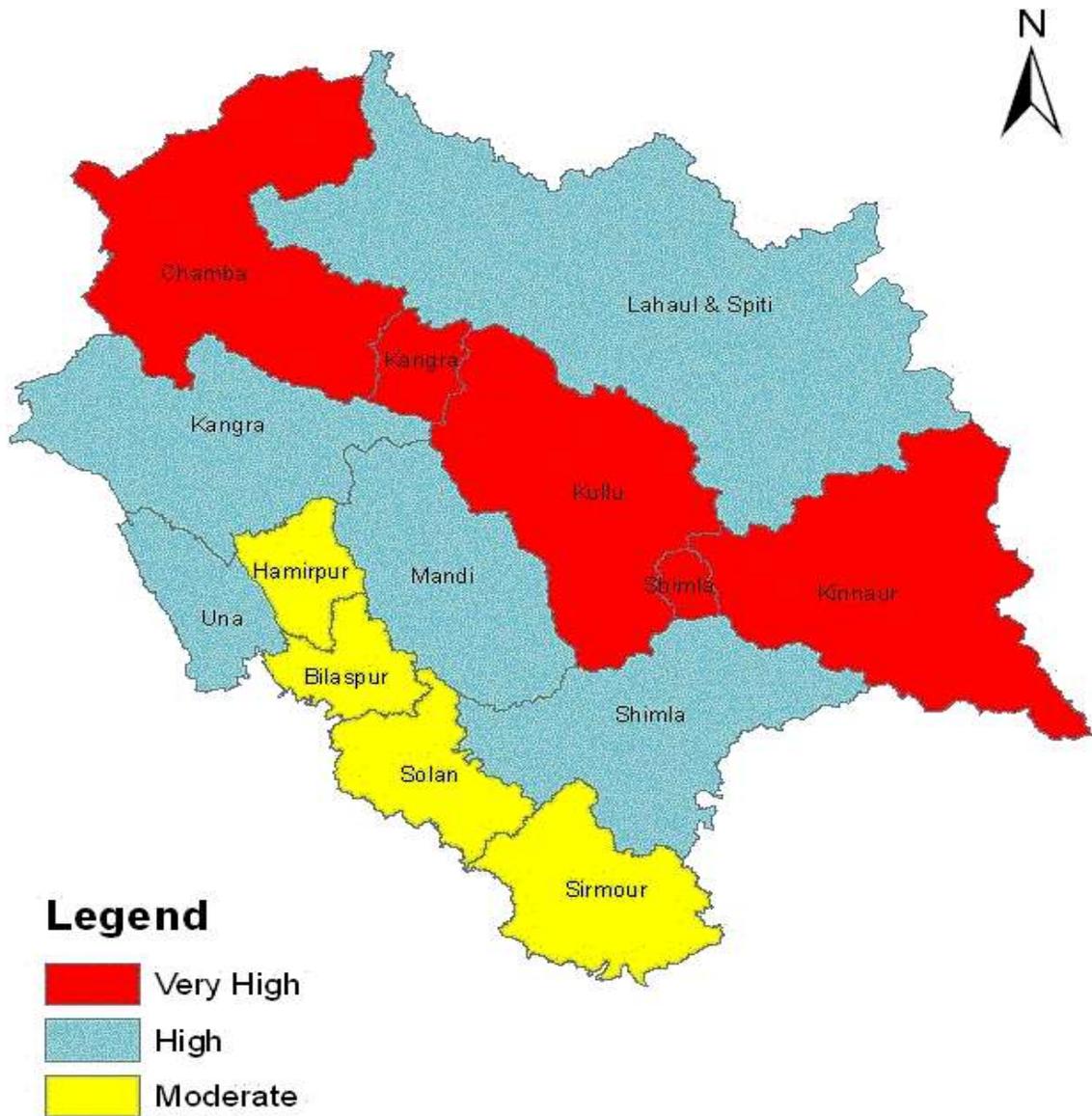
result of this continued collision. There are regional- tectonic features in the Himalayas like the main boundary fault (MBF) and Main Central Thrust (MCT) remaining parallel to the strike length of Himalayas. Besides, the Krol, the Giri, Jutogh and Nahan thrusts lie in this region. Besides that there are scores of smaller faults, like the Kaurik Fault which triggered the 1975 Kinnaur earthquake.

## HAZARD VULNERABILITY OF HIMACHAL PRADESH

DISTRICT	E.Q.	LANDSLIDE	FLOODS	AVALANCHE	INDUSTRY	CONSTR. TYPE & DENSITY	OVERALL VULNERABILITY	
Kangra	VII	M	L	—	M	VII	II	
Chamba	II	II	II	M	M	II	VII	
Hamirpur	VII	L	L	—	—	II	M	
Mandi	VII	M	M	—	—	II	II	
Kullu	II	II	II	M	II	II	VII	
Bilaspur	M	M	L	—	M	M	M	
Una	M	L	II	—	II	M	II	
Sirmour	M	M	L	—	II	M	M	
Solan	L	L	L	—	II	M	M	
Kinnor	II	II	II	VII	II	M	VII	
L&Spiti	L	M	M	VII	—	M	II	
Shimla	L	M	M		II	M	II	

Source : H.P. State Council for Environment Science and Technology

## OVERALL VULNERABILITY MAP-HIMACHAL PRADESH



Source : H.P. State Council for Environment Science and Technology

### **3.3 Landslides Hazards**

**3.3.1** Another form of the natural hazards in the state is the occurrences of landslides. The hills and mountains of Himachal Pradesh are liable to suffer landslides during monsoons and also in high intensity earthquakes. The vulnerability of the geologically young and not so stable steep slopes in various Himalayan ranges, has been increasing at a rapid rate in the recent decade due to inappropriate human activity like deforestation, road cutting, terracing and changes in agriculture crops requiring more intense watering etc.

**3.3.2** Landslides are known to pay havoc causing death and destruction. In India, Western and Eastern Ghats, Jammu and Kashmir, Himachal Pradesh, Uttarakhand and North Eastern Parts as well known for landslides. Delineation of landslide-prone areas requires a large data set. Various forms of landslides are slumps; debris or rock slides, debris falls or rock falls. Various factors influence the landslides: steepness of slopes, saturation by heavy rains or melting snow and ice, rocks vibrations, excess load from embankments, fills and waste dumps, changes in water content, frost effect, weathering of rocks, effect of ground water, and change in vegetal cover.

### **3.4 The important slides in Himachal Pradesh which caused huge damage are:**

**3.4.1** Maling (1968). This landslide slide damaged 1 Km NH-22 and is still active.

**3.4.2** Kinnaur (Dec.1982) This occurred at Sholding nala collapsing 3 bridges and 1.5 of road was vanished.

**3.4.3** Jhakri (March 1989) At Nathpa about 500 m of road was damaged due to this slide and is still active.

**3.4.4** At Luggar bhati on 12 Sept.1995, 65 (39 as per official record) were buried alive during the slide.

**3.4.5** Prominent slides in Beas valley are at Marhi, Bhang, Chhyal, and Mandu in upper catchment of the Beas river.

The devastating landslides in H.P. need more intensive scientific studies and engineering measures that are focused on the problem of landslides. As per the first step, it will be necessary to prepare zoning maps of landslides and rock fall prone areas through geological and geo technical studies. The landslide prone areas should be avoided while locating new settlement or buildings, and those, which are already occupied, should either be resettled or protective measures undertaken based on expert advice.

### 3.5 Avalanche Hazards

**3.5.1** The higher hills comprising the districts of Kinnaur, L&S & Spiti, Chamba, and Kullu are particularly vulnerable to the hazards of avalanches. The destruction caused as a result of avalanches in the past in Himachal Pradesh though not widespread is confined to the higher reaches of the state only. Avalanches have also the history of damage in Himachal Pradesh. The prominent avalanches in Himachal Pradesh are:

LOCATION	DATE/YEAR	DAMAGES OCCURRED
L&S & Spiti	Jan 1975	Earthquake shocks triggered the avalanche of great dimensions damaging road net work
L&S & Spiti	Mar 1978	About 30 people killed, road and property damaged.
	Mar 1979	About 237 people killed . Communication disrupted
Tinku	Mar 1991	Tinku avalanche occurs every year 4-5 times from Jan to March. Road was blocked for 40 days in 1991
	Sept.1995	Due to avalanche, huge chunk of debris came down which later changed into flood

### 3.6 Flood Hazards

**3.6.1** Floods are another form of natural disaster which the state experiences every year. Due to the diverse topography of the area, the flood problem in the state is largely

isolated in Nature. High monsoon rains in the area of the Shivalik and lower and mid Himalayan ranges cause extensive floods during rainy seasons. In the upper reaches of the Beas and Satluj valley the main problems are flash floods and bank erosion because of the steep slopes of rivers and High River flows due to heavy rains. Often the flash floods caused due to cloudbursts, glacial lake outbursts and temporary blockade of the river channels have been also observed. As a result of breaches in embankments and damage to various utilities such as irrigation/flood control schemes and houses are also observed.

### 3.7 The importance of rivers from flood damage angle are:

- River Satluj and its tributaries like Spiti, Sangle khad, Ali khad, Gambhar khad, Sir khad, and Swan river.
- River Beas and tributaries like Uhl and Suketi khads.
- River Ravi and its tributaries like Siul
- River Yamuna and its tributaries like Pabbar, Giri and Bata.

Although widespread floods problems do not exist in the state because of topographical nature, continuing attention is necessary to reduce flood hazards in the state, more particularly the flash flood hazard the incidences of which are increasing causing large scale damage. The major flash floods have been tabulated as under:

### 3.8 Major Flash Floods in Himachal Pradesh.

Some of the devastating Floods, which caused heavy damage to Private as well as Public Property in Himachal Pradesh.

Prominent Flash Floods	History of Damage Occurred
<ul style="list-style-type: none"> <li>▪ 8 July 1973</li> </ul>	Lake formed by the blockage of Satluj river due to Nathpa rock fall damaged Sanjay power house, loss of about Rs. 45 million estimated.
<ul style="list-style-type: none"> <li>▪ 19 Jan. 1975</li> </ul>	In Satluj basin two blockages were observed in Spiti valley. One on Parechu River between Sumdo and

	<p>Kaurik due to landslide created by 19 Jan. 1975 earthquake, which occurred along the Sumdo-Kaurik fault. Blockage was 60m in height and 150m in length created temporary lake. In march this lake burst causing flash floods in Spiti valley</p>
<ul style="list-style-type: none"> <li>▪ On 29th Sept. 1988 (2.30 a.m.) a flash flood occurred due to cloud burst in Soldang Khad.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Caused heavy loss of life and property in the Soldng village.</li> <li>➤ Washed away the Bhabanagar water works.</li> <li>➤ Washed away 2 Km of NH-22 across Soldan Khad.</li> <li>➤ Created landslides along the eastern slopes of Soldan Khad and damaged road to Ponda.</li> <li>➤ Lake was formed on the Satluj river near conference.</li> <li>➤ Block stopped the flow of Satluj river for about 30 minutes and created a temporary lake having dimensions roughly about 6000 m long. 200-250 m wide and 25-30 m deep extending up to Wangtoo Bridge.</li> <li>➤ Lake water entered Sanjay Vidut Pariyojna and damaged the Power House.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 31 July and 2 August 1991</li> </ul>	<ul style="list-style-type: none"> <li>➤ Cloudburst and flash flood along Soldan Khad in Satluj valley killed 32 people, 15 houses, 35 bigha agriculture land, 600 apple trees, 2Km of road of NH 22 and 20 m bridge on Soldan Khad washed away. Agriculture land along Leo village situated downstream.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 24 Feb 1993</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flood washed away 15 houses, 35 bigha of agriculture land and about 600 apple trees in Soldang village.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 4th and 5th September</li> </ul>	<ul style="list-style-type: none"> <li>➤ Satluj river blocked twice due to major</li> </ul>

	<p>landslide and rock fall near Jhakri and Nathpa, damaging NH-22.</p> <ul style="list-style-type: none"> <li>➤ Another flash flood occurred in two phases along Duling Khad on 4th and 5th September causing extensive damage in Tapri, district Kinnaur.</li> </ul>
<ul style="list-style-type: none"> <li>▪ First flash flood occurred on 4th September 1995 at 2 p.m. After cloudbursts in the upper catchments of Duling and damaged the PWD rest house. Another flood came at 6 a.m. and 9 a.m. on 5th Sept. 1995 bursting the lake formed during the previous cloudbursts.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 32 people and 35 cattle lost their lives. Huge debris formed a fan along Satluj and formed a take partially blocking the Satluj</li> <li>➤ Flash flood caused heavy damage due to change in course of Satluj from left to right bank increased the tow and lateral erosion at Tapri.</li> <li>➤ Washed away 19 houses, HRTC workshop along with 3 buses. Change in course is still causing tow erosion to NH-22.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 4th and 5th Sept. 1995 flash flood in Kullu valley</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flash flood in Kullu valley occurred which cause damage to the tune of Rs. 759.8 million.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Feb-93</li> </ul>	<ul style="list-style-type: none"> <li>➤ 500 m road section of NH-22 washed away by Jakhri slide. Rs. 10 million loss to road and forest land, a village upper slope was in danger.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 4-5 and 12 Sept. 1995</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flood and landslide along Bas river in Kullu valley killed 65 people. NH damaged at numerous places, loss to government and private property, road and bridges estimated US\$ 182 million.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 4-5 Sept. 1995</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flash flood along Panwi Khad in Satluj valley washed away 19 houses, 3 buses, HRTC</li> </ul>

	workshop and damaged HPPWD rest house at Tapri.
<ul style="list-style-type: none"> <li>▪ 11-Aug-97</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flash flood and landslide along Andhra khad in Pabbar valley killed 124 people, 456 cattle, washed away government and private buildings, 200 m road section and damaged Andhra power house at Chirgaon. Loss was estimated Rs. 10.63 million.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Aug-97</li> </ul>	<ul style="list-style-type: none"> <li>➤ Cloudburst and flash flood along Satluj river killed 19 people, 464 cattle, 105 houses damaged, 10 cattle sheds and 39-hectare agriculture land. Total loss was estimated Rs.672.9 million.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods in the night of 31st July and 1st August 2000 in Satluj valley.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flash floods in the Satluj valley resulting in the increase in water level of Satluj an up to 60 feet above the normal level. The flash flood was termed as the one that occurs once in 61,000 years. Widespread damage in the valley right from its confluence with Spiti river near Khab to downstream areas. Extensive damage to 200 Km of NH-22, washed away 20 bridges, 22 Jhulas and badly damaged 12 bridges. About 1000 irrigation, sewerage, flood protection and water supply schemes were badly damaged. Expensive damage to hydel projects including NJPC. 135 people and 1673 cattle lost their lives. The total estimated loss was to the tune of Rs. 1466.26 crore.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods on the night of 23rd July 2001 in Sainj valley in District</li> </ul>	<ul style="list-style-type: none"> <li>➤ Cloudbursts in the upper reaches of Sainj valley caused flash floods in two nallahs namely, Sainj and Jeeba, affecting about 40 families 2</li> </ul>

Kullu.	bridges on Sainj and Jeeba nallahs and plenty of fertile land were washed away. Connecting road to Slund and Sainj was also washed away at a number of places. Two persons were washed away and 5 cattle perished. Some other areas in Kullu district were also affected due to excessive rains in July and the population of 6355 was adversely affected.
<ul style="list-style-type: none"> <li>▪ 17th and 19th July 2001 floods in Mandi district.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Excessive rains caused damage to 160 houses in Mandi district and destroyed 11 cattle and one human life.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods in the night of 29th and 30th July 2001 in Chhota Bhangal and Baijnath Sub Division of Kangra District.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Caused widespread damage in the area. 12 deaths occurred due to flash floods and loss of 150 cattle was reported from the area. Bridge connecting Deol and Baijnath was also washed away. Total estimated loss was to the tune of Rs. 18.27 crores.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods in the night of 9th August and 10th August 2001 on Moral-Danda peak in the Rohru sub Division in Shimla District.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flash floods occurred along two streams, one along the Devidhar area and an other along Darkali in Rampur Sub Division. Damage to infrastructure like roads, bridges, water supply schemes, forest wealth, agriculture land, horticulture land, footbridges, village paths, residential houses and water mills and loss of 3 lives and 39 cattle and destruction of private property. Total loss in both the Sub Divisions was 145.15 lacs. In Rohru Sub Division 7 bridges, 8 village paths, 8 water supply schemes, and 1 power house were damaged besides 16 houses, whereas in Rampur Sub Division, 10 bridges, 8 village paths, 1 water</li> </ul>

	supply scheme, 1 soil conservation plant, 7 residential houses and 16 water mills were damaged.
<ul style="list-style-type: none"> <li>▪ Flash floods in the night of 21st and 22nd August 2001, cloudburst in Ani Sub Division of Kullu district occurred.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Due to flash flood in village Badhali 2 houses in which a couple was buried alive and their two children injured. In village sarli 7 people lost their lives, 15 houses were washed away besides the loss of 12 cows, 18 oxen and 40 sheep and about 115 bighas of agriculture and horticulture land was washed away.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods in Sihunta area and Tissa areas of Chamba district in the night of 12th and 13th August 2001.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Washed away 9 hectare of fertile land, 2 small bridges causing a total loss to property of some Rs. 2 Crore.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods due to cloudbursts in Gharsa valley on 16th July 2003 in Kullu district.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Due to these flash floods 21 people lost their lives, 21 people suffered major injuries and 9 are still missing.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash floods in Kangni nalla near Solang in Kullu district on 7th August 2003.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 30 people lost their lives and 19 people were injured and 9 people are missing, 2 people lost their lives due to landslide in Bhang nalla.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flash flood in Satluj river due to breach in the Parachoo lake in Tibetan catchment on 26th June 2005</li> </ul>	<ul style="list-style-type: none"> <li>➤ Extensive damage as a result of risen water level of Satluj river due to breach in Parachoo lake formed in Tibet catchments. Washed away the NH-22 at a number of places, 10 bridges, 11 ropeways washed away, 15 motor able bridges and 8 jeep able and footbridges damaged/affected, 10 Km stretch of NH-22 between Wangtoo and Samdo was washed</li> </ul>

	away, and various link roads were damaged. Total loss estimated to the government as well as public property was some Rs. 610 crore.
<ul style="list-style-type: none"> <li>▪ Flash floods during July 2005.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Flash floods in Pabbar river in Rohru Sub Division resulted in heavy losses to roads, bridges, public buildings, residential houses, cowsheds, private land. Dhirgaon block was totally cut off. On July 7th, 2005, flash flood in Baspa river took place causing the loss of 6 bridges and 600 mt link road to Sangla. More than 3000 cattle perished in different parts of the state leading a total loss of some of Rs. 55980.76 lacs.</li> </ul>
<ul style="list-style-type: none"> <li>▪ 15th August 2007, Bhavi Village, Ghanvi, Shimla</li> </ul>	<ul style="list-style-type: none"> <li>➤ 58 persons died; All roads leading to village cut off</li> </ul>
<ul style="list-style-type: none"> <li>▪ 7th August 2009, Dharampur, Mandi</li> </ul>	<ul style="list-style-type: none"> <li>➤ 2 persons died</li> </ul>
<ul style="list-style-type: none"> <li>▪ 12th September 2010, Kharahal Valley</li> </ul>	<ul style="list-style-type: none"> <li>➤ Washed away several roads and bridges</li> </ul>

### 3.9 Retreat of Glaciers

**3.9.1** The lakes are quietly growing because of rising temperatures, but a sufficiently close eye is not being kept on them, campaigners say. Nobody knows how many are close to bursting, and no steps have been taken to establish early warning systems for the villages downstream. A burst lake would cause flash floods which could sweep away people, houses, roads and bridges in Nepal, Bhutan, Bangladesh and India. Such disasters have already happened more than a dozen times around Nepal in the last 70 years. A glacial lake burst in Khumbu, Nepal, in 1985, killing at least 20 people. It also washed away a hydropower station, a trekking trail and numerous bridges. Despite the real threat, no systematic on the ground research has taken place since the mid-1990s.

**3.9.2** Between 1970 and 1989, Japanese researchers discovered most of the glaciers in the Khumbu region had retreated 30-60m. In Nepal's Dhaulagiri region, field studies until 1994 showed the same trend. And Nepal's most studied glacier in Tsorong Himal underwent a 10m retreat between 1978 and 1989. For now, there is reliance on satellite data. This even, shows some glaciers are stable or advancing, particularly in the west and north.

**3.9.3** We urgently need to update our glaciological data otherwise we won't have any warning when disaster strikes. The data on glacial retreat on the Himalayas has been compiled by the DRDO which is reproduced as under:-

### **Retreat of Glaciers**

<b>Sr. No.</b>	<b>Name of Glacier</b>	<b>State/Basin</b>	<b>Receding Rate(M/Year)</b>
1	Barashingri	Himachal Pradesh	44.3
2	Bilare Bange	Sutlej	2.6
3	Shaune Garang	Sutlej	26.4
4	Jhampa Garang	Sutlej	19.9
5	Parbati galacier	Beas	52
6	Gangotri	Uttaranchal	17.5
7	Milam	Uttaranchal	13.3
8	Pindar	Uttaranchal	23.5
9	Dokriani	Uttaranchal	17
10	Zemu	Sikkim	13.2

**Source:** DRDO & Ak Kulkarni et al.

The retreating glaciers would disturb the water cycle of the Himalayas and cause major ecological disaster besides causing major water scarcity in the entire region.

## **3.10 Forest Fire Incidents**

**3.10.1** This life supporting systems are presently under great stress due to impact of modern civilization, economic development and growth in human and cattle population. The forests of Himachal Pradesh are rich in vascular flora, which forms the conspicuous vegetation cover. Out of total 45,000 species of plants found in the country as many as 3,295 species (7.32%) are reported in the State. More than 95% of species are endemic to Himachal and characteristic of Western Himalayan flora, while about 5% (150 species) are exotic introduced over the last 150 years. Over the years the forest wealth of the State is being destroyed by the incidences of fire attributed to both anthropogenic and other

reasons. The destruction of rich flora and fauna of the State due to forest fires will have serious repercussions on the ecological balance of the State. The rich forest wealth of the State has been subjected to the numerous fire incidences. A list of the same has been tabulated below:-

### 3.11 Road Accidents

**3.11.1** With the increase of road connectivity and number of vehicles plying on these roads in the State, the number of road accidents and loss of precious human lives is increasing day by day. The data from 2001-02 to 2009-10 show an increasing trend in the number of accidents and the victims. The hilly terrain of the State and rash and negligent driving are the major cause of these accidents. The department of PWD has identified numerous black spots and the department is in the process of improving them to reduce road accidents.

#### Road Accidents

Sr.No.	Year	Road Accident	Person killed	Injured person
1	2001-02	2,226	804	3,798
2	2002-03	2,830	695	3,917
3	2003-04	2,607	867	4,188
4	2004-05	2758	920	4674
5	2005-06	2807	863	4833
6	2006-07	2756	886	4688
7	2007-08	2953	921	5272
8	2008-09	2840	898	4837
9	2009-10	3023	1173	5630
10	2010-11	3104	1105	5350
11	2011-12	3063	1051	5260
12	2012-13	2867	1057	5422
13	2013-14	3008	1116	4961
14	2014-15	3012	1179	5522

**Source : State Statistical Abstract**

### **3.12 Other Hazards**

**3.12.1. Stampede:** The State is known as land of Gods. Many famous temples are located in the State such as Sri Naina Devi, Baba Balak Nath, Sri Chintpurni, Maa Jawalaji, Maa Braheswari and Sri Chamunda Nandikeshwari Dham to name a few. Large number of devotees throng these places every year. A human stampede at the temple of Naina Devi occurred on 3 August 2008. 162 people died when they were crushed, trampled, or forced over the side of a ravine by the movement of a large panicking crowd. Possibility of such instances is always there if there is any laxity on the part of the management.

**3.12.2. Air Crash:** The State has two airports and more than 120 helipads/helicopter landing sites in the State. Punjab Governor Surendra Nath and nine members of his family were killed when the Government's Super-King aircraft crashed into high mountains in bad weather on July 9, 1994 in Himachal Pradesh. Nath was then acting Governor of Himachal Pradesh.

## **Chapter-4**

### **Research Method and Design**

#### **4.1 Research Methodology**

**4.1.1** Natural and human induced disasters have been causing unimaginable loss of life and property and damages to public and private infrastructure, eroding gains of hard earned development and resulting in mounting expenses on relief and rehabilitation. Natural disasters mainly consist of earthquakes, landslides, cyclones, etc. while manmade disasters are of the type of chemical/ industrial development, economic development, deforestation and human settlements etc., main cause of rapid built –up of greenhouse gases, are leading to global warming and major change in climate conditions.

**4.1.2** There are projections that disasters would be on the rise due to climate change, unplanned human settlements, unsafe building practices and other factors. Climate change cause geophysical effects such as more intense precipitation events, higher maximum temperatures, more hot days/ heat waves, higher minimum temperatures, fewer cold days / frost days/ cold waves, increase summer drying and associated risk of drought etc. there is broad scientific consensus that more intense precipitation leads to increase flood, landslides, avalanche and mudslide damage , increase soil erosion , increase flood run off and increased deaths and serious illness in older age groups and urban poor, increased heat stress in livestock and wildlife , and increased risk of damage to a number of crops. Higher minimum temperature result in decreased co- related human morbidity and mortality. It also causes damage to number of crops and extended range and activity of pests and disease vectors. Increased summer drying results in decreased crop yields, decreased water resource quantity and quality and increase risk of forest fires. The geophysical effects of climate change individually and collectively results in increase in flood and drought , decreased agricultural productivity in drought and flood prone regions, increased risk to human life and risk of infectious disease and epidemics , increase coastal erosion and damage to coastal buildings and infrastructure . Major health impacts of climate change can be change in the pattern of vector borne viral diseases.

**4.1.3** All these development led to a paradigm shift in disaster management from one of post disaster relief and reconstruction to a holistic management of disasters encompassing pre disaster prevention, mitigation, preparedness on disaster response and post disaster relief, reconstruction and recovery. Globally this shift is reflected the adoption of Yokohama strategy of safer world in 1994 and Hygo framework of action in 2005.

**4.1.4** In India the shift is articulated in the development of National Disaster Management Framework and reinforced through the enactment of Disaster Management Act, constitution of National Disaster Management Authority and setting up the National Institute of Disaster Management. The holistic management of disasters requires analytical data on hazards, risks and vulnerabilities of different natural and human induced disasters at all levels. At present raw data on different aspects of disasters are collected by various agencies, but mostly these remains confined in news papers reports or official files. Sometimes periodical bulletins and reports are published by some agencies, but there is no system to collect, compile, validate and Publish such data in one place on a regular basis for the use of policy makers, analysts, disaster managers and other users, Therefore a need has been felt for the development of a comprehensive national database on disaster which would facilitate formulation of area specific disaster risk profile, assessment of long term impacts of disasters, development of policies, strategies and frameworks, preparation of proper planning for disaster preparedness and allocation of adequate funds for the prevention and mitigation of disasters etc.

## **4.2 Definition of disasters and Criteria for inclusion of disaster events in the database**

**4.2.1** As per Disaster management Act (DMA) 2005 of India, disaster means “a catastrophe, mishap, calamity or grave occurrence affecting any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of property, or damage to, or degradation of, environment, and is of such a nature or magnitude as beyond the coping capacity of the community of the affected area”. Although the Disaster Management Act gives a definition for disasters but no threshold limits have been mentioned in the Act. The Committee was of

the view that the threshold limits of disaster events would need to be defined for their inclusion in the database on disasters. Accordingly the Committee considered the following database on disasters for defining the threshold limits.

☞ The WHO Collaborating Centre for Research on the Epidemiology of Disasters (CRED) has been maintaining an Emergency Events Database- EM-DAT since 1988. The database was created with the initial support of the WHO and the Belgian Government. Criteria used by CRED for including an event in database are

- 10 or more person killed
- Hundred or more persons effected
- Declaration of a state of emergency
- Call for international assistance

☞ In the Canadian database on disasters, events which fulfill one or more of the following conditions are included in the database:

- 10 or more person killed
- Hundred or more persons effected, injured, evacuated or left homeless
- There is a national appeal for national/international assistance
- The event is of historical significance
- Significant damage has occurred and normal processes have been affected and the affected community cannot recover of its own.

☞ In the Australian database on disasters, events which fulfill one or more of the following conditions are included in the database:

- Three or more deaths
- Twenty or more people injured
- Significant damage to property, infrastructure, agriculture, environment, disruption of essential services, commerce, industry or

trauma or dislocation of community at an estimated total cost of ten million Australian dollars or more

**4.2.2** In India development of a database on disasters has been initiated under Indis Data project with the support of UNDP for the State of Orissa in 2002 and the initiative has been extended to 4 more states viz. Tamil-Nadu, Uttar Pradesh, Uttaranchal and Delhi with the support of Disaster Management Authorities, State Relief Department, State level nodal agencies like DMMC etc.

**4.2.3** The Committee considered the issue of defining the threshold levels of the events in terms of not only loss of lives but also the other important losses for inclusion in the database and came to the conclusion that it would not be possible to define these threshold limits of events similar to the threshold limits of events included in Canadian Database and Australian Database for inclusion in the disasters database in Indian contexts. The committee noted that Disasters are classified, depending upon their magnitude and severity, in to three types:

**L-1 disaster** is of minor nature which is handled at the District Level Disaster Authority

**L-2 disaster** is of medium type which is handled at State Level by State Level Disaster Authority

**L-3 disaster** is major in nature which is handled at centre by Central Disaster Authority

**4.2.4** The Committee is of the view that the disaster database being developed should include all the events which have been notified as disasters at any level by the appropriate authority. For the preparation of database, all the events notified as disasters at any specific level (L1/L2/L3) by the appropriate authority would be included in the database.

### **4.3 Capturing Disaster Statistics: Existing System and Proposed Formats**

**4.3.1** Under the existing system, in case of any event of disaster, the line Ministries/Departments of the State Government send the information on disasters at Sub-Division/Taluk or Block/Panchayat/village level to District Commissioners Office. The major line Ministries include Agriculture, Water Resources, Health, Urban Development, etc. Some of the information on minor events is collected by DC's Office directly.

**4.3.2** The available data on disasters is needed to be improved in coverage and its availability at one place. The proposed database should provide data on all type disasters and relief/ reconstruction aspects of these disasters. The committee is of the view that the disaster statistics should contain three parts: Damage, Relief and Reconstruction. The damage data should be classified in seven categories namely (i) lives (ii) livestock (iii) Agriculture (iv) housing (v) infrastructure (vi) environmental damage (vii) health and (viii) damage at macro-economic level. The data on relief and reconstruction should also collected and compiled. The unit for compilation of data both for damage and relief/ reconstruction should be the district. There should be well defined formats for collection of data at below district level and its aggregation at district level. The formats are:

**FORMAT-I:** Indicates the details for capturing damage data for all types of disasters at district level

**FORMAT-II:** Indicates the details for capturing relief data at disasters at district level

**4.3.3** The Technical Co-ordination Committee for the Institutional Mechanism of data collection for disaster Statistics at District level have been formed under the Chairmanship of respected DC's of the District in 2009-10.

**4.3.4** Executive Committee held on 20-05-2009 under the Chairmanship of Chief Secretary with the suggestion that all departments may identify nodal officers to deal with the subject of disaster management.

**4.3.5** In February, 2010 the formation of Technical Co-ordination Committee for Institutional Mechanism of data collection for disaster Management was formed.

## **4.4 Methodological Issue**

The basic unit for compilation of data should be clearly defined as district. For collection of data at district level, the district codes of Census can be used. The reference period is from 2007-08 to 2014-15. Disaster Management Authority under the chairperson ship of Collector/District Magistrate/deputy Commissioner has all disaster related information on lives, livestock and housing and the information of the Department of the State at district level,

statutory bodies and other governmental and non-governmental organizations in the district engaged in the disaster management. District Collector's Office (Collectorate) will be the ideal agency for collection and compilation of damage statistics at district level. The data should flow from below district level to District Collector Office. Relief and Reconstruction data should be provided by the Relief Commissioner. Data at district level should be compiled and aggregated at District Collector Office with the assistance of District Statistical Office. Directorate of Economics & Statistics of the State Governments should be the nodal agency for compilation validation and computerization and the aggregation of data on disaster statistics at state level.

#### **4.5 Institutional Mechanism of Data Collection**

'Disaster Management Act 2005' envisages State should constitute State Disaster Management Authorities and State Executive Committees. Chief Secretary of the State is chairperson of such a committee. One of the functions of this committee is to coordinate response in the event of disaster and also coordinate the activities of department of the State, District Authorities, statutory bodies and other governmental and non-governmental organizations engaged in disaster management. The Act also envisage that among other responsibilities of the Departments of the State, these would be assisting State Executive Authorities and District Authorities for drawing disaster Management plans, data collection and assessing the damage from any disaster. As per the DMA, the States should also constitute District Disaster Management Authority under the chairmanship of Collector/District Magistrate/Deputy Commissioner. One of the functions of the District Authority is to coordinate response to any disaster and coordinate the activities of the Departments of the State Government at District level, statutory bodies and other governmental and non-governmental organizations in the district engaged in the disaster management.

The need for systematic data for disaster mitigation and prevention is an increasing concern of both development and response agencies. In the past, data needs were addressed on an ad hoc basis, which included collecting the information at the time of the emergency. However, there is a growing importance and understanding that data collection, analysis, and management can help both short and long-term development goals and help to identify and address disaster risks.

## Chapter – 5 Situation Analysis

### 5.1 Human Loss

**5.1.1** Human lives are the most precious things in the universe and its loss due to any type of disaster is a great loss not to family but to State/county as well. The table (5.1) below shows that in the year 2008-09 and 2009-10 more than two thousand lives had been lost in various disasters as compared to other years.

**Table-5.1  
Number of lives lost due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	90	222	106	105	99	197	80	117
2	CHAMBA	136	416	51	296	18	1	47	125
3	HAMIRPUR	62	66	222	37	40	72	82	81
4	KANGRA	216	248	134	207	311	293	227	315
5	KINNAUR	163	98	407	111	96	155	64	120
6	KULLU	137	127	24	101	147	124	103	117
7	L&S	25	23	102	16	10	15	22	36
8	MANDI	180	303	242	162	204	256	294	277
9	SHIMLA	233	253	434	326	193	256	243	243
10	SIRMOUR	221	156	115	106	179	93	101	154
11	SOLAN	84	113	169	132	79	50	96	175
12	UNA	0	3	24	68	24	64	0	55
<b>HP</b>		<b>1547</b>	<b>2028</b>	<b>2030</b>	<b>1667</b>	<b>1400</b>	<b>1576</b>	<b>1359</b>	<b>1990</b>

### 5.2 Person affected by minor injuries

**5.2.1** As per the table below the data of last eight years shows that there was a sharp increase in injuries in 2012-13 and 2013-14 as compared to other years. In the year 2013-14 no injuries were reported from Chamba and Una Districts.

**Table-5.2**  
**Number of persons affected due to minor injuries**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	9	73	97	77	2	1	79	82
2	CHAMBA	37	0	0	0	0	158	5	69
3	HAMIRPUR	26	46	44	36	68	43	160	95
4	KANGRA	59	93	97	42	59	2458	36	72
5	KINNAUR	14	63	81	96	3	26	67	14
6	KULLU	62	97	50	32	128	20	28	49
7	L&S	0	0	0	2	17	422	0	5
8	MANDI	116	281	307	234	139	104	422	451
9	SHIMLA	146	188	388	256	202	21	184	149
10	SIRMOUR	32	101	88	21	42	40	25	18
11	SOLAN	8	6	5	3	20	4	7	17
12	UNA	0	0	18	29	18	0	0	20
<b>HP</b>		<b>509</b>	<b>948</b>	<b>1175</b>	<b>828</b>	<b>698</b>	<b>3297</b>	<b>1013</b>	<b>1059</b>

### 5.3 Person affected by major injuries

Information collected on the number of persons affected due to major injuries from the year 2007-08 to 2014-15 has been depicted in Table 5.3.

**Table-5.3**  
**Number of persons affected due to major injuries**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	32	191	107	101	192	243	118	45
2	CHAMBA	103	204	283	149	9	0	40	20
3	HAMIRPUR	71	59	42	47	58	72	38	62
4	KANGRA	123	162	203	97	59	99	54	74
5	KINNAUR	86	125	109	125	54	334	35	58
6	KULLU	88	46	38	55	34	54	23	59
7	L&S	0	0	14	1	17	4	3	0
8	MANDI	157	445	347	270	281	400	364	405
9	SHIMLA	58	128	247	218	235	186	70	28
10	SIRMOUR	250	205	193	54	166	54	52	57
11	SOLAN	27	53	19	29	18	5	27	556
12	UNA	0	0	29	40	29	21	0	10
<b>HP</b>		<b>995</b>	<b>1618</b>	<b>1631</b>	<b>1186</b>	<b>1152</b>	<b>1472</b>	<b>824</b>	<b>1930</b>

Above table reveals that the maximum number of major injuries occurred in the year 2014-15 and minimum number of persons who suffered from major injuries were in the year 2007-08.

#### 5.4 Ex-gratia payment to families of deceased person

The table-5.4 shows the amount of relief paid to the deceased persons. In the past eight years some amount has been paid as relief to the families of the deceased persons, and the maximum amount of ex-gratia payment amounting to Rs. 2338 lakh had been paid to the families of deceased person in the year 2009-10. In the year 2014-15 the amount spent on families of deceased person were Rs.6345 lakh. Every year some amount of relief has been paid.

**Table-5.4**  
**Ex-Gratia (Rs. in Lakh) payment to the families of deceased persons**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	72	221	106	95	99	123	114	175
2	CHAMBA	102	409	428	289	326	2	61	182
3	HAMIRPUR	39	59	80	37	60	102	112	118
4	KANGRA	100	232	227	201	343	264	88	4375
5	KINNAUR	30	74	69	71	74	98	42	146
6	KULLU	115	126	125	100	119	116	134	108
7	L&S	20	16	24	16	10	16	33	67
8	MANDI	220	332	277	208	204	274	420	409
9	SHIMLA	177	196	720	382	113	274	383	387
10	SIRMOUR	153	147	167	105	2	117	184	170
11	SOLAN	41	92	92	31	59	0	47	128
12	UNA	0	3	24	53	2	36	0	83
<b>HP</b>		<b>1069</b>	<b>1905</b>	<b>2338</b>	<b>1588</b>	<b>1411</b>	<b>1421</b>	<b>1616</b>	<b>6345</b>

#### 5.5 Gratuitous Relief during Grievous Injury Requiring Hospitalization

Table-5.5 shows that the maximum Gratuitous relief during hospitalization amounting to Rs. 243 lakh was paid in the year 2014-15 and minimum Gratuitous relief of Rs. 10 lakh was provided during hospitalization in the year 2011-12 .

**Table-5.5**  
**Gratuitous (Rs. in Lakh) Relief Grievous Injury Requiring Hospitalization**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	1	10	8	11	0	31	16	6
2	CHAMBA	14	0	0	0	0	0	2	6
3	HAMIRPUR	2	4	2	8	0	2	7	10
4	KANGRA	26	24	27	14	1	21	40	11
5	KINNAUR	7	11	5	8	0	3	4	1
6	KULLU	8	7	6	5	0	7	5	84
7	L&S	0	0	0	1	0	1	0	1
8	MANDI	20	0	52	41	0	60	62	45
9	SHIMLA	7	7	12	36	0	71	12	21
10	SIRMOUR	30	33	32	4	1	22	7	55
11	SOLAN	19	1	3	1	8	0	4	2
12	UNA	0	0	1	3	0	1	0	4
	<b>HP</b>	<b>134</b>	<b>97</b>	<b>150</b>	<b>132</b>	<b>10</b>	<b>220</b>	<b>160</b>	<b>243</b>

### 5.6 Amount spent on relief for old infirm and destitute children

Table-5.6 shows the relief provided to old infirm and destitute children Rs. 1379 lakh was spend in the year 2013-14 out of which 99 percent spent in Shimla district.

**Table-5.6**

**Amount (Rs. in Lakh) spent on relief for the old, infirm and destitute children**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	27	0	1	0.00
2	CHAMBA	0	0	0	0	0	0	0	0.00
3	HAMIRPUR	0	2	0	0	9	15	0	0.26
4	KANGRA	0	0	0	0	10	0	11	0.00
5	KINNAUR	0	0	0	0	8	0	0	0.00
6	KULLU	0	0	0	0	8	0	0	0.00
7	L&S	0	0	0	0	0	0	0	0.00
8	MANDI	12	0	0	0	40	2	3	5.20
9	SHIMLA	0	1	0	3	16	0	1359	3.06
10	SIRMOUR	0	0	0	0	22	0	3	0.00
11	SOLAN	0	0	0	0	3	0	1	0.00
12	UNA	0	0	0	0	1	0	0	0.00
	<b>HP</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>145</b>	<b>17</b>	<b>1379</b>	<b>8.52</b>

**5.7 Assistance provided for clothing and utensils / household goods for affected families**

Table-5.7 shows the amount of relief provided for the household goods of affected families. In the year 2014-15 an amount of Rs. 31 Lakh were provided for household goods for affected families, out of which 32 percent amount was spent in Mandi district.

**Table-5.7**

**Amount (Rs in Lakh) provided for clothing and utensils / household goods for affected families**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	14	0	0	0	0	0	7
2	CHAMBA	19	0	0	0	0	0	0	2
3	HAMIRPUR	0	14	8	0	1	0	1	2
4	KANGRA	0	0	0	0	12	3	0	0
5	KINNAUR	2	0	0	0	0	0	0	8
6	KULLU	0	2	0	0	0	16	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	9	0	0	0	0	1	2	10
9	SHIMLA	5	3	0	2	0	34	0	1
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>35</b>	<b>33</b>	<b>8</b>	<b>2</b>	<b>13</b>	<b>54</b>	<b>3</b>	<b>31</b>

**5.8 Gratuitous relief for families in dire need of immediate relief**

Table-5.8 depicts the amount of relief provided for families in dire need. An amount of Rs. 175 lakh was provided in the year 2014-15 which was maximum in the eight years period under study. In the year 2013-14, an amount of Rs. 18 Lakh was provided for families in dire need out of which 56 percent amount spent in district Shimla.

**Table-5.8**

**Gratuitous (Rs. in Lakh) Relief provided For Families in dire need of immediate Relief**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	25	0	15	15	0	0	1	0
2	CHAMBA	0	0	0	0	0	0	0	1
3	HAMIRPUR	0	0	0	0	0	13	0	0
4	KANGRA	1	0	0	1	0	0	0	0
5	KINNAUR	0	0	0	0	3	0	0	0
6	KULLU	5	0	3	13	1	0	0	158
7	L&S	0	0	0	0	10	0	0	0
8	MANDI	0	0	0	0	0	0	7	12
9	SHIMLA	1	1	0	128	1	3	10	0
10	SIRMOUR	0	0	0	0	0	0	1	4
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>32</b>	<b>2</b>	<b>19</b>	<b>157</b>	<b>15</b>	<b>16</b>	<b>18</b>	<b>175</b>

### 5.9 Livestock Loss

Like humans, domestic as well as wild animals are also exposed to the effects of natural and manmade disaster. The data in the referred eight years from 2007-2015 reveals that maximum number of animal perished during the year 2013-14, out of which Kinnaur reported maximum number of deaths. The lowest loss was reported from Una District in the year 2013-14.

**Table-5.9**

### Number of livestock perished due to various disasters

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	1787	77	127	150	107	110	116	368
2	CHAMBA	515	1242	3028	2251	186	716	202	366
3	HAMIRPUR	177	234	259	136	108	264	426	544
4	KANGRA	1005	1055	722	850	637	2018	574	759
5	KINNAUR	455	491	833	782	215	389	9091	672
6	KULLU	408	467	673	909	870	874	36	496
7	L&S	322	1133	711	3778	544	198	176	188
8	MANDI	879	783	436	508	503	763	938	988
9	SHIMLA	424	416	514	325	828	1013	327	360
10	SIRMOUR	530	591	679	273	567	345	223	688
11	SOLAN	124	125	78	96	59	693	134	192
12	UNA	6	206	47	23	47	79	3	48
<b>HP</b>		<b>6632</b>	<b>6820</b>	<b>8107</b>	<b>10081</b>	<b>4671</b>	<b>7462</b>	<b>12246</b>	<b>5669</b>

### 5.10 Assistance for replacement of drought animals

The table 5.10 gives the relief provided to small and marginal farmers for replacement of drought animals, milch animals or animals used for haulage. The maximum amount provided for replacement of drought animals was during the year 2007-08 and the minimum amount of assistance provided was 9 lakh provided during the year 2011-12

**Table-5.10**

**Assistance (Rs. in Lakh) provided for replacement of drought animals**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	7
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	6	13	6	14	2	0	11	20
4	KANGRA	0	0	0	0	0	0	0	4
5	KINNAUR	5	5	12	9	2	0	0	0
6	KULLU	0	0	0	0	1	0	0	1
7	L&S	0	0	0	0	0	0	10	28
8	MANDI	0	0	0	0	0	0	5	0
9	SHIMLA	0	0	21	15	0	0	0	1
10	SIRMOUR	6	25	35	9	3	0	0	15
11	SOLAN	72	4	4	7	0	0	11	10
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>89</b>	<b>48</b>	<b>78</b>	<b>55</b>	<b>9</b>	<b>0</b>	<b>37</b>	<b>85</b>

### 5.11 Provision for fodder in cattle camps

Fodder, a type of animal feed, is any agricultural foodstuff used specifically to feed domesticated livestock, such as cattle, goats, sheep, horses, chickens and pigs. "Fodder" refers particularly to food given to the animals (including plants cut and carried to them), rather than that which they forage for themselves. The table 5.11 reveals the amount spent on fodder in cattle camps.

**Table-5.11**

**Assistance (Rs in Lakh) provided for fodder in cattle camps**

		<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
<b>Sr.No.</b>	<b>District</b>								
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	2	25	15	0	0	0	4	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	18	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>20</b>	<b>25</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>

**5.12 Assistance provided for vaccine and medicine in cattle camps**

Susceptible animals such as cattle, sheep, and goat pigs some time come in the effect of viral diseases. These viruses cause high fever for approximately two to six days. Table 5.12 indicates the amount spent on vaccines and medicines of animals. The amount spent was Rs.10 lakh in district Chamba during the year 2013-2014.

**Table-5.12**

**Assistance (Rs. in Lakh) provided for vaccine and medicines for animals**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	34	10	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	12	5	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>39</b>	<b>10</b>	<b>0</b>

**5.13 Assistance provided for supply of fodder in cattle camps.**

The table 5.13 depicts the amount spent on supply of fodder in cattle camps, the maximum amount of Rs.22 lakh were spent on supply of fodder in cattle camps and the minimum amount of Rs. 11 lakh were spent during the year 2009-10.

**Table-5.13**

**Assistance (Rs. in Lakh) provided for supply of fodder in cattle camps**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	4	12	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	11	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	13	10	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>17</b>	<b>22</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 5.14 Agriculture Loss

The table below shows that due to natural disasters around 3,17,222 hectares of sown land was affected in 2009-10 which resulted in the food crop production loss of 1,72,316 tonnes. The data in the preceding years shows that there was comparatively less loss due to natural disasters.

**Table-5.14(a)**

**Loss of sown area (hectares) due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	19993	54986	51350	23150	5700	4652	1200	4285
2	CHAMBA	0	0	0	0	0	0	12	13120
3	HAMIRPUR	35200	35867	9417	18080	11798	10070	4284	4191
4	KANGRA	13076	38531	143704	11950	0	0	0	0
5	KINNAUR	46	9	0	0	0	0	1386	110
6	KULLU	2550	29630	43850	43836	24468	2140	790	0
7	L&S	0	0	0	0	2	8	0	0
8	MANDI	19690	40415	57143	40137	19942	24669	24750	3240
9	SHIMLA	9216	0	2058	0	31	2039	16	100
10	SIRMOUR	34	64	5699	4793	35	353	8	14662
11	SOLAN	3051	3302	4001	932	2	0	2457	1500
12	UNA	3837	58617	0	0	0	6	225	7
<b>HP</b>		<b>106693</b>	<b>261422</b>	<b>317222</b>	<b>142878</b>	<b>61978</b>	<b>43937</b>	<b>35127</b>	<b>42716</b>

**Table-5.14(b)**

**Loss of agriculture production (in Tons) due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	38643	36070	73390	15685	15750	2500	600	1545
2	CHAMBA	0	0	0	0	0	0	0	4709
3	HAMIRPUR	40164	25912	5922	25603	14515	20116	915	1280
4	KANGRA	4756	40430	9325	765	0	0	0	0
5	KINNAUR	15	20	0	0	0	0	1018	57
6	KULLU	2418	14367	50253	20210	14806	3692	1279	0
7	L&S	0	0	0	0	2	1	0	0
8	MANDI	5085	11718	18673	12247	39880	1935	14682	1808
9	SHIMLA	3216	0	4	0	0	0	0	115
10	SIRMOUR	2	54	12249	10890	32	0	0	971
11	SOLAN	1550	1700	2500	1000	52	1006	7719	2766
12	UNA	7620	97925	0	0	0	0	125	113
<b>HP</b>		<b>103469</b>	<b>228196</b>	<b>172316</b>	<b>86400</b>	<b>85037</b>	<b>29250</b>	<b>26338</b>	<b>16129</b>

**5.15 Assistance for De-silting of agriculture land**

As per the table-5.15 the assistance for de-silting of agriculture land were provided to the tune of Rs. 278 lakh during the year 2014-15 followed by an assistance of Rs. 31 lakh provided during the year 2013-14.

**Table-5.15**  
**Assistance (Rs. In Lakh) provided to small and marginal farmers for**  
**De-silting of agriculture land**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	15	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	15	0
6	KULLU	0	0	0	0	0	0	0	278
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	1	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>278</b>

### **5.16 Assistance provided to small and marginal farmers for removal of debris from agriculture land**

Table-5.16 shows that an amount of Rs.13 Lakh assistance was provided for removal of debris from agriculture land in the year 2013-14.

**Table-5.16**

**Assistance (Rs. in Lakh) provided to small and marginal farmers for removal of debris from agriculture land in hilly areas**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	6	0.06
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	7	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0.02
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0.08</b>

**5.17 Assistance provided to small and marginal farmers for De-silting/ Restoration/ Repair of Fish Farm**

The table below depicts that an amount of Rs. 7.5 Lakh was provided for de-silting / Restoration / Repair of fish farm during the year 2011-12 and that an amount of Rs. 5 Lakh was provided during 2013-14.

**Table-5.17**

**Assistance (Rs. in Lakh) provided to small and marginal farmers for de-silting/ restoration/ repair of fish farm**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	5	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	7.5	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7.5</b>	<b>0</b>	<b>5</b>	<b>0</b>

### 5.18 Assistance (Rs. in Lakh) provided to small and marginal farmers for Loss of substantial portion or land caused by land slides

Landslides are the downward movement of a slope composed of earth materials such as rock, soil or artificial fills. Landslides are also called rock-slide, debris-slide, slump, earth-flow or soil-creep. The table below depicts the maximum amount of assistance provided for land slide was Rs.231 lakh during the year 2007-08 , in 2008-09 amount of Rs. 46 lakh, was provided, Rs. 26 lakh provided during the year 2013-14.

**Table-5.18**  
Assistance (Rs. in Lakh) provided to small and marginal farmers for loss of substantial portion or caused by land slide

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	231	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	5	0.22
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	46	0	9	0	0	20	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0.28
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>231</b>	<b>46</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0.50</b>

### 5.19 Horticulture Loss

From the Table-19(a) it is evident that maximum area affected was in year 2014-15 to the tune of 1,54,788 (Hectare) as compared to other years. Table-10(b) shows that maximum production loss in horticulture crop was 3, 72,125 Tonnes during the year 2010-11 and minimum crop loss was 51,632 Tonnes during the year 2007-08.

**Table-5.19(a)**  
**Horticultural crops area (hectares) affected due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	896	3527	0	463	0	1225	270
2	CHAMBA	349	4775	2650	7838	0	0	0	4296
3	HAMIRPUR	742	1091	95	831	824	897	1635	1063
4	KANGRA	6867	3237	4885	9124	0	4741	290	123745
5	KINNAUR	3196	812	0	120	0	11668	10274	187
6	KULLU	2485	1198	150	180	3875	19300	21300	5639
7	L&S	0	0	0	0	0	0	7	43
8	MANDI	2162	4884	2573	5976	19400	13200	10036	8120
9	SHIMLA	2605	23563	3500	26019	25322	332	15119	8874
10	SIRMOUR	1	6	1468	1393	551	0	1	0
11	SOLAN	800	9956	13741	116	415	0	188	946
12	UNA	1850	3020	3036	2880	3036	0	600	1606
	<b>HP</b>	<b>21057</b>	<b>53437</b>	<b>35625</b>	<b>54476</b>	<b>53886</b>	<b>50139</b>	<b>60676</b>	154788

**Table-5.19 (b)**  
**Loss of Horticulture production (in Tons) due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	1664	1985	0	935	0	535	1866
2	CHAMBA	6313	76240	42250	119399	0	0	0	3936
3	HAMIRPUR	1555	1199	50	2657	886	775	819	453
4	KANGRA	2642	2098	6454	10684	0	7485	180	109651
5	KINNAUR	15705	2500	0	1000	0	6000	3400	11
6	KULLU	517	65644	30000	30000	82675	27000	38800	9511
7	L&S	0	0	0	0	0	0	70	7
8	MANDI	0	0	0	0	39710	31317	23127	4781
9	SHIMLA	23446	165313	57000	202159	147737	17	95509	32516
10	SIRMOUR	4	54	2395	2462	0	0	0	
11	SOLAN	200	1096	3184	520	348	0	210	819
12	UNA	1250	6000	9494	3244	9494	0	1770	10756
	<b>HP</b>	<b>51632</b>	<b>321808</b>	<b>152812</b>	<b>372125</b>	<b>281785</b>	<b>72594</b>	<b>164420</b>	174306

## 5.20 Cash Crops

It has been observed that maximum area affected in cash crops was 19772 hectare during the year 2012-13, the minimum area affected during the year 2013-14 was 6201 hectare as shown in table 5.20(a). From table 5.20(b) we can see that the maximum production loss in cash crops was 99,429 ton during the year 2008-09.

**Table-5.20 (a)**  
**Loss of cash crops area (hect.) due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	2721	2810	1980	950	600	2593	100	442
2	CHAMBA	0	0	0	0	0	9495	0	950
3	HAMIRPUR	990	1347	249	318	318	455	136	249
4	KANGRA	1568	4408	6013	782	0	0	0	0
5	KINNAUR	5	10	0	0	0	0	809	33
6	KULLU	507	3355	6400	5810	4015	921	188	1924
7	L&S	22	0	0	3	0	24	55	0
8	MANDI	293	335	410	317	4512	4867	4867	869
9	SHIMLA	3070	0	393	0	60	0	20	1600
10	SIRMOUR	1	6	812	751	0	0	1	0
11	SOLAN	750	800	1000	600	2	1417	0	500
12	UNA	0	405	0	0	0	0	25	0
	<b>HP</b>	<b>9927</b>	<b>13476</b>	<b>17257</b>	<b>9531</b>	<b>9507</b>	<b>19772</b>	<b>6201</b>	<b>6567</b>

**Table-5.20(b)**  
**Loss of Cash Crops Production (in Tons) due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	29200	15185	19575	7125	400	2068	122	1716
2	CHAMBA	0	0	0	0	0	0	0	2982
3	HAMIRPUR	9899	13622	2559	3542	1710	10500	409	847
4	KANGRA	9408	35051	178	45	0	0	0	0
5	KINNAUR	3	37	0	0	0	0	1249	41
6	KULLU	139	23233	14770	23850	30183	7050	564	17189
7	L&S	0	0	0	0	0	5	355	0
8	MANDI	5440	6714	7243	6358	89200	2188	2188	3556
9	SHIMLA	23352	0	715	0	0	0	0	2500
10	SIRMOUR	3	7	3537	3414	0	0	0	0
11	SOLAN	850	950	1300	700	52	0	0	15482
12	UNA	0	4630	0	0	0	0	500	1203
	<b>HP</b>	<b>78294</b>	<b>99429</b>	<b>49877</b>	<b>45034</b>	<b>12545</b>	<b>21811</b>	<b>5387</b>	<b>45516</b>

## 5.21 Assistance to Small and Marginal Seri culturist

Sericulture is the rearing of silk worm for production of silk. Silkworm larvae fed on malbury leaves and after the fourth molt, climb on the twigs placed near them. The silk moth lays eggs. The eggs hatch, and the larvae feed on mulberry leaves. When the silkworms are about 10,000 times heavier than when they hatched, they are ready to spin a silk cocoon. The silk is produced in two glands in the silkworm's head and then forced out in liquid form through openings called spinnerets. Table 5.21 depicts the amount of Rs.64 lakh was provided during the year 2011-12 in district Shimla.

**Table-5.21**  
**Assistance (Rs. in Lakh) provided to o Small and Marginal Seri culturist**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	3	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	64	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 5.22 Agriculture input subsidy where crop loss was 50%

Table 5.22 depicts the amount of agriculture input subsidy provided to farmers where crop loss was 50%. The maximum assistance amounting to Rs.198 lakh was provided during the year 2013-14 out of which 62 percent spent in district Hamirpur. Whereas the minimum amount of Rs. 3 lakh was provided during the year 2014-15 in district Sirmour.

**Table-5.22**  
**Agriculture Input Subsidy (Rs. in Lakh) Where Crop Loss Was 50%**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0.0
2	CHAMBA	0	0	0	0	0	0	1	0.0
3	HAMIRPUR	0	0	0	52	0	5	123	0.0
4	KANGRA	0	0	0	0	0	0	0	0.0
5	KINNAUR	0	0	0	0	0	0	62	0.0
6	KULLU	0	0	0	0	0	0	0	0.0
7	L&S	0	0	0	0	0	6	0	0.0
8	MANDI	0	0	0	0	0	35	0	0.1
9	SHIMLA	0	0	0	0	0	64	0	0.0
10	SIRMOUR	0	0	0	1	0	0	12	3.0
11	SOLAN	0	0	0	0	0	0	0	0.0
12	UNA	0	0	0	0	0	0	0	0.0
	<b>HP</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>0</b>	<b>109</b>	<b>198</b>	<b>3.1</b>

### 5.23 Input subsidy for agriculture, horticulture and plantation crops

The table 5.23 depicts Input Subsidy for Agriculture, Horticulture and Plantation Crops. Subsidy amounting to Rs. 752 lakh was provided during the year 2009-10 which was highest in the eight years.

**Table-5.23**  
**Input Subsidy (Rs. in Lakh) for agriculture, horticulture and plantation crops**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	564	0	0	0	0	0
2	CHAMBA	38	0	0	0	0	0	0	0
3	HAMIRPUR	25	59	49	0	0	5	0	31
4	KANGRA	43	16	0	0	0	0	0	0
5	KINNAUR	7	0	0	0	1	0	0	0
6	KULLU	0	8	104	91	0	0	0	0
7	L&S	0	0	0	0	2	6	0	0
8	MANDI	70	0	0	0	0	35	0	55
9	SHIMLA	2	0	0	0	0	64	0	0
10	SIRMOUR	1	2	0	1	0	0	0	3
11	SOLAN	28	32	35	37	0	0	0	0
12	UNA	16	3	0	0	0	0	0	0
	<b>HP</b>	<b>230</b>	<b>119</b>	<b>752</b>	<b>129</b>	<b>3</b>	<b>109</b>	<b>0</b>	<b>89</b>

## 5.24 Input Subsidy for Perennial Crops

Table 5.24 depicts the provision of Input Subsidy for Perennial Crops. The maximum subsidy of Rs. 46 lakh was given during the year 2007-08 and the minimum subsidy of Rs.3 lakh was provided in 2009-10. No subsidy given in the years 2010-11, 2011-12, 2013-14 and 2014-15.

**Table-5.24**  
**Input Subsidy (Rs. in Lakh) for Perennial Crops**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	5	0	0	0	0	0	0	0
2	CHAMBA	11	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	2	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	1	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	12	0	0
9	SHIMLA	15	20	0	0	0	24	0	0
10	SIRMOUR	0	2	1	0	0	0	0	0
11	SOLAN	14	5	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>46</b>	<b>28</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>0</b>	<b>0</b>

## 5.25 Number of villages affected by various disasters

From the table 5.25 the information collected on the number of villages affected by various disasters shows that the maximum numbers of 3496 villages were affected during the year 2009-10, whereas only 666 villages were affected in the year 2013-14.

**Table-5.25**  
**Number of villages affected by various disasters**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	802	490	820	0	410	625	275	262
2	CHAMBA	126	468	205	1109	0	0	0	0
3	HAMIRPUR	715	915	60	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	35	97	0	77	2	435	0	98
6	KULLU	154	230	21	25	45	120	176	359
7	L&S	0	0	0	0	0	7	6	35
8	MANDI	231	720	550	840	0	10	125	0
9	SHIMLA	0	0	410	0	893	293	84	0
10	SIRMOUR	8	161	890	860	1	0	0	0
11	SOLAN	0	0	0	0	0	0	0	1
12	UNA	230	260	540	475	540	0	0	0
<b>HP</b>		<b>2301</b>	<b>3341</b>	<b>3496</b>	<b>3386</b>	<b>1891</b>	<b>1490</b>	<b>666</b>	<b>755</b>

### **5.26 Number of families affected by various disasters**

The table 5.26 depicts the number of families affected by various disasters. The maximum number of 84, 641 families were affected by various disasters in the year 2013-14. In Shimla district 39098 were affected from various disasters in the year 2013-14.

**Table-5.26**  
**Number of families affected by various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	5654	5145	9000	0	1800	13655	5585	1312
2	CHAMBA	3150	1560	0	2950	0	0	0	5518
3	HAMIRPUR	5600	1142	267	2348	3947	2416	6350	7311
4	KANGRA	0	0	0	0	0	7776	778	20771
5	KINNAUR	234	966	0	212	28	1465	0	488
6	KULLU	3143	6850	300	700	821	7200	9587	11157
7	L&S	0	0	0	0	0	350	0.97	198
8	MANDI	3210	5500	4850	7600	12645	22802	19142	14875
9	SHIMLA	4200	12150	7600	35354	35354	787	39098	15999
10	SIRMOUR	32	1289	4315	4155	0	0	0	15
11	SOLAN	0	0	0	0	0	0	0	1288
12	UNA	3500	5100	6950	6380	6950	0	4100	5000
<b>HP</b>		<b>28723</b>	<b>39702</b>	<b>33282</b>	<b>59699</b>	<b>23345</b>	<b>56451</b>	<b>84641</b>	<b>83932</b>

### 5.27 Kacha houses damaged in rural areas

Human suffering increases manifold when human lives and their houses are affected by natural and manmade disasters. Kacha Houses are made up of mud, bamboo and leaves by villagers. Table 5.27 shows that the maximum damage to houses took place in 2008-09 whereas the least damage occurred in 2012-13.

**Table-5.27**  
**Number of Kacha house damaged in rural areas due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	788	824	258	456	437	316	258	295
2	CHAMBA	578	500	1050	654	842	149	0	176
3	HAMIRPUR	729	687	283	329	51	366	605	581
4	KANGRA	2023	1396	683	759	601	1099	0	1023
5	KINNAUR	463	885	1107	1301	143	732	1068	521
6	KULLU	652	556	205	50	1181	216	0	242
7	L&S	220	367	824	241	483	105	86	116
8	MANDI	1177	583	375	702	304	910	858	821
9	SHIMLA	991	4308	2087	861	38	265	724	447
10	SIRMOUR	717	2160	683	1467	313	561	116	159
11	SOLAN	732	1948	296	451	1585	31	39	130
12	UNA	307	1603	507	249	293	98	0	260
<b>HP</b>		<b>9377</b>	<b>15817</b>	<b>8358</b>	<b>7520</b>	<b>6271</b>	<b>4848</b>	<b>3854</b>	<b>4771</b>

## 5.28 Pacca houses damaged in rural areas

Pacca houses are made of bricks, steel, wood, cement etc. Table5.16 shows that the number of pacca houses damaged in rural areas was 1790 during the year 2008-09.

**Table-5.28**  
**Number of Pacca House damaged in rural areas due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	53	277	95	97	8	33	130	58
2	CHAMBA	132	0	0	0	0	0	0	41
3	HAMIRPUR	195	49	46	66	91	41	30	56
4	KANGRA	57	93	50	95	59	62	0	110
5	KINNAUR	2	48	27	8	0	0	1762	269
6	KULLU	27	104	30	44	61	8	0	11
7	L&S	0	0	0	0	0	0	1	0
8	MANDI	172	242	19	32	25	43	119	64
9	SHIMLA	76	239	139	29	164	45	58	90
10	SIRMOUR	7	8	5	96	60	33	12	61
11	SOLAN	22	225	62	86	45	85	62	12
12	UNA	3	505	39	77	26	0	0	0
<b>HP</b>		<b>746</b>	<b>1790</b>	<b>512</b>	<b>630</b>	<b>539</b>	<b>350</b>	<b>2174</b>	<b>772</b>

## 5.29 Kacha houses damaged in urban area

Table 5.29 depicts the number of Kacha houses damaged in Urban areas. The maximum number of Kacha houses damaged was 1242 during the year 2011-12 and minimum number of Kacha house damaged were 105 during the year 2010-11.

**Table-5.29**  
**Number of Kachha houses damaged in urban areas due to various disasters**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	4	0	4	4	4	0	2	2
2	CHAMBA	3	0	0	0	10	0	0	9
3	HAMIRPUR	12	0	0	30	228	19	30	29
4	KANGRA	143	132	113	52	41	208	0	65
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	79	0	0	2
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	17	21	9	7	29	48	77
9	SHIMLA	18	95	0	10	0	85	126	2
10	SIRMOUR	4	11	0	0	0	2	0	28
11	SOLAN	25	0	0	0	111	0	0	3
12	UNA	45	151	0	0	762	0	0	0
	<b>HP</b>	<b>254</b>	<b>406</b>	<b>138</b>	<b>105</b>	<b>1242</b>	<b>343</b>	<b>206</b>	<b>217</b>

### **5.30 Pacca houses damaged in urban area**

Table 5.30 depicts the number of Pacca house damaged in urban areas. The maximum number of Pacca houses damaged were 358 during the year 2011-12 and minimum number of eight houses during the year 2009-10.

**Table-5.30**  
**Number of pucca houses damaged in urban areas due to various disasters**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	7	2	2	0	0	0	0
2	CHAMBA	0	0	0	0	4	40	0	0
3	HAMIRPUR	0	0	0	3	17	8	5	11
4	KANGRA	5	4	1	3	3	12	0	4
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	4	0	0	7	0	0	6
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	12	125	5	8	1	6	4	5
9	SHIMLA	29	54	0	0	0	33	3	2
10	SIRMOUR	0	0	0	7	0	0	0	28
11	SOLAN	7	0	0	0	4	0	0	0
12	UNA	7	27	0	0	322	49	0	0
	<b>HP</b>	<b>60</b>	<b>221</b>	<b>8</b>	<b>23</b>	<b>358</b>	<b>148</b>	<b>12</b>	<b>56</b>

### 5.31 Assistance provided for repair/restoration of fully damaged houses

The data in the table-5.31 shows that the maximum amount of assistance provided for fully damaged houses was 3431 lakh during the year 2014-15 out of which 92 percent of the amount was spent in district Kangra.

**Table-5.31**  
**Assistance (Rs. in Lakh) provided for repair/restoration of fully damaged houses**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	2	7	9	13	1	35	3	0
2	CHAMBA	11	28	53	33	0	0	15	164
3	HAMIRPUR	13	12	2	8	11	36	18	20
4	KANGRA	29	25	13	21	1	95	21	3172
5	KINNAUR	6	0	9	0	7	41	270	66
6	KULLU	59	62	9	18	4	7	0	12
7	L&S	0	0	1	0	0	0	0	0
8	MANDI	65	17	22	21	12	37	49	54
9	SHIMLA	22	7	26	32	4	18	7	106
10	SIRMOUR	19	11	29	16	21	68	12	8
11	SOLAN	21	27	4	11	2	0	11	14
12	UNA	1	2	0	0	0	1	0	0
	<b>HP</b>	<b>247</b>	<b>196</b>	<b>177</b>	<b>172</b>	<b>63</b>	<b>274</b>	<b>405</b>	<b>3431</b>

### 5.32 Assistance provided for repair/restoration of severally damaged house

The table-5.32 shows that the maximum assistance provided for Severally Damaged Houses was 295 lakh during the year 2014-15 out of which 37 percent amount was spent in district Mandi and the minimum amount assistance provided for severally damaged houses was Rs.49 Lakh during the year 2011-12.

**Table-5.32**  
**Assistance (Rs. in Lakh) provided for repair/restoration of severally damaged houses**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	19	46	0	7	0	0	0	0
2	CHAMBA	23	0	0	0	0	0	16	2
3	HAMIRPUR	5	0	2	0	8	7	15	18
4	KANGRA	24	22	12	17	3	19	26	20
5	KINNAUR	10	33	20	47	2	0	107	61
6	KULLU	0	7	0	0	16	8	0	11
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	28	33	22	24	12	44	49	108
9	SHIMLA	30	40	80	23	0	83	15	76
10	SIRMOUR	10	22	14	58	5	10	14	8
11	SOLAN	6	0	2	4	0	0	0	4
12	UNA	22	83	0	0	0	7	0	6
	<b>HP</b>	<b>178</b>	<b>285</b>	<b>151</b>	<b>180</b>	<b>46</b>	<b>179</b>	<b>241</b>	<b>295</b>

### 5.33 Assistance provided for repair/restoration of partially damaged houses

Table 5.33 depicts the amount spent on partially damaged houses. An amount of Rs. 404 Lakh assistance was provided for partially damaged both Pucca and Kacha houses during the year 2008-09 out of which 62 percent amount was provided to district Una.

**Table-5.33**  
**Assistance (Rs. in Lakh) provided for repair/restoration of partially damaged houses**

		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
<b>Sr.No.</b>	<b>District</b>								
1	BILASPUR	0	5	4	2	0	20	17	0
2	CHAMBA	3	0	0	0	0	0	5	0
3	HAMIRPUR	13	9	3	7	0	0	2	0
4	KANGRA	24	26	16	19	0	23	0	0
5	KINNAUR	0	0	0	0	0	27	54	0
6	KULLU	0	11	9	13	0	1	0	0
7	L&S	15	25	31	19	0	13	2	0
8	MANDI	0	0	15	16	0	18	15	0
9	SHIMLA	28	18	0	3	0	0	4	3
10	SIRMOUR	15	37	3	4	0	19	1	0
11	SOLAN	4	24	6	9	0	0	0	0
12	UNA	0	250	0	0	0	0	0	0
	<b>HP</b>	<b>102</b>	<b>404</b>	<b>87</b>	<b>93</b>	<b>0</b>	<b>122</b>	<b>98</b>	<b>3</b>

### 5.34 Temporary accommodation provided during disaster

Table 5.57, depicts the value of assistance provided for temporary accommodation during disaster. An assistance of Rs. 175 lakh was provided during the year 2008-09 and no assistance for temporary accommodation was reported for other years.

**Table-5.34**  
**Assistance (Rs. in Lakh) provided for temporary accommodation during disaster**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	175	0	0	0	0	0	
2	CHAMBA	0	0	0	0	0	0	0	
3	HAMIRPUR	0	0	0	0	0	0	0	
4	KANGRA	0	0	0	0	0	0	0	
5	KINNAUR	0	0	0	0	0	0	0	
6	KULLU	0	0	0	0	0	0	0	
7	L&S	0	0	0	0	0	0	0	
8	MANDI	2	0	0	0	0	0	0	
9	SHIMLA	0	0	0	0	0	0	0	
10	SIRMOUR	0	0	0	0	0	0	0	
11	SOLAN	0	0	0	0	0	0	0	
12	UNA	0	0	0	0	0	0	0	
	<b>HP</b>	<b>2</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

### 5.35 Assistance provided for repair/restoration of damaged / destroyed huts

Table 5.35 depicts that the maximum amount spent on damaged / destroyed huts were of the order of Rs.27 lakh provided during the year 2007-08, 2008-09 and 2012-13 and minimum amount of Rs. 16 lakh was provide during the year 2013-14.

**Table-5.35**  
**Assistance (Rs. in Lakh) provided for repair/restoration of damaged/destroyed huts**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	4	0
3	HAMIRPUR	2	3	2	3	0	3	0	6
4	KANGRA	10	9	14	4	0	3	0	132
5	KINNAUR	0	0	0	0	0	0	5	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	6	0	0	0	0	0	0	0
8	MANDI	0	0	5	9	0	18	2	3
9	SHIMLA	1	2	0	1	0	0	1	2
10	SIRMOUR	3	10	0	0	0	2	4	0
11	SOLAN	4	3	3	1	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>27</b>	<b>27</b>	<b>24</b>	<b>18</b>	<b>0</b>	<b>27</b>	<b>16</b>	<b>143</b>

### 5.36 Road Length Damaged

Table 5.36 shows that the maximum Road Length Damaged was 12,569 K.m during the year 2012-13 out of which 29 percent road damaged was in district Kangra followed by Mandi district.

**Table-5.36  
Road Length (in Kilometer) Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	478	129	39	743	691	575	337	506
2	CHAMBA	0	5	0	0	0	0	50	1116
3	HAMIRPUR	361	410	567	998	916	1324	382	290
4	KANGRA	0	0	0	0	0	3706	1823	262
5	KINNAUR	247	156	79	52	18	444	351	495
6	KULLU	252	214	6	9	540	804	538	412
7	L&S	451	362	469	473	0	171	181	136
8	MANDI	0	0	0	0	93	2722	1230	1552
9	SHIMLA	2	3	4	4	45	400	63	6
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	731	1105	724	871	426	105	649	2
12	UNA	18	22	0	0	0	2318	193	363
<b>HP</b>		<b>2540</b>	<b>2406</b>	<b>1888</b>	<b>3150</b>	<b>2729</b>	<b>12569</b>	<b>5797</b>	<b>5140</b>

### 5.37 Assistance provided for repair/restoration of damaged road and bridges

Major roads and bridges are mostly the only means of transportation in the state and are therefore eligible for assistance under the Emergency Relief Program. Funds are made available for both emergency repairs and restoration of highway facilities to conditions comparable to

those before the disaster. Table 5.37 shows that maximum assistance of Rs. 6788 lakh was provided during the year 2010-11, out of which 52 percent amount was spent in district Kullu. During 2014-15 assistance to the tune of Rs.6575 lakh has been provided for repair/restoration of damaged road and bridges.

**Table-5.37**  
**Assistance (Rs. in Lakh) provided for repair/restoration of damaged road and bridges**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	287	220	215	802	0	12	0	93
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	33	45	1921	831	0	2	994	3946
4	KANGRA	86	116	685	1464	0	125	0	2385
5	KINNAUR	6	0	0	0	0	692	0	0
6	KULLU	0	0	2952	3537	0	0	0	0
7	L&S	17	29	16	18	0	550	175	0
8	MANDI	500	400	0	57	0	4490	0	121
9	SHIMLA	2	8	63	81	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	60	0	0	0	0	0	5	5
12	UNA	1	8	0	0	0	0	149	25
<b>HP</b>		<b>992</b>	<b>825</b>	<b>5852</b>	<b>6788</b>	<b>0</b>	<b>5872</b>	<b>1323</b>	<b>6575</b>

### 5.38 (a) Number Village Disconnected with transportation facility

Table 5.38(a) shows the number of villages disconnected with transportation facility. The maximum number of villages disconnected with transportation facility were 836 villages during the year 2013-14 out of which 67 percentage villages were reported from district Mandi .

**Table-5.38(a)**  
**Number of villages disconnected with transportation facility**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	10	20	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	6	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	7	91	31	39	0	0	116	72
6	KULLU	430	200	4	9	142	0	77	126
7	L&S	0	0	0	167	0	0	68	22
8	MANDI	0	0	0	0	0	0	558	525
9	SHIMLA	0	0	50	22	14	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	17	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>447</b>	<b>317</b>	<b>85</b>	<b>237</b>	<b>156</b>	<b>0</b>	<b>836</b>	<b>745</b>

**5.38 (b) Number of villages disconnected with transportation facility (no. of days)**

Table 5.38(b) shows the number of days the villages that remained disconnected with transportation facility. For a total number of 228 days in 2014-15 some village remained disconnected with transportation facility due to disasters.

**Table-5.38(b)**  
**Village disconnected (No. of Days) with transportation facility**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	4	9	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	1	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	20	0	0	0	0	0	92	15
6	KULLU	18	15	1	1	23	0	7	19
7	L&S	162	166	167	167	0	0	100	160
8	MANDI	0	0	0	0	0	0	26	34
9	SHIMLA	0	0	4	2	3	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>204</b>	<b>191</b>	<b>172</b>	<b>170</b>	<b>26</b>	<b>0</b>	<b>225</b>	<b>228</b>

### 5.39 Length of High Tension Line of Electricity Damaged

Table 5.39 depicts the length of high tension line of electricity damaged in various disasters. In the year 2013-14 maximum distance of electricity high tension line damaged were 1358 KM and the minimum distance of line damaged was 38 Km during the year 2011-12.

**Table-5.39**  
**Length (in Kilometer) of high tension line of electricity damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	3	6	0	3	0	1	0	1
2	CHAMBA	44	3	0	1	0	0	0	10
3	HAMIRPUR	0	5	2	25	1	0	17	2
4	KANGRA	4	3	4	25	0	0	22	3
5	KINNAUR	1	4	1	6	15	20	85	40
6	KULLU	0	0	1	3	3	19	0	42
7	L&S	1	10	30	7	2	61	6	0
8	MANDI	0	0	1	0	3	9	0	4
9	SHIMLA	1	33	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	7	1	0	1	12	0	1200	2
12	UNA	0	17	3	2	3	0	28	6
<b>HP</b>		<b>61</b>	<b>82</b>	<b>42</b>	<b>73</b>	<b>38</b>	<b>110</b>	<b>1358</b>	<b>110</b>

### 5.40(a) Length of low tension line damaged

Table 5.40(a) depicts the length of Low tension line of electricity damaged. The maximum distance of electricity low tension line damaged 1289 KM during the year 2012-13 and the minimum distance of line damaged was 20 Km during the year 2009-10.

**Table-5.40(a)**  
**Length (in Kilometer) of damaged low tension line of electricity**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	4	15	0	7	1	1	0	1
2	CHAMBA	56	3	0	6	0	0	0	20
3	HAMIRPUR	0	0	0	18	4	0	23	4
4	KANGRA	5	5	3	22	0	0	28	12
5	KINNAUR	0	0	1	6	6	60	55	35
6	KULLU	0	0	2	3	5	15	1	76
7	L&S	0	4	13	0	0	6	2	0
8	MANDI	0	0	0	0	6	8	0	85
9	SHIMLA	1	7	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	8	2	0	0	1	1200	0	5
12	UNA	0	15	1	2	1	0	37	48
<b>HP</b>		<b>74</b>	<b>51</b>	<b>20</b>	<b>64</b>	<b>24</b>	<b>1289</b>	<b>145</b>	<b>287</b>

**5.40(b) Value of low tension line damaged**

Table 5.40(b) gives the value and the relief provided by the State Government to district agencies for repair to damage of low tension lines. An amount of Rs. 525 lakh was provided during the year 2014-15, out of which 55 percent amount was provided to district Kullu.

**Table-5.40(b)**  
**Value (Rs. in Lakh) of damaged low tension lines of electricity**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	13	6	0	4	1	1	0	5
2	CHAMBA	92	5	0	10	0	0	0	44
3	HAMIRPUR	1	0	0	1	4	15	11	11
4	KANGRA	10	5	1	26	0	0	74	27
5	KINNAUR	0	0	3	20	9	33	175	119
6	KULLU	0	0	3	3	29	0	0	289
7	L&S	0	2	3	2	1	5	2	0
8	MANDI	0	0	0	0	11	21	0	2
9	SHIMLA	2	79	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	2	1	0	0	1	9	1	14
12	UNA	0	13	1	1	1	0	8	13
<b>HP</b>		<b>120</b>	<b>111</b>	<b>11</b>	<b>67</b>	<b>57</b>	<b>84</b>	<b>270</b>	<b>525</b>

### 5.41(a) Electricity Transformer Damaged

Table 5.41(a) depicts the damage to electricity transformer systems in various disasters. A total number of 207 electricity transformers were damaged during the year 2014-15 and the minimum numbers of 3 electricity transformers were damaged 2009-10.

**Table-5.41(a)**  
**Number of electricity transformer damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	6	7	0	6	4	10	0	12
2	CHAMBA	40	14	0	20	0	0	0	74
3	HAMIRPUR	3	5	1	0	1	3	18	43
4	KANGRA	5	46	1	53	0	0	74	38
5	KINNAUR	1	0	0	0	14	0	0	0
6	KULLU	0	0	1	3	16	0	0	4
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	3
9	SHIMLA	0	3	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	6	3	0	2	2	0	2	1
12	UNA	0	7	0	1	0	0	22	32
	<b>HP</b>	<b>61</b>	<b>85</b>	<b>3</b>	<b>85</b>	<b>37</b>	<b>13</b>	<b>116</b>	<b>207</b>

### 5.41(b) Value of damaged electricity transformer

Table 5.28(b) gives the value and relief provided by the State Government to district agencies for repair and maintenance of damaged transformers. An amount of Rs.203 Lakh was provided during the year 2013-14.

**Table-5.41(b)**  
**Value (Rs. in Lakh) of damaged electricity transformers**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	19	7	0	1	2	16	0	8
2	CHAMBA	70	11	0	10	0	0	0	44
3	HAMIRPUR	17	21	1	0	1	33	22	48
4	KANGRA	4	33	0	47	0	0	69	30
5	KINNAUR	0	0	0	0	21	0	0	0
6	KULLU	0	0	0	6	9	0	0	20
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	4
9	SHIMLA	0	3	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	6	3	0	8	7	1	7	17
12	UNA	0	7	0	1	0	0	19	31
	<b>HP</b>	<b>116</b>	<b>85</b>	<b>1</b>	<b>73</b>	<b>40</b>	<b>50</b>	<b>117</b>	<b>203</b>

#### 5.42(a) Electrical Substation Damaged

As per table 5.42(a) the maximum number of 29 electricity substation were damaged during the year 2010-11.

**Table-5.42(a)**  
**Number of Electrical Substation Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	7	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	5	0	8	28	1	0	1	11
4	KANGRA	0	0	0	0	0	0	0	1
5	KINNAUR	0	0	0	1	0	0	7	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	2	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	2	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>29</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>12</b>

### 5.42(b) Value of damaged electrical sub-station

Table 5.42(b) gives the value of relief provided by the government to different agencies for repair and maintenance of electrical substation damaged. An amount of Rs. 63 lakh was spent on electrical substations that were damaged during the year 2014-15.

**Table-5.42(b)**  
**Value (Rs. in Lakh) of damaged electrical substation**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	1	0	5	0	0	0	0
2	CHAMBA	0	0	0	16	0	0	0	0
3	HAMIRPUR	9	0	1	5	0	0	0	37
4	KANGRA	0	0	0	0	0	0	0	26
5	KINNAUR	0	0	0	2	0	0	35	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	4	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	33	41	1	5	0	7	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>42</b>	<b>42</b>	<b>2</b>	<b>33</b>	<b>4</b>	<b>7</b>	<b>35</b>	<b>63</b>

### 5.43(a) Other material of electricity damaged

Table 5.43(a) depicts the other material of electricity that was damaged due to various disasters. 49 number of other material of electricity were damaged in 2007-08.

**Table-5.43(a)**  
**Other Material of Electricity Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	49	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	17	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>49</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**5.43(b) Value of damaged other material of electricity**

Table 5.43(a) depicts the other material of electricity that was damaged due to various disasters. Loss of other material of electricity in district Bilaspur was to the tune of Rs. 8 Lakh in 2007-08.

**Table-5.43(b)**  
**Value (Rs. in Lakh) of damaged other electricity material**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	8	1	0	0	0	1	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	1	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

#### 5.44 Assistance provided to repair/restoration of damaged power supply

Table 5.44 depicts the amount spent on damaged power supply. The maximum amount of Rs. 438 Lakh was spent on damaged power supply during the year 2011-12 out of which 77 percent amount was spent in district Hamirpur.

**Table-5.44**  
**Assistance (Rs. in Lakh) provided to repair/restoration of damaged power supply**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	13	21	2	11	336	0	0	0
4	KANGRA	0	0	0	0	0	0	0	172
5	KINNAUR	2	7	0	70	76	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	26	0	9	0
8	MANDI	0	0	0	0	0	11	0	10
9	SHIMLA	71	47	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	46	0	0	0	0	0	0
12	UNA	0	0	0	2	0	0	42	27
<b>HP</b>		<b>85</b>	<b>122</b>	<b>2</b>	<b>83</b>	<b>438</b>	<b>11</b>	<b>51</b>	<b>209</b>

#### 5.45 Water tank damaged

It has been observed that in the eight years the maximum number of 795 water tank were damaged in 2007-08, out of which 645 (81%) number of water tanks were damaged in district Hamirpur.

**Table-5.45**  
**Number of water supply tanks damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	35	0	9	13	0	0	0	0
2	CHAMBA	0	0	0	0	0	67	0	0
3	HAMIRPUR	645	645	0	0	6	4	157	25
4	KANGRA	40	50	0	51	0	0	0	0
5	KINNAUR	0	0	0	0	110	92	67	0
6	KULLU	35	0	33	22	42	7	20	0
7	L&S	38	42	21	31	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	352	0	22	116	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	2	1	1	2	1	1	1	1
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>795</b>	<b>749</b>	<b>416</b>	<b>119</b>	<b>181</b>	<b>287</b>	<b>106</b>	<b>26</b>

#### 5.46 Water distribution system damaged

Table 5.33 depicted that number of water distributor systems that were damaged during the period from 2007-2015. Around 28,257 number of water distributary systems were damaged during the year 2008-09.

**Table-5.46**  
**Number of Water Distribution System Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	18	300	500	2160	0	0	0	0
2	CHAMBA	0	0	0	0	0	105	0	72
3	HAMIRPUR	9310	9310	1136	1062	8	0	139	236
4	KANGRA	5000	4800	2000	11500	0	0	0	0
5	KINNAUR	2200	56	39	50	84	0	132	0
6	KULLU	0	7075	0	0	148	58	2	147
7	L&S	150	154	72	94	0	0	49	0
8	MANDI	255	150	1117	1047	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	7	9
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	16	12	9	12	1	1	1	0
12	UNA	4800	6400	0	0	0	0	0	0
	<b>HP</b>	<b>21749</b>	<b>28257</b>	<b>4873</b>	<b>15925</b>	<b>241</b>	<b>164</b>	<b>330</b>	<b>464</b>

## 5.47 Pumping Station Damaged

Table 5.47 shows the number of pumping station that were damaged from 2007-2015. 371 number of pumping stations were damaged during the year 2010-11 out of which 350(95%) were damaged in district Kangra alone and minimum number of pumping station that were damaged during the year 2014-15 were located in district Hamirpur

**Table-5.47**  
**Number of Pumping Station Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	16	9	2	14	0	0	0	0
2	CHAMBA	0	0	0	0	0	70	0	0
3	HAMIRPUR	2	2	0	0	3	0	30	22
4	KANGRA	100	150	95	350	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	16	6	7	0	0	1	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	7	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	1	1	1	0	39	57	0	0
12	UNA	0	7	0	0	0	0	0	0
<b>HP</b>		<b>119</b>	<b>185</b>	<b>104</b>	<b>371</b>	<b>42</b>	<b>127</b>	<b>38</b>	<b>22</b>

## 5.48 Water treatment plants damaged

Table 5.48 depicts the number of water treatment plants that were damaged during the period from 2007 to 2015. The maximum number of 30 Water Treatment Plant was damaged during the year 2010-11 out of which 17 were located in district Kangra.

**Table-5.48**  
**Number of Water Treatment Plant Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	4	0	1	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	3	3	0	1	5	0	7	6
4	KANGRA	15	65	0	17	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	3	13	11	0	0	5	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	1	2	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>18</b>	<b>76</b>	<b>15</b>	<b>30</b>	<b>5</b>	<b>0</b>	<b>12</b>	<b>6</b>

#### 5.49 Other infrastructure of water supply system damaged

Table 5.49 reveals that 322 number of infrastructure of water supply systems were damaged in the year 2013-14.

**Table-5.49**  
**Number of damaged other infrastructure of water supply system**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	27	1	3	13	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	1	129	26
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	10	4	54	25
6	KULLU	0	7	0	0	1	0	139	0
7	L&S	0	0	0	0	0	14	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	211	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>27</b>	<b>8</b>	<b>3</b>	<b>224</b>	<b>11</b>	<b>19</b>	<b>322</b>	<b>56</b>

## 5.50 Sewerage tank damaged

Table 5.50 shows the number of sewerage tanks that were damaged during the period from 2007 to 2015. The maximum number of sewerage tanks damaged were 131 in the year 2010-11, out of which 61 percent tanks damaged were in district Mandi and 38 percent tanks that were damaged were in district Kangra.

**Table-5.50**  
**Number of sewerage tanks damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	1
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	3
4	KANGRA	0	0	0	50	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	38	0	70	80	0	0	0	0
9	SHIMLA	0	1	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	1	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>38</b>	<b>1</b>	<b>70</b>	<b>131</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>

## 5.51 Sewerage tanks distribution system damaged

Table 5.51 shows the number of sewerage tanks distribution damaged system that were during the year from 2007 to 2015. The maximum number of sewerage tanks distribution damaged were 212 in the year 2008-09, out of which 57 percent tanks distribution systems were damaged in district Kullu , 28 percent tanks distribution system were damaged in district Kangra and 15 percent systems were damaged in district Hamirpur.

**Table-5.51**  
**Number of sewerage tanks distribution system damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	1	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	30	0	0	2	0	25	12
4	KANGRA	0	59	8	16	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	2
6	KULLU	0	122	0	0	0	53	1	11
7	L&S	0	0	0	0	0	2	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	1	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	5	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>212</b>	<b>8</b>	<b>17</b>	<b>2</b>	<b>60</b>	<b>26</b>	<b>25</b>

### 5.52 Sewerage treatment plants damaged

Table 5.52 depicts the number of sewerage treatment plants that were damaged during this period due to various disasters. 18 number of sewerage treatment plants were damaged in 2007-08 while 4 number of sewerage treatment plants were damaged in 2014-15.

**Table-5.52**  
**Number sewerage treatment plant damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	4	0	1	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	3	3	0	1	5	0	4	3
4	KANGRA	15	65	0	17	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	2	0
6	KULLU	0	3	13	11	0	2	0	1
7	L&S	0	0	0	0	0	0	6	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	1	0	0
11	SOLAN	0	1	2	2	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>18</b>	<b>76</b>	<b>15</b>	<b>30</b>	<b>5</b>	<b>3</b>	<b>12</b>	<b>4</b>

### 5.53 Irrigation system damage due to breach of canal

As per the table below the data of last eight years shows that 725 canals were damaged due to breach in 2009-10.

**Table-5.53**  
**Number of irrigation system damage due to breach of canal**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	17	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	37
3	HAMIRPUR	0	0	0	0	0	0	14	1
4	KANGRA	39	43	44	22	0	0	0	0
5	KINNAUR	14	60	35	67	68	27	91	115
6	KULLU	0	0	7	14	57	23	32	0
7	L&S	55	59	77	60	70	0	46	0
8	MANDI	168	50	561	491	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	2	1	1	1	5	1	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>278</b>	<b>213</b>	<b>725</b>	<b>672</b>	<b>200</b>	<b>51</b>	<b>183</b>	<b>153</b>

### 5.54 Irrigation system damaged due to breach of dam

Table 5.54 (a) depicts the number Dams Damaged due to breach.. In the year 2013-14, 48 numbers of dams were damaged.

Table 5.54(b) presents the amount spent on repair of dams that were damaged. An amount of Rs. 202 Lakh was spent on breach of dams damaged during the year 2008-09.

**Table-5.54(a)**  
**Number of irrigation system- breach of dam damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	3	0	2	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	24	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	2	0	0	0	2	0	0
7	L&S	0	0	0	0	0	0	24	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	6	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>48</b>	<b>0</b>

**Table-5.54(b)**  
**Value (Rs. in Lakh ) of breach of dam damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	3	0	2	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	19	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	199	0	0	0	2	0	0
7	L&S	0	0	0	0	0	0	19	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	31	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>202</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>33</b>	<b>38</b>	<b>0</b>

## 5.55 Irrigation tanks damaged

Table 5.55 (a) depicts that maximum number of 125 irrigation tanks were damaged in district Kullu during the year 2010-11 and 15 number of irrigation tanks were damaged during the year 2007-08 in district Hamirpur

Table 5.55(b) shows the amount spent on irrigation tanks that were damaged during this period. Maximum amount of Rs. 144 Lakh was spent on repair to irrigation tanks damaged during the year 2013-14.

**Table-5.55(a)**  
**Number of Irrigation Tank Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	15	0	0	0	18	0	0	1
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	105	125	0	0	28	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	12	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>15</b>	<b>0</b>	<b>117</b>	<b>125</b>	<b>18</b>	<b>0</b>	<b>28</b>	<b>1</b>

**Table-5.55(b)**  
**Value (Rs. in Lakh) of damaged irrigation tanks**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	5	5	0	0	7	0	0	33
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	7	9	0	0	144	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	16	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>5</b>	<b>5</b>	<b>23</b>	<b>9</b>	<b>7</b>	<b>0</b>	<b>144</b>	<b>33</b>

### 5.56 Reservoir damaged

Table 5.56(a) depicts that the maximum number of 327 reservoir were damaged during the year 2009-10 and the minimum 4 reservoir were damaged during the year 2008-09 in district Bilaspur. In the year 2013-14, 29 number of reservoir were damaged out of which 97 percent damaged were located in district Hamirpur.

The table 5.56(b) gives the value of relief for repair of reservoir that was damaged during this period. The maximum assistance was provided during the year 2014-15 to the tune of Rs. 147 lakh out of which 53 percent amount was spent in district Kullu and 47 percent amount was spent in district Hamirpur.

**Table-5.56(a)**  
**Number of Reservoir Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	4	4	1	1	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	28	1
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	1	20
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	2	0	245	8	0	0	0	0
9	SHIMLA	0	0	81	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>6</b>	<b>4</b>	<b>327</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>21</b>

**Table-5.56(b)**  
**Value (Rs. in Lakh) of Damaged Reservoirs**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	6	5	5	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	25	70
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	30	77
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>147</b>

### 5.57 Provision of emergency supply of drinking water in rural areas and urban areas.

It has been observed that in the last eight years maximum amount of assistance of Rs 1694 lakh was provided during the year 2013-14 to District Mandi, followed by an assistance amounting to Rs. 170 lakh in the year 2010-11.

**Table-5.57**  
**Immediate Assistance (Rs. in Lakh) provided to emergency supply of drinking water in rural areas and urban areas**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	20	8	0	0	0	0
3	HAMIRPUR	0	5	32	1	3	2	0	0
4	KANGRA	0	0	0	0	5	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	70	0	0	0	0	0	0	6
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	5	24	0	16	0	0	1694	1
9	SHIMLA	0	0	6	13	0	0	0	0
10	SIRMOUR	2	1	33	132	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>77</b>	<b>30</b>	<b>91</b>	<b>170</b>	<b>8</b>	<b>2</b>	<b>1694</b>	<b>7</b>

### 5.58 Restoration/repair of damaged water supply

The table- 5.58 reveals the extent of assistance provided for Drinking water supply. The assistance for Drinking water supply damaged was 2331 lakh during the year 2014-15.

**Table-5.58**  
**Assistance (Rs. in Lakh) provided to repair/restoration of Damaged Drinking Water Supply**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	217	216	53	45	0	6	41	94
4	KANGRA	0	0	0	0	0	0	0	2237
5	KINNAUR	0	0	0	0	0	38	338	0
6	KULLU	0	39	268	251	0	0	0	0
7	L&S	0	0	0	0	8	0	0	0
8	MANDI	0	0	0	0	264	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	134	0	0	0
12	UNA	15	90	0	0	0	0	0	0
<b>HP</b>		<b>232</b>	<b>345</b>	<b>321</b>	<b>296</b>	<b>405</b>	<b>43</b>	<b>379</b>	<b>2331</b>

### 5.59 Assistance provided to repair/restore damaged irrigation system

Table 5.59 gives the relief value on damaged irrigation system. An amount of Rs. 440 Lakh was spent during the year 2011-12 and no amount was spent in the year 2013-14. During 2014-15 an amount of Rs. 361 lakh has been spent on repair and restoration/

**Table-5.59**  
**Assistance (Rs. in Lakh) provided to repair/restore damaged irrigation system**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	111	116	0	55	393	114	0	12
4	KANGRA	0	0	17	0	0	0	0	0
5	KINNAUR	0	0	0	0	35	4	0	0
6	KULLU	0	91	0	51	0	0	0	0
7	L&S	21	51	26	83	12	0	0	0
8	MANDI	0	0	99	0	0	0	0	349
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	2	17	0	0	0	0	0	0
<b>HP</b>		<b>134</b>	<b>275</b>	<b>142</b>	<b>189</b>	<b>440</b>	<b>118</b>	<b>0</b>	<b>361</b>

## 5.60 Number of overhead reservoir damaged

A reservoir is a storage space for fluids; these fluids may be water, hydrocarbon or gas. a reservoir can be controlled by stream that drains an existing body of water.

Table 5.60 depicts the amount spent on repair and maintenance of damaged reservoir. An amount of Rs. 29 Lakh was spent in 2013-14.

**Table-5.60**  
**Number of overhead reservoir damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	28	0
4	KANGRA	0	0	27	0	0	0	0	0
5	KINNAUR	0	0	0	0	8	0	0	0
6	KULLU	0	0	0	0	0	0	1	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>29</b>	<b>0</b>

## 5.61 Irrigation wells damaged

The table 5.61 depicts the number of Irrigation wells damaged. A maximum number of 27 Irrigation wells were damaged, during the year 2009-10, and minimum number of 1 Irrigation wells was damaged during the year 2014-15.

**Table-5.61**  
**Number of irrigation wells damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	1
4	KANGRA	0	0	27	0	0	0	0	0
5	KINNAUR	0	0	0	0	8	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>

### 5.62 Drinking water tank damaged

Table-5.62 below depicts the number of drinking water tanks that were damaged during the period of 2007 to 2015. The maximum number of drinking water tanks that were damaged was 240 in Una district in 2012-13 and in the year 2013-14, 32 such tanks were damaged.

**Table-5.62**  
**Number of Drinking Water Tanks Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	1	7	7	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	5	0	25	1
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	5	0	0	0
6	KULLU	0	0	20	13	0	0	5	0
7	L&S	1	0	4	1	64	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	2	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	240	0	0
<b>HP</b>		<b>1</b>	<b>0</b>	<b>25</b>	<b>21</b>	<b>81</b>	<b>240</b>	<b>32</b>	<b>1</b>

### 5.63 Drinking water well damaged

Table 5.63 depicts the numbers of drinking water well that were damaged during this period. The maximum damage to the tune of 15 drinking water wells happened during the year 2010-11.

**Table-5.63**  
**Number drinking water well damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	10	0	7	14	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	2	0	0	0	0	1	0	0
4	KANGRA	0	0	8	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	5	3	0	8	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>7</b>	<b>13</b>	<b>8</b>	<b>15</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>0</b>

### 5.64 Trees uprooted

Table 5.64 depicts the number of trees uprooted due to various disasters. The maximum number of trees uprooted were 3,43,738 trees during the year 2012-13 District Mandi was the worst affected district in which 1,67,800 trees were uprooted.

**Table-5.64  
Number of Trees Uprooted**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	174319	76700	61925	0	25240	50216	0	0
2	CHAMBA	5800	1140	810	1800	0	0	0	19647
3	HAMIRPUR	0	21927	8730	36526	0	0	0	0
4	KANGRA	0	0	0	0	0	44311	9322	186
5	KINNAUR	3104	2452	0	0	0	63449	1484	1679
6	KULLU	1250	0	0	0	130	4000	0	100478
7	L&S	0	0	0	0	0	290	50	12354
8	MANDI	0	0	0	0	10820	167800	0	1893
9	SHIMLA	0	0	2600	500	16916	13672	1458	290
10	SIRMOUR	0	0	5474	3120	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	30
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>184473</b>	<b>102219</b>	<b>79539</b>	<b>41946</b>	<b>53106</b>	<b>343738</b>	<b>12314</b>	<b>136557</b>

### **5.65 Forest plantation area damaged**

Table 5.65 (a) depicts the damage to forest plantation. The least damage occurred in the year 2009-10 and highest in 2014-15.

Table 5.65(b) depicts the amount of money spent on forest plantation that was damaged. The maximum amount of Rs. 127 Lakh was spent on forest plantation damaged during the year 2014-15.

**Table-5.65 (a)**  
**Forest plantation area (in hectares) damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	206	0	0	0	1	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	499
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	13	10	114	5.5	92	0	0
5	KINNAUR	0	69	0	3	33	0	0	0
6	KULLU	0	0	1	5	7	0	0	0
7	L&S	35	36	0	0	23	145	0	0
8	MANDI	24	6	0	45	79	6	0	14
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	5	0	3	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	1
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>265</b>	<b>129</b>	<b>11</b>	<b>170</b>	<b>147</b>	<b>243</b>	<b>0</b>	<b>514</b>

**Table-5.65 (b)**  
**Value (Rs. in Lakh) of damaged forest plantation**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	3	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	94
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	2	7	1	0	15	0	0
5	KINNAUR	0	4	0	5	3	0	14	0
6	KULLU	0	0	0	5	1	0	0	0
7	L&S	2	19	0	0	6	12	9	0
8	MANDI	1	10	0	5	10	3	16	20
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	1	0	0	0	0
11	SOLAN	0	0	0	0	0	0	4	13
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>6</b>	<b>35</b>	<b>7</b>	<b>17</b>	<b>20</b>	<b>30</b>	<b>43</b>	<b>127</b>

## 5.66 Forest nurseries damaged

Table 5.66(a) depicts the forest nurseries that were damaged during this period. 54 numbers of nurseries were damaged during 2008-09.

Table 5.66(b) depicts the amount spent on forest nurseries that were damaged. The maximum amount of Rs. 103 Lakh was spent on damaged forest nurseries during the year 2014-15.

**Table-5.66(a)**  
**Number of Forest Nurseries Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	11	2	0	0	2	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	18
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	1	3	7	1	0	3	0	3
5	KINNAUR	0	10	0	0	0	4	6	0
6	KULLU	0	0	1	6	8	0	0	5
7	L&S	0	0	0	0	3	11	4	0
8	MANDI	27	15	0	25	27	30	26	3
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	1	24	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	2	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>40</b>	<b>54</b>	<b>8</b>	<b>32</b>	<b>40</b>	<b>48</b>	<b>38</b>	<b>29</b>

**Table-5.66(b)**  
**Value (Rs. in Lakh) of damaged forest nurseries**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	6	1	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	16
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	1	1	2	0	0	5	0	70
5	KINNAUR	0	2	0	0	0	5	11	0
6	KULLU	0	0	4	1	12	0	0	7
7	L&S	0	0	0	0	3	11	9	0
8	MANDI	10	3	0	5	17	23	14	11
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	5	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	1	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>16</b>	<b>12</b>	<b>6</b>	<b>6</b>	<b>32</b>	<b>44</b>	<b>35</b>	<b>103</b>

### **5.67 Soil Works Damaged**

Table 5.67(a) depicts that 2702 soil works were damaged during the year 2013-14 out of which 84 percent soil works were damaged in district Kinnaur and minimum number of 301 soil works were damaged during the year 2011-12.

Table 5.67(b) gives the value of relief provided to different agencies for repair on soil works that were damaged. An amount of Rs. 257 Lakh was spent on damaged soil works during the year 2013-14.

**Table-5.67 (a)**  
**Number of Soil Works Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	90	55	0	0	14	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	952
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	17	0	0	0	0	27	0	0
5	KINNAUR	0	324	72	79	50	0	2284	0
6	KULLU	0	0	230	589	43	0	0	0
7	L&S	148	165	0	0	129	299	50	0
8	MANDI	99	19	43	465	0	276	343	50
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	3	65	0	0	0
11	SOLAN	0	0	0	0	0	0	25	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>354</b>	<b>563</b>	<b>345</b>	<b>1136</b>	<b>301</b>	<b>602</b>	<b>2702</b>	<b>1002</b>

**Table-5.67 (b)**  
**Assistance (Rs. in Lakh) provided to damaged soil works**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	5	3	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	238
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	3	0	0	0	0	16	0	0
5	KINNAUR	0	23	4	151	17	0	214	0
6	KULLU	0	0	13	8	3	0	0	0
7	L&S	3	4	0	0	10	18	9	0
8	MANDI	10	5	5	29	0	33	33	1
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	1	4	0	0	0
11	SOLAN	0	0	0	0	0	0	1	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>20</b>	<b>35</b>	<b>22</b>	<b>189</b>	<b>34</b>	<b>67</b>	<b>257</b>	<b>239</b>

## 5.68 Forest building damaged

Table 5.68(a) reveals the data on forest buildings that were damaged during this period. In the year 2013-14, 25 number of forest buildings were damaged in Mandi district out of total 41 buildings damaged in the State.

Table 5.68 (b) gives the value of relief provided for the restoration of forest building that were damaged. The maximum amount of Rs. 166 Lakh was spent on forest building damaged during the year 2014-15.

**Table-5.68(a)**  
**Number of Forest Building Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	19	12	0	0	5	1	1	0
2	CHAMBA	0	0	0	0	0	0	0	16
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	5	8	12	4	0	7	0	6
5	KINNAUR	0	3	0	3	1	19	8	11
6	KULLU	0	0	0	5	7	0	0	4
7	L&S	0	3	0	0	0	8	6	3
8	MANDI	49	23	0	45	37	40	25	1
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	18	23	1	3	0	0	0	0
11	SOLAN	0	0	0	0	0	2	1	0
12	UNA	0	0	0	0	0	1	0	0
	<b>HP</b>	<b>91</b>	<b>72</b>	<b>13</b>	<b>60</b>	<b>50</b>	<b>78</b>	<b>41</b>	<b>41</b>

**Table-5.68(b)**  
**Value (Rs.in Lakh) of damaged forest buildings**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	15	18	0	0	0	0	1	0
2	CHAMBA	0	0	0	0	0	0	0	31
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	4	6	22	9	0	23	0	110
5	KINNAUR	0	2	0	2	0	22	0	17
6	KULLU	0	0	0	5	24	0	0	3
7	L&S	0	14	0	0	0	5	8	4
8	MANDI	34	14	0	46	46	47	45	2
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	4	1	2	1	0	0	0	0
11	SOLAN	0	0	0	0	0	1	5	0
12	UNA	0	0	0	0	0	9	0	0
	<b>HP</b>	<b>58</b>	<b>55</b>	<b>24</b>	<b>62</b>	<b>69</b>	<b>106</b>	<b>58</b>	<b>166</b>

### **5.69 Forest retaining wall damaged**

Table 5.69(a) depicts that maximum number of 751 forest retaining walls were damaged during the year 2010-11 and a minimum number of 16 forest retaining wall were damaged during the year 2014-15.

Table 5.69(b) gives the value of relief provided for damage to forest retaining wall. An amount of Rs. 114 Lakh was spent on repair to damaged forest retaining walls during the year 2011-12.

**Table-5.69(a)**  
**Number of forest retaining wall damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	12	0	1	0	5	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	6
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	27	0	5	1	0	6	0	0
5	KINNAUR	0	6	0	0	0	8	0	0
6	KULLU	0	0	30	684	11	5	5	8
7	L&S	0	30	0	18	1	1	1	2
8	MANDI	20	11	0	27	328	5	3	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	10	0	1	21	2	0	0	0
11	SOLAN	0	0	0	0	0	14	14	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>69</b>	<b>47</b>	<b>37</b>	<b>751</b>	<b>347</b>	<b>19</b>	<b>23</b>	<b>16</b>

**Table-5.69(b)**  
**Value (Rs. in Lakh) of damaged forest retaining walls**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	5	0	1	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	8
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	6	0	11	1	0	3	0	0
5	KINNAUR	0	4	0	0	0	8	0	0
6	KULLU	0	0	1	4	14	0	1	7
7	L&S	0	3	0	20	4	0	0	2
8	MANDI	12	4	0	7	95	2	2	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	3	0	4	18	2	0	0	0
11	SOLAN	0	0	0	0	0	0	23	0
12	UNA	0	0	0	0	0	0	1	0
	<b>HP</b>	<b>25</b>	<b>11</b>	<b>16</b>	<b>50</b>	<b>114</b>	<b>13</b>	<b>26</b>	<b>17</b>

## 5.70 Forest road and path damaged

Table 5.70(a) shows the data on forest road and path damaged. During the year 2009-10 minimum number of 3 forest road and path were damaged.

Table 5.70(b) gives the value of relief provided for the restoration of forest road and path damaged. An amount of Rs. 96 Lakh was spent during the year 2013-14, out of which 61 percent was spent in district Kinnaur.

**Table-5.70(a)**  
**Number of forest road and path damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	6	24	0	0	8	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	30
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	1	3	0	0	4	0	0
5	KINNAUR	0	8	0	3	15	26	24	0
6	KULLU	0	0	0	6	6	0	13	0
7	L&S	0	0	0	0	1	4	1	0
8	MANDI	46	34	0	52	19	66	23	5
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	11	7	0	0	27	0	0	0
11	SOLAN	0	0	0	0	0	0	5	0
12	UNA	0	0	0	0	0	14	0	0
	<b>HP</b>	<b>63</b>	<b>74</b>	<b>3</b>	<b>61</b>	<b>76</b>	<b>114</b>	<b>66</b>	<b>35</b>

**Table-5.70( b)**  
**Value (Rs. in Lakh) of damaged forest road and path**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	3	15	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	52
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	1	4	0	0	11	0	0
5	KINNAUR	0	2	0	3	5	13	59	0
6	KULLU	0	0	0	11	6	0	9	0
7	L&S	0	2	0	0	5	3	2	0
8	MANDI	455	17	0	68	20	44	22	5
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	2	1	0	0	1	0	0	0
11	SOLAN	0	0	0	0	0	0	4	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>460</b>	<b>38</b>	<b>4</b>	<b>82</b>	<b>37</b>	<b>72</b>	<b>96</b>	<b>57</b>

### 5.71 Primary school damaged

The damage to school buildings in various disasters is depicted in the following tables. Table 5.71 gives us the number of primary school that were damaged. The maximum number of primary school damaged were 508 in the year 2013-14 and minimum number of 19 primary schools were damaged during the year 200-109.

**Table-5.71**  
**Number of primary school damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	12	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	185	0	0	0	0	55	0	9
6	KULLU	8	0	14	14	3	2	0	1
7	L&S	0	0	0	0	0	0	0	1
8	MANDI	20	21	3	9	0	0	0	0
9	SHIMLA	0	0	2	0	1	3	0	0
10	SIRMOUR	0	0	0	0	1	0	0	0
11	SOLAN	0	0	0	0	82	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>213</b>	<b>21</b>	<b>19</b>	<b>23</b>	<b>87</b>	<b>60</b>	<b>12</b>	<b>26</b>

### 5.72 Assistance provided to repair /restoration of Primary Education institution

Table 5.72 reveals the value of relief provided for the restoration of Primary Education institutions during disasters. Assistance of Rs 48 lakh was provided during the year 2013-14 in Kinnaur district and the minimum amount of Rs. 6 Lakh assistance was provided during the year 2011-12 in Hamirpur district.

**Table-5.72**  
**Assistance (Rs.in Lakh) provided for repair and restoration of Primary Schools**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	6	0	0	3
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	48	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	55	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>55</b>	<b>48</b>	<b>3</b>

### 5.73 Senior secondary school damaged

The maximum number of senior secondary school damaged were 47 during the year 2007-08 as shown in the table 5.73 all of them were located in district Kinnaur. In the year 2013-14 no damaged was reported from any district.

**Table-5.73**  
**Number of senior secondary school damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	1	0	1	0	0	0	0	4
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	1	4	0	0	0	0	7
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	42	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	4	0	0	0
7	L&S	0	0	0	0	0	0	0	1
8	MANDI	4	7	8	13	0	0	0	0
9	SHIMLA	0	0	1	0	3	0	0	0
10	SIRMOUR	0	0	3	8	4	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>47</b>	<b>8</b>	<b>17</b>	<b>21</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>12</b>

### 5.74 Dispensaries damaged

Dispensary is an office in a hospital or other institution from which medical supplies and medicines are dispensed. Table 5.74 depicts that the maximum number 11 dispensaries were damaged during the year 2012-13 and the minimum number of 3 medical dispensary were damaged during the year 2011-12.

**Table-5.74**  
**Number of dispensaries damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	8	0	4
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	3	3	0	3
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>11</b>	<b>0</b>	<b>7</b>

## 5.75 P.H.Cs Damaged

Primary Health Centre (PHCs), sometimes referred to as Public Health Centres, are state-owned rural health care facilities in India. They are essentially single-physician clinics usually with facilities for minor surgeries, too. Table 5.75 depicts the number of PHCs damaged.

**Table-5.75**  
**Number of P.H.C Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	1	1	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	6	6	0
6	KULLU	0	0	0	1	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>0</b>

## 5.76 Assistance provided to repair /restoration of Primary Health Centre

Table 5.76 depicts the amount of assistance provided for the restoration of Primary Health Centers. Assistance of Rs. 8 Lakh was provided in Sirmour district in 2011-12.

**Table-5.76**  
**Assistance (Rs.in Lakh) provided for repair and restoration of Primary Health Centers**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	8	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 5.77 Other Government buildings damaged

The table 5.77 depicts the number of other govt. building that were damaged due to various disasters. The number of other govt. building damaged were 24 during the year 2007-08 and the minimum number of other govt. building that were damaged was 1 in district Sirmour in the year 2009-10.

**Table-5.77**  
**Number other government building damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	23	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	1
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	1	0	0	0	0	0	7	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	1	0	0	0	0	0	0
10	SIRMOUR	0	11	1	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	2
<b>HP</b>		<b>24</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>3</b>

## 5.78 Public park damaged

Table 5.78 depicts that only one public park was damaged in district Mandi and Kullu during the year 2010-11 and 2014-15.

**Table- 5.78**  
**Number of public park damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	1
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	1	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

## 5.79 Assistance provided to repair /restoration of community assets owned by panchayats

Table 5.79 gives the amount spent on community assets owned by Panchayats. An amount of Rs. 210 lakh was spent on community assets during the year 2013-14 in district Hamirpur.

**Table-5.79**  
**Assistance (Rs.in Lakh) provided for repair and restoration community assets**  
**owned by panchayat**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	5	0	0	0	0	0	210	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	3	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>210</b>	<b>0</b>

### 5.80 Assistance for Employment Generation

Table 5.80 indicates the amount provided for assistance of employment generation.

**Table-5.80**  
**Assistance (Rs. in Lakh) provided for Employment Generation**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	2	8	115	100	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	149	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>2</b>	<b>8</b>	<b>115</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 5.81 Cost of clearance of debris

Table 5.81 reveals the amount provided for the clearance of debris. In the year 2012-13 and 2013-14 Kinnaur district got this assistance.

**Table-5.81**  
**Cost (Rs. in Lakh) of clearance of debris**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	244	228	0
6	KULLU	0	0	3	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>228</b>	<b>0</b>

### 5.82 Assistance provided for draining of flood water in affected areas

Table 5.82 depicts the amount of assistance given for draining of flood water in affected areas. An amount of Rs. 2 lakh was provided during the year 2008-09, 2009-10 in district Shimla.

**Table-5.82**  
**Assistance (Rs. in Lakh) provided for draining of flood water in affected areas**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	0	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	2	2	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 5.83 Cost of search and rescue measures

Table 5.83 reveals the amount spent on search and rescue measure. An amount of Rs. 244 lakh was provided in the year 2012-13 in Kinnaur district.

**Table-5.83**  
**Cost (Rs. in Lakh) of search and rescue measures**

		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
<b>Sr.No.</b>	<b>District</b>								
1	BILASPUR	0	0	0	0	0	0	0	0.00
2	CHAMBA	0	0	0	0	0	0	0	0.35
3	HAMIRPUR	0	0	0	0	0	0	0	0.00
4	KANGRA	0	0	0	0	0	0	0	0.00
5	KINNAUR	0	0	0	0	0	244	0	0.00
6	KULLU	0	0	0	0	0	0	0	0.00
7	L&S	0	4	0	0	0	0	0	0.20
8	MANDI	0	0	0	0	0	0	0	0.00
9	SHIMLA	0	0	0	0	0	0	0	0.00
10	SIRMOUR	0	0	0	0	0	0	0	0.00
11	SOLAN	0	0	0	0	0	0	0	0.00
12	UNA	0	0	0	0	0	0	0	0.00
	<b>HP</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>0</b>	<b>0.55</b>

### **5.84 Landline telephone disrupted**

The data presented in table 5.84 reveals the number of days the landline telephones remained disrupted due to various disasters. The maximum 150 days disruption was noticed in case of landline telephone during the year 2014-15 and minimum number 14 days landline telephones were disrupted during the year 2008-09.

**Table-5. 84**  
**No. of days landline telephone disrupted**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	12	14	18	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	21	0	30
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	32	0	0
6	KULLU	15	0	0	0	0	0	0	0
7	L&S	0	0	0	0	35	90	0	120
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	2	0	0	0	0	0	0
10	SIRMOUR	0	0	48	59	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>15</b>	<b>14</b>	<b>62</b>	<b>77</b>	<b>35</b>	<b>143</b>	<b>0</b>	<b>150</b>

### **5.85 Mobile phone disrupted**

Not only the landline telephone was disrupted but the mobile phones also got disrupted. Table 5.85 depicts the number of days when the mobile phone services remained disrupted.

**Table 5.85**  
**No. of days mobile phone disrupted**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	10	12	14	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	5	0	0	0	0	0	0	0
7	L&S	0	0	0	0	11	0	45	120
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	0	0	0	120	0	0
10	SIRMOUR	0	0	42	58	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>5</b>	<b>10</b>	<b>54</b>	<b>72</b>	<b>11</b>	<b>120</b>	<b>45</b>	<b>120</b>

### 5.86 Village disconnect with communication system

Table 5.86 shows the number of days the Villages that were disconnected with Communication System. During the year 2010-11, the villages were disconnected for 73 days.

**Table- 5.86**  
**Number of days villages disconnected with communication facility (Days)**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	13	11	14	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	6	0	5
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	32	0	0
6	KULLU	5	0	0	0	0	0	0	0
7	L&S	0	0	0	0	3	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	15	0	0	0	0	0	0
10	SIRMOUR	0	0	42	58	0	0	0	0
11	SOLAN	0	0	0	0	70	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>5</b>	<b>28</b>	<b>53</b>	<b>72</b>	<b>73</b>	<b>38</b>	<b>0</b>	<b>5</b>

## 5.87 Water born diseases

The data in table 5.87 reveals that in the year 2014-15 the maximum number of person affected due to water borne diseases were 1935 in the year 2007-08, and in the year 2013-14 no person was affected reported due to water born disease.

**Table- 5.87**  
**No. of persons affected with water borne diseases**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	334	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	10	36	0	8	0	0
7	L&S	0	0	0	0	0	0	0	1935
8	MANDI	0	0	0	0	0	0	695	0
9	SHIMLA	1288	69	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	206	94	64	82	61	0	0	0
12	UNA	0	0	0	0	0	0	0	0
<b>HP</b>		<b>1494</b>	<b>163</b>	<b>74</b>	<b>118</b>	<b>61</b>	<b>342</b>	<b>695</b>	<b>1935</b>

## 5.88 Vector borne disease

The data in table 5.88 reveals the number of persons affected by vector borne diseases. The maximum number of person affected due to vector borne disease were 105 in the year 2011-12 and the minimum number of person affected was 1 in the year 2014-15.

**Table- 5.88**  
**No. of persons affected vector borne**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	7	0	0	0	0	0
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	21	3	0	0	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	105	0	0	1
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>21</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>105</b>	<b>0</b>	<b>0</b>	<b>1</b>

### 5.89 Other diseases

The data in table 5.89 reveals number of persons affected by Other Disease. The maximum number of person affected due to Other Disease were 1237 in the year 2009-10 and the minimum number of person were 4 in the year 2014-15 and no person was affected due to other diseases during the years 2007-08, 2008-09, 2011-12, 2012-13 & 2013-14.

**Table-5.89**  
**No. of persons affected by others disease**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	156	0	0	0	0	0
4	KANGRA	0	0	0	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	0	1	0	0	0	22	4
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	0	0	0	0	0	0	0	0
9	SHIMLA	0	0	1080	557	0	0	0	0
10	SIRMOUR	0	0	0	0	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>0</b>	<b>0</b>	<b>1237</b>	<b>557</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>4</b>

## 5.90 Shops Damaged

Table-5.90 shows that the maximum number of shops damaged during the year 2008-09 (210), out of which 62 percent were damaged in district Hamirpur.

**Table- 5.90**  
**Number of Shops Damaged**

Sr.No.	District	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	BILASPUR	0	6	9	0	6	7	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	4	130	4	11	3	6	7	6
4	KANGRA	24	46	48	7	36	16	31	28
5	KINNAUR	0	0	0	0	0	2	0	0
6	KULLU	0	0	0	0	0	2	0	1
7	L&S	0	0	0	0	0	0	0	0
8	MANDI	38	13	2	2	12	55	13	0
9	SHIMLA	7	5	0	3	0	0	0	0
10	SIRMOUR	2	10	12	2	0	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	1	0	0
<b>HP</b>		<b>75</b>	<b>210</b>	<b>75</b>	<b>25</b>	<b>57</b>	<b>89</b>	<b>51</b>	<b>35</b>

## 5.91 Other commercial building damaged

Table-5.91 shows that the maximum number of 134 other commercial building were damaged during the year 2012-13, out of which 99 percent were damaged in district Hamirpur. No damaged was reported in 2013-14.

**Table-5.91**  
**Number of other commercial building damaged**

<b>Sr.No.</b>	<b>District</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
1	BILASPUR	5	0	0	0	0	0	0	0
2	CHAMBA	0	0	0	0	0	0	0	0
3	HAMIRPUR	0	0	0	100	110	132	0	0
4	KANGRA	0	0	4	0	0	0	0	0
5	KINNAUR	0	0	0	0	0	0	0	0
6	KULLU	0	27	0	0	0	2	0	1
7	L&S	0	1	0	0	0	0	0	0
8	MANDI	0	0	1	1	1	0	0	0
9	SHIMLA	0	1	0	0	0	0	0	0
10	SIRMOUR	0	11	0	1	-	0	0	0
11	SOLAN	0	0	0	0	0	0	0	0
12	UNA	0	0	0	0	0	0	0	0
	<b>HP</b>	<b>5</b>	<b>40</b>	<b>5</b>	<b>102</b>	<b>111</b>	<b>134</b>	<b>0</b>	<b>1</b>

**FORMAT FOR COLLECTION OF STATISTICS ON DISASTER**

**DISTRICT LEVEL**

**Name of Disaster (with Code):**

**Name of District (with Code):**

**Time of Disaster (dd/mm/yyyy):**

**Category of Disaster (L1/L2/L3):**

<b>Sr. No</b>	<b>Item</b>	<b>Year</b>
<b>1</b>	<b>LIVES</b>	
	(a) Numer of Death (no)	
	Male	
	Female	
	Children	
	(b) Number of injuries (no)	
	(i) Major	
	Male	
	Female	
	Children	
	(ii) Minor	
	Male	
	Female	
	Children	
	(c) affected population (No)	
	( d) Percentage of affected population (%)	
<b>2</b>	<b>LIVE STOCKS</b>	
	(a) No. of animal (perished)(no)	
	(i) Cow	
	(ii) Buffalo	
	(iii) sheep	
	(iv) Goats	
	(v) Camels	
	(vi)Horse/mule/donkey	
	(vii)Poultry/duck	
	(viii)Pigs	
	(ix)Others	
<b>3</b>	<b>AGRICULTURE</b>	
	<b>Season : Ravi/Kharif</b>	
	(a) Food grains	
	(i) Sown area affected(Hectare)	
	(ii) Production loss (in tonnes)	
	(b) Cash crop	
	(i)Sown area affected (Hectr)	

Sr. No	Item	Year
	(ii) Production loss (in tones)	
	( c) Horticulture Crops	
	(i)Sown area affected (Hectr)	
	(ii) Production loss (in tones)	
	(d)Trees uprooted (no)	
	(e) Villages affected (no)	
	(f) Families affected (no)	
<b>4</b>	<b>HOUSING</b>	
	Number of affected houses (no)	
	(A) Rural	
	(i)Kacha	
	Fully	
	Partially	
	(ii) Pucca	
	Fully	
	Partially	
	(B) Urban	
	(i) Kacha	
	Fully	
	Partially	
	(II)Pucca	
	Fully	
	Partially	
<b>5</b>	<b>INFRASTRUCTURE</b>	
	<b>(A)ROADS</b>	
	(a) Road length damaged(km)	
	(i)National highway (km)	
	(ii) State highway(km)	
	(iii)District Roads(km)	
	(iv)Other(km)	
	(b) Village Disconnected <b>to transportation facility</b>	
	(i) Numbers	
	(ii) Days	
	<b>(B) BRIDGES</b>	
	(a) Motor able (no)	
	Fully damaged(no)	
	Partially (no)	
	<b>( C) WATER SUPPLY SYSTEM</b>	
	(a) Pipe line	
	<b>(i) Trunk (no)</b>	
	Fully damaged(no)	

Sr. No	Item	Year
	Partially Damaged	
	<b>(ii) Distibution(no)(RMT)</b>	
	Fully damaged(no)	
	Partially Damaged	
	<b>(b) Pumping Station(no)</b>	
	Fully damaged(no)	
	Partially Damaged	
	<b>( c ) Overhead Reservoirs</b>	
	Fully damaged(no)	
	Partially Damaged	
	<b>(d) Water treatment plant</b>	
	Fully damaged(no)	
	Partially Damaged	
	<b>(e) Drinking water tanks (in numbers)</b>	
	Fully damaged	
	Partially damaged	
	<b>(f)Drinking water wells (No)</b>	
	Fully damaged	
	Partially damaged	
	<b>(g) Others (please mention)</b>	
	Fully damaged	
	Partially damaged	
	<b>(D) Sewerage system</b>	
	(a) Trunk (no)	
	Fully damaged	
	Partially damaged	
	(b) Distribution (no)	
	Fully damaged	
	Partially damaged	
	(c) Sewerage treatment plant	
	Fully damaged	
	Partially damaged	
	<b>(E) Irrigation</b>	
	(a)breach of canal damaged (No)	
	(i) No.	
	(ii)Value (Lakhks)	
	(b)breach of dam damaged (No)	
	(i) No.	
	(ii)Value(Lakhks)	
	(c ) Irrigation tank damage	
	(i) No.	

Sr. No	Item	Year
	(ii)Value (Lakhk)	
	(d) Irrigation well damaged	
	(i) No.	
	(ii)Value(Lakhks)	
	(e) Reservoir damages	
	(i) No.	
	(ii)Value(Lakhks)	
	<b>(F) ELECTRICTY SUPPLY</b>	
	(a) High tension lines damaged	
	(i) Length (km)	
	(ii) Value( Lakh)	
	(b) Low tension lines damaged	
	(i) Length km	
	(ii) Value ( Lakh)	
	(c )transformer damaged	
	(i)Number	
	(ii)value (Lakh)	
	(d) Sub-Station damaged	
	(i)Number	
	(ii)value (Lakh)	
	(e) Other material/metering equip	
	(i)Number	
	(ii)value (Lakh)	
	<b>(G)BUILDING</b>	
	(a) Primary School (no)	
	Partially	
	Fully	
	(b) Secondary School (no)	
	Partially	
	fully	
	(c ) Public Parks (no)	
	Partially	
	fully	
	(d) Health centers (no)	
	(i)Dispensaries	
	(ii)PHC'S	
	(iii)Hospitals(DH/SDH)	
	(e) Other Government Building (no)	
	(i)Partially	
	(ii)Fully	

Sr. No	Item	Year
	<b>(H) OTHER UTILITY</b>	
	(a) land line telephone disrupted (no. of days)	
	(b) mobiles phones disrupted (no. of days)	
	(c) Villages disconnected to communication facilities (no)	
	(i) Number	
	(ii) Days	
	<b>[I] SHOPS AND OTHER COMMERCIAL BUILDING DAMAGED</b>	
	(a) Shops	
	Partially	
	Fully	
	(b) Commercial Buildings	
	Partially	
	fully	
6	<b>HEALTH</b>	
	(a) Occurrence of epidemics (no. of persons affected)	
	(i) Water borne	
	(ii) Vector borne	
	(iii) others	

**FORMAT FOR CPLECTION OF STATISTICS ON RELIEF,  
REHABILITATION AND RECONSTRUCTION:**

**(A) RELIEF AND REHABILITATION**

**DISTRICT LEVEL**

**Name of Disaster (with Code):**

**Name of District (with Code):**

**Time of Disaster (dd/mm/yyyy):**

**Category of Disaster (L1/L2/L3):**

<b>Sr. no</b>	<b>Item</b>	<b>Amount</b>
1	<b>GRATUITOUS RELIEF</b>	
	a) Ex-Gratia payment to the families of deceased persons	
	b) Ex -Gratia payment for loss of a limb or eyes	
	c) Grievous injury requiring hospitalization	
	d) Relief for the old, infirm and destitute children	
	e) Clothing and utensils/household goods for families whose houses have been washed away/fully damaged/ severely inundated for more than a week due to natural calamity.	
	f) Gratuitous relief for families in dire need of immediate sustenance after a calamity	
2	<b>Supplementary Nutrition</b>	
3	<b>Assistance to small and marginal farmers for</b>	
	a) Desilting of agricultural land	
	b) Removal of debris on agricultural land in hilly areas	
	c) Desilting /Restoration/Repair of fish farms	
	d) Loss of substantial portion or land caused by landslide avalanche, change of course of rivers	
	e) Agriculture Input subsidy where crop loss was 50% and above	
	i) For agriculture crops, horticulture crops and annual plantation crops	
	ii) Perennial crops	
4	<b>Input subsidy to farmers other than small and marginal farmers</b>	
5	<b>Assistance to small and marginal sericulture farmers</b>	
6	<b>Employment generation</b>	
7	<b>Animal Husbandry: Assistance to small and marginal farmers/ farmers/agricultural labourers</b>	
	i) RepLakhement of draught animals, milch animals used for haulage	

	ii) Provision of fodder/feed concentrate in the cattle camps	
	iii) Water supply in cattle camps	
	iv) Additional cost of medicines and vaccine (calamity related requirements)	
	v) Supply of fodder outside cattle camps	
	vi) Movement of useful cattle to other area	
8	<b>Assistance to Fisherman</b>	
	a) For repair /repLakhement of boats, nets-damaged or lost	
	➤ Boat	
	➤ Dugout-Canoe	
	➤ Catamaran	
	➤ Nets	
	b) Input subsidy for fish seed farm	
9	<b>Assistance to artisans in handicrafts/handloom sector by way of subsidy for repair/ repLakhement of damaged equipment</b>	
	a) For Traditional Crafts (Handicrafts)	
	i) For repLakhement of damaged tools/equipment	
	ii) For loss of raw material/goods in process/finished goods	
	b) for Handloom Weavers	
	i) Repair /repLakhement of loom equipment and accessories	
	ii) (Purchase of yarn and other materials like dyes & chemicals and finished stocks	
10	<b>Assistance for repair/restoration of damaged houses</b>	
	<b>(a) fully damaged houses</b>	
	(i) Pucca houses	
	(ii) Kutcha house	
	<b>(b) Severely damaged houses</b>	
	(i) Pucca houses	
	(ii) Kutcha houses	
	<b>(c) Partially Damaged House</b> both pucca/Kutcha(other than hut)( where the damaged is minimum of 15%)	
	<b>(d) Huts: damaged /destroyed</b>	
11	Provision of emergency supply of drinking water in rural areas and urban areas	
12	Provision of medicines, disinfectants, insecticides for Prevention of outbreak of epidemics	
13	Medical care for cattle and poultry against epidemics as a sequel to a notified natural calamity	
14	Evacuation of people affected /likely to be affected	

15	Hiring of boats for carrying immediate relief & saving life	
16	Provision for temporary accommodation, food, clothing, medical care etc. of people affected/evacuated(operation of relief camps)	
17	Air dropping of essential supplies	
18	Repair /restoration of immediate nature of damaged infrastructure in eligible sectors:	
	• Roads & bridges	
	• Drinking water Supply Works	
	• Irrigation	
	• power	
	• Primary Education	
	• Primary Health Centres	
	• Community assets owned by Panchayats	
	• others	
19	Replacement of damaged medical equipment and lost medicines of Govt. Hospitals/Health centres	
20	Operational cost (of POL only)for Ambulance Service, Mobile Medical Team and temporary dispensaries.	
21	Cost of clearance of debris	
22	Draining off flood water in affected areas	
23	Cost of search and rescue measures	
24	Disposal of dead bodies/carcasses	
25	Procurement of essential search, rescue and evacuation equipment including communication equipments	