



## **Socio- Economic Impacts of Natural Disasters in Himachal Pradesh**

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### **ABSTRACT**

Disaster means a catastrophe, mishap, calamity or grave occurrence in 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 nature or magnitude as to be beyond the coping capacity of the community of the affected area. The impact of natural disasters in Himachal Pradesh has been witnessing damages almost during every rainy, winter and summer season also due to excessive rain, avalanches, cloudbursts, landslides, flash floods, hailstorms and droughts where as earthquake disaster took place occasionally. Extensive damages are caused to the infrastructure like roads, bridges, drinking water supply schemes, irrigation projects/ schemes, hydroelectric projects, destruction of forest wealth, besides taking its toll of human and cattle lives and destruction of private properties. Over the last decade of 20<sup>th</sup> century and recent past Himachal Pradesh is facing nature wrath in diverse forms one calamity has followed in the wake of the other. During the period from 1990 to 2005 a search of loss due to natural disasters through govt. record reveals that during this period the total loss to the public property in the state is estimated to be Rs.163530.82 lacs, housing sector and cowsheds etc. to the extent of Rs. 92340.46 lacs and 274.778 lacs population affected. Due to natural disasters 828 human lives and 18033 heads of cattle have been lost. An extensive loss to the agriculture and horticulture sectors has also been recorded in the state.

### **Introduction**

Disasters are such uncontrollable extreme events that disrupt social structure and impair essential functions which are necessary to support human life system and also cause several socio economic and health problems etc. It is the natural and geological setting of Himachal Pradesh which makes it very

susceptible and prone to natural disasters. These disasters not only create immense loss to life, property and economy of the state but also disrupt the daily routine of life of the hilly people. But it is also true that the natural disaster is not unknown to Himachal Pradesh. People of the state have lived with them and always manage to overcome their aftermath. Every time therefore, the state administration gear-up to meet

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the eventuality. Anyway the life and property in the state is damage to a great extent by the various form of disasters as these disasters are beyond human control. Whenever these disasters occur people have to undergo lots of miseries. In the recent year the disasters are occurring frequently and unpredictably in the state of Himachal Pradesh. The damage causes by these disasters not only is horrible, but are also high due to unpreparedness of people and administration. In the state floods, cloudbursts, flash floods, landslides, earthquakes avalanches are major and dangerous natural disasters. The occurrence of one such disaster may washout the development accrued through several decades in the areas where they occur and cast a wide shadow over human life and property. During the recent past all over the state extensive and widespread damage occurred due to several massive natural disasters to human life as well as property.

## Study Area



Himachal Pradesh lies in northern part of India and western part of Himalayas. Its geographical extent lies between the latitudes 30°22' 40" to 33°12' 40" North and longitudes 75°45' 55" east to 79°04' 20" East. This state is spread over 10.54% area of the Himalayas. This state ranks at 17<sup>th</sup> in terms of area (1.7%). 21<sup>st</sup> medium to sparsely populated state (0.57% population). The Land area of Himachal Pradesh is 55,673 sq. kms. The entire part of Himachal Pradesh is hilly and mountainous and it is characterised with undulating topography. Its altitude ranges from 350 meters to 7000 meters above sea level. Its maximum length from chamba in the northwest to kinnaur in the southeast is 335kms whereas its maximum breadth is 275 kms from

the southwest of Kangra to Southeast of Kinnaur. The state is highly dissected mountain ranges interspersed with deep gorges and valleys. This state is bordered by Indian Union territory Jammu Kashmir in the north, Punjab in the west and south-west, Haryana and Uttar Pradesh in the south and Uttrakhand in the south-east. The total land frontier of Himachal Pradesh is 1170 kms of which 200 kms distance is of international boundary with China on its eastern border. In order to make the functioning smooth the state is divided into twelve districts 03 division ,81 sub Division, 113 Tehsil, 73 Sub tehsil, 88 development Blocks . The state has very effective structure of PRI,s comprising 3615 panchyat 12 Zila parishads 81 panchayat samitis.( Statistical Abstract of H.P. 2022-23)

## Objectives of the study

1. To investigate the economic ,social and environment impacts of natural disasters in Himachal Pradesh
2. To examine the impact of natural disasters on human population and cattle population including loss of life and shelters destruction.
3. To assess the frequency and severity of natural disasters.

## Methodology

The present research is based on primary and secondary data. The primary data has been collected randomly through personal observation and interview method. The secondary data has been obtained from various published records of Revenue Department Govt. of Himachal Pradesh, statistical abstract of department of economics and statistics govt. of Himachal Pradesh. Regional, ecological and behavioural approaches have been used in examine, analysis and presentation of this work .Random field study has been conducted in the study region to know the people opinion about the impact of natural disasters.

## Impacts of natural disasters

Over the Last decade of 20<sup>th</sup> century and recent past for understand the impact of natural disasters in Himachal Pradesh. The various damages caused due to natural disasters in the state have been broadly examined in this study. The extent of damage to public property, housing sectors and cowsheds etc, population affected, human lives lost and heads of cattle perished, loss to agriculture/ horticulture and fodder crops and cropped area has been tabulated and analysed in detail in this study.

Table – 1, Damage caused due to natural disaster in Himachal Pradesh, 1990-2005

Sr. No.	Year	Damage to public property (Value – Rs in lacs)	Damage to Housing Sector and cowsheds etc. (Value-Rs in lacs)	Popu-lation Affected (In lacs)	Human lives lost and heads of cattle perished	Loss to agriculture/ horticulture and fod-der crops (Value-Rs in lacs)	
					Hum-an cattle		
1	1990	16152.60	6928.08	29.264	45	2250	24596.60
2	1991	6175.020	2066.00	21.369	34	2010	2618.46
3	1992	-	-	-	-	-	-
4	1993	-	-	29.458	-	-	20517.07
5	1994	10981.15	4767.06	28.352	130	1022	24856.35
6	1995	19688.53	7522.00	-	-	-	-
7	1996	16152.60	6928.08	24.688	45	2250	24596.60
8	1997	34394.29	8146	28.55	223	4809	17324.90
9	1998	11016.27	84.02	24.688	71	221	10576.50
10	1999	16921.67	2730.00	23.05	30	129	23487.00
11	2000	20018	1581.70	9.617	135	1673	8552.88
12	2001	2026.97	54.31	46.64	18	168	36971.55
13	2002	-	-	-	-	-	-
14	2003	8796.44	16582.26	2.37	89	452	1779.02
15	2004	-	-	-	-	-	-
16	2005	1207.28	34950.95	6.732	8	3049	32859.00
	Total	163530.82	92340.46	274.778	828	18033	228735.83

Source: Memorandum on damage due to Natural calamities, Himachal Pradesh Govt. Revenue Department.

## Damage to public property caused due to natural disasters

Table - 1 shows that immense damage has been caused to public property due to natural calamities from 1990 to 2005. The totle loss to the public property in the state during this period is estimated to be about Rs. 163530.82 lacs. Analysis of the record reveals that there was not even a single district in the state which remained safe from the wrath of natural disasters. Yearly evaluation of losses to public property indicates that the year of 1997 remain the most worst in which public property has got loss of Rs.34394.29 lacs which was quite high than the loss of other years under reference. While during this period the least loss of Rs 1207.28 has been estimated in the year 2005.

## Damage to housing sector and cowsheds etc. caused due to natural disaster

Natural disasters like excessive rain, snowfall, landslides, cloudbursts, flash floods caused extensive damage to housing sector and cowsheds etc during the period from 1990 to 2005. During this period the total loss to this sector in term of money to the entire state has been estimated to be Rs 92340.46 lacs. Data reveals that greatest damage to the housing and cowsheds sector by natural disaster has

been created to district mandi which was Rs. 18424.24 lacs. The year –wise investigation of losses throughout the state reveals that the anger of the natural disaster in the year 2005 was much worst with the loss of Rs. 34950.95 lacs. Whereas the loss of 54.31 have been estimated lowest in the sector of housing and cowsheds etc. during this period under reference which occurred in the year 2001.

## Population affected due to natural disasters

Field observation reveals that the continuous increasing population pressure in urban, valleys, along the roads and even steep slope as well as improper land use practices often disturbing the delicate equilibrium of the state and knowingly or unknowingly invites various natural disasters. It is also needless to say that the state of Himachal Pradesh often faces natural disasters or disasters like floods, landslides, cloud bursts, flash floods every year. The young geological and topographical structure of the state increases the intensity of these disasters in the state. The huge portion of population of the state directly or indirectly affected adversely due to these natural disasters. Table - 1 shows that during the mentioned period about 274.778 lacs population of the state get affected by natural disasters. Year –wise examination of affected population in the state due to natural disasters shows that highest share of affected population about 46.64 lacs has been recorded in the year 2001. While the least share of

population 2.37 lacs get affected in the year 2003 during this 15 years duration of time.

## Human lives lost and head of cattle perished due to natural calamities

The natural calamities not only damage to public and private properties of the people of the state but also causing extensive loss of human and cattle lives. Table - 1 reveals that as a result of natural calamities in the state huge number of 828 human lives 18033 heads of cattle were lost during the period from 1990 to 2005. The causality due to natural disasters in the district Shimla was quite high among all other districts 229 human lives and 3391 head of cattle were lost during this period. Heavy loss to human lives has also been recorded in Kullu district where 167 persons died. After Shimla the position of district Chamba in the state was second in terms of loss to cattle lives during this period 3291 head of cattle were lost in the district. History is witness that economically weaker sections of the society have often badly affected by natural disasters. Due to economic backwardness of these people they have always forced to work in the riskful areas where the possibilities of the occurrence of natural disasters are continuous. The best example comes from the labourers who reside in river beds and others who have also been residing in the highly dangerous areas of the region. These people of the society get huge loss of life and property due to natural disasters.

## Loss to Agriculture / Horticulture and fodder crops

Agriculture with the horticulture is the main stay of the people of the state of Himachal Pradesh. Agriculture provides direct employment to about more than 70% of the total workers of the state. The extensive damage is done when the disaster any form hit and witnesses the state. As a result of various natural disasters heavy loss has been caused to agriculture, horticulture and fodder crops in the state during this mentioned period the total loss in the state to aforesaid crops has been assessed at Rs.228735.83 lacs during this period. District- wise damage to agriculture, horticulture and fodder crops in the state reveals that the severe beating of natural calamities has been assessed to Kangra district with loss of 35161.99 lacs. While the tune of losses of Rs. 193573.84 lacs have been assessed in the all other eleven remaining districts of the states. During the period under reference the year of 2001 has been considered to be much worst for agriculture, horticulture and fodder crops. In which the damage to all these crops has been estimated at Rs. 36971.55 lacs.

## Damage to Houses cowsheds

The natural disasters in the state during 1990-2005 have witnessed extensive damage to houses and cowsheds. About 54798 houses and cowsheds have been damaged in the state

during this period (Memorandum on natural calamities H.P. Govt. Revenue Deptt.) under reference. Study reveals that the highest destruction to the aforesaid sector has been recorded in the district Kangra where 16670 houses and cowsheds have been damaged during this period whereas with the number of 11654, district Mandi was at next in terms of huge destruction. Natural calamities have also disastrous effect on cropped area. Cultivation is carried out mostly on terraced slope at different altitude in the state which makes damage very serious. The heavy damage to cropped area in the state has been taken place during this period about 25.588 lacs hectares area has been damaged due to natural disasters. District Kangra has been worstly affected during period under referenced. In the district about 6.023 lac hectares cropped area has been damaged due to natural calamities.

## Loss to crops, housing sector, private/public property

The damage on an unprecedented scale has been caused to crops, housing sector and private as well as public property due to natural disaster in the state during 1990 to 2005. This sector gets the total loss of Rs. 437876.28 lac and has badly influenced (Memorandum on natural calamities H.P. Govt. Revenue Deptt.) Study reveals that the private and public property worth crores of rupees have been damaged or washed away by natural disasters in the state during this period under reference.

## Conclusion

Natural Disaster in Himachal Pradesh has been a common yearly occurrence. In The monsoon season mainly from June to September the occurrence of Natural disasters in the state is very crucial in respect to loss. Maximum incidences of landslides, floods, cloudbursts have been taken place during this period and caused heavy loss of life and property and hundreds of family has been rendered homeless. During the period from 1990 to 2005 a search of loss due to natural disasters through government record reveals that during this period the total loss to public property in the state is estimated to be Rs. 163530.82 lacs. The entire loss in the housing sector and cowsheds etc has been to the extent of Rs. 92340.46 lacs. 274.778 lacs population have been affected due to natural disasters. As a result of natural calamities 828 human lives and 18033 heads of cattle have so far been lost. A loss of Rs.228735.83 has been reported to agriculture, horticulture and fodder crops in the state. 54798 houses and cowsheds have been damaged during this period. 25.588 lacs hectares cropped area of the state has been damaged due to natural disasters. The loss of Rs. 437876.28 lacs has been estimated to crops, housing sector and other public and private property in the state.

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