



DISASTER MANAGEMENT PLAN

**DEPARTMENT OF TRIBAL
DEVELOPMENT**

GOVERNMENT OF HIMACHAL PRADESH

CONTENTS

1. Introduction	6
1.1 Overview of the Department.....	6
1.2 Organization Setup:	7
1.3 Purpose of the Plan.....	8
1.4 Scope of the Plan	9
1.5 Authorities, Codes, Policies:	9
1.6 Institutional arrangements for Disaster Management.....	10
1.7 Plan Management (Monitoring, Review and Revision).....	10
2. Hazard, Risk and Vulnerability Analysis.....	11
2.1 Risk Assessment of Himachal Pradesh.....	11
2.2 Hazard wise vulnerability and Risk Assessment	11
2.2.1 Climate Change.....	11
2.2.2 Earthquake.....	13
2.2.3 Landslide.....	13
2.2.4 Forest Fire.....	14
2.2.5 Flood.....	14
2.2.6 Avalanche	14
2.3 Assessment of Sectoral and Departmental Risks	15
2.4 Gaps in Existing Capacity	15
2.5 Assessment of Probable Damage and Loss.....	15
3. Risk Prevention and Mitigation	16
3.1 Risk Prevention	16
3.2 Risk Mitigation	16
4. Mainstreaming Disaster Risk Reduction in Development	18
5. Disaster Preparedness	21

6. Disaster Response and Relief	22
6.1 Response Plan.....	22
6.2 Roles and responsibilities of the nodal officers:.....	22
6.3 Formation of the Incident Response Teams	22
6.4 Role and Responsibility of the State Incident Response Team	23
7. Disaster Recovery and Reconstruction	24
7.1 Disaster Recovery.....	24
7.2 Damage and Loss Assessment.....	24
7.3 Disaster Reconstruction	24
8. Financial Arrangements	25
NOTES	26

1. INTRODUCTION

1.1 OVERVIEW OF THE DEPARTMENT

The Tribal Development Department came into existence in June 1976 with the objective/purpose to give special focus on the social and economic upliftment of most deprived class of society i.e. Scheduled Tribes. In the field level, i.e. in Scheduled Area of Himachal Pradesh five Integrated Tribal Development Projects (ITDP) had been opened viz. ITDP Kinnaur at Reckong Peo, ITDP Lahaul at Keylong, ITDP Spiti at Kaza, ITDP Pangi at Killar and ITDP Bharmour with its Headquarter at Shimla. In the year 1981, the work relating to the welfare of scheduled caste i.e. Special Component Plan had been given to this Department and thereby changing its name from Tribal Development Department to Scheduled Caste and Scheduled Tribes Development Department. In May 2002, the whole work relating the welfare of Scheduled Castes i.e. Special Component Plan has been transferred to Social Justice & Empowerment Department. Now, this department is known with the name of Scheduled Tribes Development Department.

Mandate of Tribal Development Department:

- All matters relating to planning e.g. assessment of resources, formulation of plans, laying down of targets and physical aspects and co-ordination in relation to matters affecting the tribal areas and the members of the Scheduled Tribes of the State.
- Periodical assessment and evaluation of Plan activities in relation to matters affecting the tribal areas and the members of the Scheduled Tribes of the State.
- All policy matters including the introduction of new schemes affecting the tribal areas as also matters relating to the members of the Scheduled Tribes consultation thereof by all administrative departments with the Tribal Development Department.
- Initiation of any proposal concerning any other department in relation to matters affecting the tribal areas or the members of the Scheduled Tribes of the State after due consultations and agreements with the concerned departments.
- Tendering advice to all departments in relation to matters affecting the Tribal areas and the members of the Scheduled tribes of the State.
- Overall coordination and evaluation of all activities of any department in relation to the matter affecting the tribal areas and the members of the Scheduled Tribes of the State.
- Tribal Advisory Council.
- Integrated Tribal Development Projects.
- Establishment, budget and accounts matters of the Tribal Development Department.

Administrative Structure:

The tribal areas in the State have well-defined administrative units. The ITDP Kinnaur comprises the whole district; the ITDP Lahaul comprises tehsil Lahaul and tehsil Udaipur and the rest of the three ITDPs are by the name of Spiti, Pangi and Bharmour (Now sub-tehsil Holi and tehsil Bharmour) comprise tehsils by the same name. In terms of CD Blocks, ITDP Kinnaur consists of three Blocks namely Kalpa, Pooh and Nichar and the rest of the four ITDPs are constituted of one C.D. Block each by the name of Lahaul, Spiti, Pangi and Bharmour respectively.

The pattern of administration in the tribal areas as also in the rest of the Pradesh had been identical except that in April 1986, the ITDP Pangi was put under the charge of an officer of the rank of Resident

Commissioner and all offices there were merged with his office and he was made Head of Department for every department in the State so that he was the epitome of ultimate authority in the ITDP area and inter-alia, single-line administration was established between the ITDP on the one side and the Government on the other. He exercises powers of Commissioner for revenue matters and that of District Magistrate in Pangti sub-division. ACRs initiated/reviewed by him were to be sent by him directly to the concerned Administrative Secretary in respect of gazetted officers and he was the final accepting authority in relation to non-gazetted establishments. He was made disciplinary authority in respect of all non-gazetted establishment and also vested with powers of imposing a minor penalty with respect to gazetted officers. He was also delegated full powers to accord administrative approval and financial sanction for all works. This experiment was a great success and there was demand from the public representatives for the introduction of such type of administration in other ITDPs also and, accordingly, the single-line administration has now come to prevail in all the ITDPs alike with effect from the 15th April 1988. This arrangement has cut down delays and improved the delivery system.

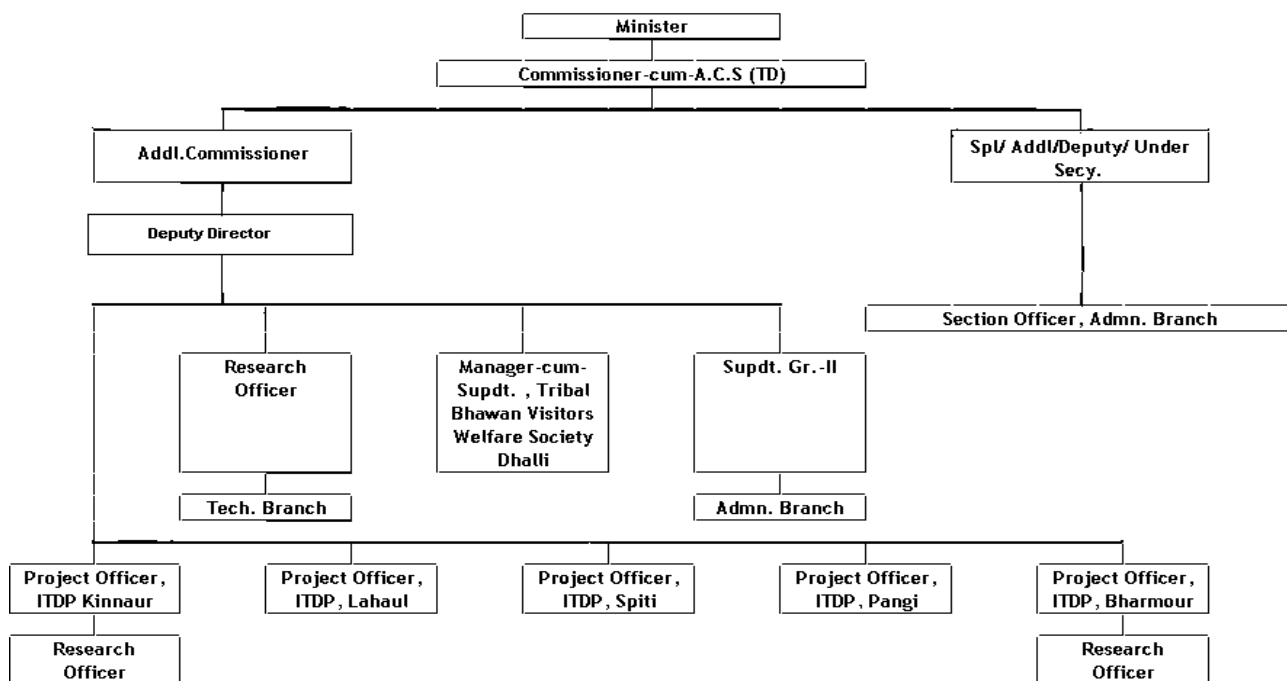
Under the new pattern of administration in the tribal areas effectively from 15th April 1988, the specified authorities in the ITDPs are as under: -

ITDP Specified Authority

1. Pangti, Resident Commissioner Pangti at Killar
2. Kinnaur, Deputy Commissioner, Kinnaur at Reckong Peo
3. Lahaul, Deputy Commissioner, Lahaul-Spiti at Keylong
4. Spiti, Additional Deputy Commissioner, Spiti at Kaza
5. Bharmour, Additional District Magistrate, Bharmour

Officer at serial No. 2 to 5 enjoy all powers previously enjoyed by the Resident Commissioner, Pangti. In addition to this divisional officer and also the circle-level officers were made to enjoy one-step up powers.

1.2 ORGANIZATION SETUP:



Infrastructure managed by Education department

List of Boys Hostel	
1	Kukumseri
2	H. P. University
3	Degree College
4	Chamba
5	Government Degree College, Solan
6	Reckong Peo
7	Sarkhang School Tabo
8	Government High School, Rangrik
9	Government Middle School, Kee Gompa
List of Girls Hostel	
1	Kukumseri
2	HP University, Shimla
3	Reckong Peo
4	Degree College, Dharamshala
5	Government Degree College Solan
6	Rajkiya Kanya Maha Vidyalaya, Shimla
7	ITI, Shamshi
8	CSK Agriculture University, Palampur
9	Sanskrit College, Sundarnagar
10	ITI, Chamba
11	Government Degree College, Kullu
12	SCH High School, Munselling
13	University of Horticulture and Forestry, Nauni, District Solan
14	H.P. University Shimla
15	NIT, Hamirpur

1.3 PURPOSE OF THE PLAN

Section 23 of the Disaster Management Act, 2005 mandates that there shall be a plan for disaster management for every State to be called the State Disaster Management Plan (DMP). Copies of the State Plan shall be made available to the departments of the Government of the State and such departments shall draw up their own plans in accordance with the State Plan. Besides, as per Section 40 of Act every department of the State Government, in conformity with the guidelines laid down by the State Authority, shall draw up their own disaster management plans. The SEC as per Section 22 (2) (c) of the Act would lay

down guidelines for preparation of disaster management plans by departments of the State and District Authorities. Further, as per Section 38 (2) (g) of the Act, the State Government shall ensure the preparation of disaster management plans by different departments of the State in accordance with the guidelines laid down by the National Authority and the State Authority.

The basic purpose of departmental DM plan is to manage the risks of disasters before, during, and after disasters. The Plan shall be reviewed and updated annually by the department. The main objectives of this plan are to facilitate the UD Department in the following:

- To assess the sectoral and departmental risks of disasters in UD Department;
- To undertake measures for mitigating the existing risks of disasters to UD sector;
- To prevent creation of new risks of disasters in UD in the state;
- To undertake preparedness measure;
- To assign roles and responsibilities for various tasks to be performed by the department in accordance with the State DM Policy and State DM Plan;
- To undertake measures proposed for strengthening capacity-building and preparedness of all stakeholders of UD sector;
- To mount prompt and coordinated response at various levels.

1.4 SCOPE OF THE PLAN

In accordance with the Disaster Management Act 2005 and Himachal Pradesh State Disaster Management Plan 2012, the plan must include the following:

- The vulnerability of different parts of the State to different forms of disasters in context of the department;
- The measures to be adopted for prevention and mitigation of disasters;
- The manner in which the mitigation measures shall be integrated with the development plan and projects;
- The capacity-building and preparedness measures to be taken;
- The roles and responsibilities of different departments of the Government of the State in responding to any threatening disaster situation or disaster;

1.5 AUTHORITIES, CODES, POLICIES:

Law:

- The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

Rules:

- Scheduled Tribes & Other Traditional Forest Dwellers (Recognition of Forest Rights) Rules, 2012
- Himachal Pradesh Tribes Advisory Council Rules, 1976
- HP Nucleus Budget for Tribal Areas Rules, 1979

Tribal Development Department will be guided by the following for Disaster Management:

- Disaster Management Act 2005
- Himachal Pradesh Disaster Management Plan 2012
- National Guidelines issued by the NDMA
- Guidelines and provision for State Disaster Response Fund (SDRF)
- Guidelines for administration of the National Disaster Response Fund (NDRF)

1.6 INSTITUTIONAL ARRANGEMENTS FOR DISASTER MANAGEMENT

Superintendent Grade-II will be the nodal officer at the state level and will be supported by concerned DDO (HQ) (Finance) will serve as a support agency for regulating relief/ restoration operations. The department will also carry out disaster risk reduction activities at the departmental level and field level. Superintendent Grade-II will be the nodal officer at the departmental level to perform emergency support functions.

Tribal Development Department has been given very specific roles and responsibilities as Primary and Support Agency in the State Disaster Management Plan as under:

#	Hazard	Nodal Department	Supporting Agency / Department / For Early Warning System
1	Snow Avalanches	Snow and Avalanche Study Establishment (SASE), Manali (DRDO) / Deptt. of Home/ ES&T	Tribal Administration - DC / RC, ADC / ADM, IMD, Health, Home and Revenue, Mountaineering Institute / S&T / GSI
2	Avalanches	SASE, ES&T	Tribal Administration - DC / RC, ADC / ADM, IMD, IPH, Health and Home and Revenue

1.7 PLAN MANAGEMENT (MONITORING, REVIEW AND REVISION)

DM Plan is a “Living document” and would require regular improvement and updating. As per the National Disaster Management Act 2005, the plan must be updated at least once a year. The Disaster Management plan prepared by the Department shall be circulated to all its field offices. The Plan shall be shared on the Departmental portal. The plan will be updated as and when required and modified plan shall also be communicated to the key stakeholders.

For the annual review of the disaster management plan participation of different stakeholders will be ensured by inviting them to workshops. Based on their feedback, necessary changes will be incorporated in the plan.

Dissemination of Plan: Tribal Development Department would involve HPSDMA for capacity building at different levels for training and dissemination. The Disaster Management Plan will be disseminated to all field offices within the State. The content of the plan would be explained through well designed and focused awareness programmes. The awareness programmes would be prepared in the local language to ensure widespread dissemination up to the community level.

Disaster Management Plan will be uploaded on the department website of Tribal Development Department. A printed document will be supplied to all the stakeholders. Meetings and seminars will be held to disseminate the Disaster Management Plan.

2. HAZARD, RISK AND VULNERABILITY ANALYSIS

2.1 RISK ASSESSMENT OF HIMACHAL PRADESH

The state of Himachal Pradesh is exposed to a range of natural, environmental and man-made hazards. Main hazards consist of earthquakes, landslides, flash floods, snowstorms, avalanches, GLOF, droughts, dam failures, fires, forest fire, lightning etc. Enormous economic losses caused due to natural disasters such as earthquakes, floods, landslide, avalanche, etc., erode the development gain. Most of the fatalities and economic losses occur due to the poor construction practices, lack of earthquake-resistant features of the buildings and low awareness about disasters among people. In order to estimate and quantify risk, it is necessary to carry out the vulnerability assessment of the existing building stocks and lifeline infrastructure.

The entire state is at risk of being affected by a severe seismic event. About 32% of the total geographical area of Himachal Pradesh falls in the very high seismic zone V, while the rest (68%) lies in the high seismic zone IV. Ten out of 12 districts fall in the very high seismic zone. Three districts have over 90% of their geographical area prone to very high seismicity. Two districts have more than 50% of the geographical area with the severest seismic intensity: Chamba (53.2%), and Kullu (53.1%). During 1800–2008, about 70% of earthquakes occurred in three districts, namely, Chamba, Lahul and Spiti, and Kinnaur. Three districts, Solan, Hamirpur and Bilaspur, have less than 1% concentration, whereas in Una district, no earthquake has ever been recorded during this period but that doesn't mean that in future there will be no such events. In recent past, the state has been facing mild earthquakes within short span which itself embarks the risk and gives the scope to assess it for mitigation.

2.2 HAZARD WISE VULNERABILITY AND RISK ASSESSMENT

As per State HVRA report

2.2.1 CLIMATE CHANGE

Observed Temperature and Precipitation:

Summary of the long-term trends in observed seasonal precipitation and temperature over Himachal Pradesh using IMD gridded rainfall and temperature at daily time scales is:

Rainfall:

- Annual average rainfall for Himachal Pradesh from 1971-2005 (35 years) is 1294.3 mm. The mean south-west monsoon (June, July, August and September) rainfall (802 mm) contributes 62% of annual rainfall. Contribution of pre-monsoon (March, April and May) rainfall and post-monsoon (October, November and December) rainfall in annual rainfall is 17.8% and 13.6% respectively.
- Annual average rainfall for the state shows significant positive trend in period 1971-1990 while the insignificant negative trend in 1991-2005.
- Maximum mean observed monsoon rainfall is observed in North Western districts of the state namely, Chamba, Kangra, Sirmaur and Hamirpur districts for both the periods (1971-1990 and 1991-2005). Lahul & Spiti receives the least rainfall.

Rainy days:

- An average number of rainy days in Himachal Pradesh during the south-west monsoon is about 50 days for the period 1969-2005 and varies from 25 days to 69 days. Average number of rainy days in the state during the post-monsoon (winter) is about 7 days and varies from 3 days to 9 days
- Average number of rainy days (when daily rain >2.5 mm) in the state during the south-west monsoon is about
- 43 days and varies from 17 days to 71 days for 1971-1990.
- 45 days and varies from 17 days to 78 days for 1991-2005.
- In monsoon months in period 1991-2005 light to rather heavy rainfall days ($0 < R \leq 64.4$ mm) have increased by 3 days on average compared to 1971-1990 while the extreme and heavy rainfall days show no change

Temperature:

- Annual average maximum and minimum temperature for Himachal Pradesh from 1969-2005 are 25.2°C and 13.0°C respectively. Seasonal average maximum temperature is higher during monsoon season (30.0°C) and ranges between 28.6°C to 31.6°C. Similarly, the seasonal average minimum temperature is lowest during the winter period (4.4°C) and ranges from 1.9°C to 6.1°C.
- The annual maximum temperature for Himachal Pradesh shows an increase of about 0.41°C in 1991-2005 while in 1971-1990 it shows no change. In pre-monsoon season, state maximum temperature shows decline of about 1.63°C in 1971-1990 while the increase of about 2.07°C in 1991-2005.
- The annual minimum temperature for Himachal Pradesh shows an increase of about 0.19°C in 1991-2005 while in 1971-1990 it shows a much higher increase of about 3.6°C. State shows much higher increase of minimum temperature in pre-monsoon, monsoon and post-monsoon seasons in 1991-2005 in comparison to 1971-1990

Climate Change Temperature and Precipitation:

PRECIS simulations for future indicate an all-around warming over Himachal Pradesh associated with increasing greenhouse gas concentrations.

- The mean minimum and maximum air temperature rise by mid-century is projected to be around 2.3°C and 1.9°C respectively. Change for the same towards end century is projected to be around 5.0°C and 4.6°C respectively. Increase in minimum temperature is projected to be marginally higher than the maximum temperature.
- Precipitation is projected to increase by about 15% and 28% towards mid-century and end Century respectively.

Climate Indices:

Climate extremes show that minimum of maximum and minimum of minimum temperatures is consistently increasing in MC (Mid Century) and EC (End Century) compared to the BL (Base Line), indicating significant warming up increasing over the Himachal Pradesh districts. Very wet and extremely wet day precipitation is projected to increase for all the districts in MC and EC compared to the BL implying that rainfall and its intensity would increase in the future.

- Percentage of warm days and warm nights is projected to increase while the percentage of cool days and cool nights is projected to decrease for all the districts implying warming up.
- Kullu, Kinnaur and Mandi districts of Himachal Pradesh are expected to get the warmest in MC and EC compared to the BL, while for Lahul & Spiti temperature increase is expected to be the least compared to the other districts.
- Increase in precipitation in MC and EC is projected to be the maximum for Salon, Bilaspur, Hamirpur districts of Himachal Pradesh compared to the BL, while increase in extremely wet days (annual total rain when rainfall is greater than 99th percentile of baseline) is projected to be the maximum for Mandi, Hamirpur and Bilaspur districts.
- Increase in count of very heavy precipitation days is expected to be the maximum for Salon, Bilaspur and Kangra of Himachal Pradesh districts compared to the baseline
- 1 and 5-day extreme precipitation increase is projected to be the maximum for Shimla towards end century

2.2.2 EARTHQUAKE

As per HVRA Report of the State, building vulnerability assessment in the state of Himachal Pradesh shows that stone masonry and rammed earth building types are the most vulnerable one which may cause the huge loss of life in the state. In last two decades, brick masonry and RC frame construction have been on the rise but the quality of construction was not maintained which resulted into increasing vulnerability.

Traditional construction practices like Dhajji Dewari and Kath Khunni should be promoted as these structures have shown the great capability to resist the lateral forces during strong earthquake also. Vulnerability and damage assessment of buildings represent the areas having a concentration of risk in certain areas. Mitigation planning should be taken at tehsil and district level to improve the building condition.

2.2.3 LANDSLIDE

Hazard and Vulnerability mapping are the most vital steps to be conducted so as to tackle the adverse effects of the landslide risk. This exercise was carried out to delineate the areas under different hazard zones and further analyze the vulnerability to landslides in the state of Himachal Pradesh. Comparison of both the results obtained from methodology as adopted in BMPTC Vulnerability atlas with incidences of past landslides recorded by GSI indicates that Hamirpur, Bilaspur and Una although falling under high to very high hazard area hardly having any incidences of landslides in the past. Similar results are observed in the case of revised methodology as well.

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2.2.4 FOREST FIRE

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2.2.5 FLOOD

Riverine flooding or river floods are caused when a river reaches its flood stage. Water can rise and spill over the banks of the river. The amount of flooding is a function of the amount of precipitation in an area, the amount of time it takes for rainfall to accumulate, previous saturation of local soils, and the terrain around the river system.

Floods are natural phenomena, which can have severe economic, social and environmental consequences. An increased number of people and economic assets are located in riverine floodplain areas. The rising water level may be caused by heavy snowmelt or high-intensity rainfall creating soil saturation and high runoff either directly or in upstream catchment areas.

Locally, soil saturation after prolonged natural recharge may contribute to the severity of the flooding. In Himachal Pradesh, flash flood due to cloudburst is common phenomena. Himachal Pradesh experiences riverine flooding of varied magnitude almost every year and Sutlej and Beas are most vulnerable rivers. All the villages and property inside the floodplain and near close vicinity are in the vulnerable zone.

2.2.6 AVALANCHE

Almost 1.2% area of Himachal Pradesh falls under the category of high avalanche probability zone, whereas 14.5% area has moderate probability. Rest of the region (i.e. 84.3%) have low to nil snow avalanche probability. However, 99% of avalanches do not have adverse-affect and is a part of the natural process of maintaining glacier mass balance and as a low-magnitude high-frequency mass movement process.

The high potential areas, identified in category 3 should be monitored at the time of winter snowfall, as these reach highways and infrastructure. The proven method of controlled sound and blast mechanism should be initiated to trigger avalanches to avoid hazard to life and structures during heavy snow events in the high probability zones.

The study on snow avalanche hazard can be strengthened provided the following set of data and variables are made available:

- Snowfall data/ meteorological conditions
- Snow properties (snow structure and mechanics)
- Analysis of avalanche path configuration and gradient at the micro level.
- Properties of snow rupture and run out zones in the probable areas.
- Debris carrying capacity of a snow avalanche, if any (for understanding damage potential).

2.3 ASSESSMENT OF SECTORAL AND DEPARTMENTAL RISKS

As per State HVRA

Asset / infrastructure at risk	Hazard	Likely impact	Details of asset
Tribal Development Department	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-1
Tribal Bhawan, Dhalli Shimla	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-2
Recokong Peo, Kinnaur	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-1
Bharmour	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-1
Kaza, Spiti (Independent)	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-1
Keylong, Lahaul	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-1
Pangi, Killar (Independent)	Earthquake / Landslide	Partial or complete damage of the buildings	Number of office-1
	Earthquake / Landslide	Partial or complete damage of the buildings	Number of buildings-24
Residential accommodation of staff in tribal areas and HQ Shimla	Earthquake / Landslide	Partial or complete damage of the buildings	Number of building- 8

2.4 GAPS IN EXISTING CAPACITY

Most of the fund is disbursed to the Districts. Hence there is need to develop a standard and uniform disaster operation procedure for them as well as for the department to use that fund considering disaster vulnerability in tribal areas. Human resources of the department need training on management and mitigation of different types of disasters including relief, rescue and rehabilitation. Department also needs to establish a monitoring mechanism at the district level to check the district level Disaster management plans, whether the disaster and climate resilient development are incorporated or not. For this, a pool of resource persons is needed in each district to help in the preparation of safety plans in tribal areas. It will also assist in the auditing of these plans at grass root level to ensure the implementation of the concerns of risk reduction. Adequate financial powers need to be vested with the districts to manage the crisis.

2.5 ASSESSMENT OF PROBABLE DAMAGE AND LOSS

The Departments may provide details of actual damage and loss suffered by the sector and by the department due to disasters in the past. Such information available in departmental archives should be retrieved as much as possible. This will give good ideas about the pattern and trend of such losses in the past, based on which projections can be made of future losses. Although the department has not done any loss assessment for the sector, the department can ask DCs to check the damage and loss due to natural disasters in tribal areas.

3. RISK PREVENTION AND MITIGATION

3.1 RISK PREVENTION

Risk prevention is preventing the creation of new risks of disasters. Such risks may be created unwillingly by the Departments directly through public investments or indirectly through the facilitation of private investments that are vulnerable to the risks of disasters. Therefore, every investment should go through HVRA to check if new programmes, activities or projects have the potential to create new risks of disasters. If such investments cannot be avoided these must be protected by safeguards through adequate structural and non-structural prevention measures so that the benefits of investments are fully protected from risks of disasters. For example, assets of the tribal department like offices, equipment's and others should be located at places which have lesser chances of getting affected by a hazardous event.

Certain method which can be implemented for risk prevention are:

- The department will follow risk sensitive approach while implementing any project in future.
- Proper implementation of the government schemes and programs can also reduce the risks.
- Establish programmes as long-term undertakings with a strong commitment to sustained effort rather than one-time action.
- The department should consider Disaster impact assessment while doing the Environment Impact assessment.
- Climate change adaptation is to be kept in mind at the time of implementation of a new project.

3.2 RISK MITIGATION

Risk mitigation is reducing the risks of disasters that are already there due to exposure and vulnerabilities to the hazards. Mitigation projects reduce the level of exposures or the depth of vulnerabilities or both through a combination of various structural and non-structural measures. Mitigation projects are always costly and therefore these have to be planned with proper Cost Benefit Analysis (CBA) to ensure that the benefits of the projects outweigh the costs. On the basis of its developmental responsibility, the department can liaise with other line departments and agencies for a coordinated mitigation approach.

The primary objective of mitigation efforts would be:

- To identify, delineate and assess the existing and potential risks to the tribal population and to work towards reducing potential casualties and damage from disasters.
- To substantially increase public awareness of disaster risk to ensure a safer environment for communities to live and work.

Below table describes the Structural and Non-Structural risk prevention and mitigation measures:

Mitigation Measures	Activity	Authority for implementation
Capacity Building	One day bi-annual training for developing basic understanding on different hazards, their predictability, response time available, their impact and precautions and preventive measures to be taken (State level-All officers of the department District Level- District officers of the department)	Tribal Development Department along with DDMA and SDMA
Awareness Generations among	Awareness programmes will regularly be conducted for hostel students run by the department in association with the Public Works Department as well as in tribal community	Tribal Development Department
Capacity Building	Training on Basics of Disaster Management	Tribal Development Department
IEC Material	Developing brochures, posters and pamphlets to disseminate information	Tribal Development Department with the support of HPSDMA
RVS of building	Rapid visual screening of the selected buildings of the department can be conducted	Tribal Development Department with the support of NIT Hamirpur

4. MAINSTREAMING DISASTER RISK REDUCTION IN DEVELOPMENT

Disaster Management Act has stipulated that DM Plans of the Departments of State Government shall integrate strategies for prevention and mitigation of the risks of disasters with the development plans and programmes of the department.¹The State Policy on Disaster Management, following the National Policy, prescribed 'DRR Mainstreaming' in the following words:

The DRR issues would be mainstreamed in development plans, programmes and policies at all levels by all the departments, organisations and agencies. It would be ensured that all the development programmes and projects that originate from or funded by Government are designated with evident consideration for potential disaster risks to resist hazard impact. That all the development programmes and projects that originate from or are funded by Government do not inadvertently increase vulnerability to disaster in all sectors: social, physical, economic and environment. It would also be ensured that all the disaster relief and rehabilitation programmes and projects that originate or are funded by Government are designed to contribute to development aims and to reduce future disaster risk.²

The Himachal Pradesh State DM Plan 2012 has one full chapter on 'Mainstreaming DM Concerns into Development Plans/Programmes/Projects'.³ The Plan has proposed strategies for integration and mainstreaming DRR into a few flagships national programmes in the sectors of rural and urban development, education, health and public works department. Some of these programmes have undergone changes in the recent years but the strategic entry points for mainstreaming DRR in development plans remain the same. Concerned Departments may, therefore, incorporate structural and non-structural measures for disaster risk reduction into the projects according to the contexts of local situations within the broad framework and guidelines of the programmes, therefore mainstreaming may involve innovative adaptation of national programmes according to local contexts for disaster reduction. Many State Governments have made such innovative adaptations which the Departments may like to consider on their merits.

With the abolition of Planning Commission and devolution of higher tax revenue to the States, many central sectors and centrally sponsored plan programmes are undergoing changes. The State Governments shall, therefore, have greater freedom to design state specific development programmes and projects. This will create new opportunities for disaster risk reduction. The Departments are therefore well advised to propose specific programmes of disaster risk reduction in their respective sectors, based on the assessment of risks in their sectors and the likely benefit of such programmes. Every Department of the State Government implements state-level development programmes that provide good entry points for mainstreaming DRR in development. The Departments may, therefore, explore the possibilities of mainstreaming DRR in as many existing programmes and projects as possible. This will ensure that existing development projects are not creating any new risks of disasters; on the contrary, the projects are designed in such a manner that these would facilitate the process of risk reduction without any significant additional investments.

¹Section 40(1)(a)(ii)

² Himachal Pradesh State Policy on Disaster Management 2011, para 6.1.2, page-25

³ Himachal Pradesh State Disaster Management Plan 2012, Chapter-IV

Mainstreaming has three purposes:

- To make certain that all the development programmes and projects that originate from or funded by Government are designated with evident consideration for potential disaster risks to resist hazard impact.
- To make certain that all the development programmes and projects that originate from or are funded by Government do not inadvertently increase vulnerability to disaster in all sectors: social, physical, economic and environment.
- To make certain that all the disaster relief and rehabilitation programmes and projects that originate or are funded by Government are designed to contribute to development aims and to reduce future disaster risk. This will create new opportunities for disaster risk reduction. The Departments are therefore well advised to propose specific programmes of disaster risk reduction in their respective sectors, based on the assessment of risks in their sectors and the likely benefit of such programmes.

Every Department of the State Government implements state-level development programmes that provide good entry points for mainstreaming DRR in development. The Departments may, therefore, explore the possibilities of mainstreaming DRR in as many existing programmes and projects as possible. This will ensure that existing development projects are not creating any new risks of disasters; on the contrary, the projects are designed in such a manner that these would facilitate the process of risk reduction without any significant additional investments.

Scheme	Main objective	Entry point
Tribal Sub Plan	<ul style="list-style-type: none"> • All matters relating to planning generally e.g. assessment of resources, formulation of plans, laying down of targets and physical aspects and co-ordination in relation to matters affecting the tribal areas and the members of the Scheduled Tribes of the State. • Periodical assessment and evaluation of Plan activities in relation to matters affecting the tribal areas and the members of the Scheduled Tribes of the State. • All policy matters including the introduction of new schemes affecting the tribal areas as also matters relating to the members of the Scheduled Tribes consultation thereof by all administrative departments with the Tribal Development Department. • Initiation of any proposal concerning any other department in relation to matters affecting the tribal areas or the members of the Scheduled Tribes of the State after due consultations and agreements with the concerned departments. • Tendering advice to all departments in relation to matters affecting the Tribal areas and the members of the Scheduled tribes of the State. • Overall coordination and evaluation of all activities of any department in relation to the matter affecting the tribal areas and the members of the Scheduled Tribes of the State. • Tribal Advisory Council. • Integrated Tribal Development Projects. • Establishment, budget and accounts matters of the Tribal Development Department. 	Advice to all departments to incorporate DRR / CCA component in tribal development projects.

Mainstreaming DRR in Project Cycle Management

The best way to ensure that DRR is mainstreamed into the development projects is to integrate this into the Project Cycle Management (PCM). PCM is the process of planning, organizing, coordinating, and controlling of a project effectively and efficiently throughout its phases, from planning through execution, completion and review to achieve the pre-defined objectives at the right time, cost and quality. There are six phases in PCM - programming, identification, appraisal, financing, implementation and evaluation. The first three phases are the initial planning phases of the project which provide key entry points for mainstreaming. Among the various toolkits available for mainstreaming DRR in project cycle management the following may apply with relative ease in Himachal Pradesh.

Marginal Investment Analysis

Existing investments can be so designed and calibrated that these do not exacerbate the latent risks or create new risks of disasters. Incorporation of elements of risk resilience in the concept, design, management and evaluation of existing and new programmes, activities and projects may necessitate additional investments. The tools of marginal investment analysis are used to determine the effectiveness of such additional investments for disaster risk reduction. For example, roads, water infrastructure and buildings, can be so designed that with marginal additional investments these structures may become resistant to the hazards of earthquakes or landslides. The marginal higher costs in earthquake resistant buildings are 2.5% for structural elements and 0.8% for non-structural elements, but the benefits are higher than the replacement costs of these structures if these collapse in earthquakes.

1. Multi-purpose development projects

The projects can be designed with dual or multi-purpose that can reduce the risks of disasters and at the same time provide direct economic benefits that would enhance both cost-benefit ratio and internal rate of return and justify the costs of investments. One of the most common examples of such multiple purpose development projects are large hydroelectric projects that generate electricity, provide irrigation and at the same time protect downstream locations from the risks of floods. Many innovative multi-purpose projects can be designed that can offset the costs of disaster risk reduction.

2. Check Lists for disaster risk reduction

The government of India issued a notification in 2009 which makes it mandatory for any new project costing more than Rs. 100 crores to have a *Check List for Natural Disaster Impact Assessment* before it is approved. These checklists provide complete information on the hazards, risks and vulnerabilities of the project. These include not only the probable effects of natural disasters on the project but also the possible impacts of the project in creating new risks of disasters. The costs involved in the prevention and mitigation of both types of impacts can be built into the project costs and accordingly the economics and viability of the project can be worked out. Similar checklists for DRR can be followed in large development projects of the Departments.

The department will use hazard resilient design for new construction of their buildings. The existing Departmental buildings will be assessed for vulnerability. Wherever there will be a need, necessary steps would be taken for retrofitting of buildings. These concerns will be addressed in the future during review and updating of the plans.

Steps will be taken for preparing information formats and monitoring checklists for monitoring and reporting during a disaster. A critical component of preparedness has been the training of intervention teams, the establishment of standards and operational plans to be applied following a disaster.

5. DISASTER PREPAREDNESS

Measures for Disaster Preparedness

Disaster preparedness has been defined as 'the state of readiness to deal with a threatening disaster situation or disaster and the effects thereof'. The Department may review their 'state of readiness' and prepare a strategic action plan to deal with possible disaster situations.

- Designate a focal point for disaster management within the department;
- Ask District offices to check available stocks of equipment and materials which are likely to be most needed during disasters like floods, earthquake and landslide;
- Follow up with all district offices to update resource inventory;
- Instruct District offices to procure equipment related to Search and Rescue;
- Geo-tagging of all the assets can be done to assess the post-disaster losses if any;
- The officials within the department can be trained on certain aspects of disaster management which can help in increasing awareness about the subject;
- Evacuation plan of all the buildings and fire exit plan to be developed;
- Secondary database management plan for important documents;
- Analyse past experiences of the Department to know what went well and what could have been done better for risk reduction and emergency response by the department;
- Document it as lessons learnt annually and after every disaster;
- Emergency numbers can be displayed on the notice board.

6. DISASTER RESPONSE AND RELIEF

6.1 RESPONSE PLAN

After getting a warning from State Disaster Management Authority or District Disaster Management Authority, information shall be disseminated to the field by the State/District office Incident Response Team. Mass media like TV, Radio, and Press should also be included for dissemination.

6.2 ROLES AND RESPONSIBILITIES OF THE NODAL OFFICERS:

- To act as the focal point for disaster management activities of the department. The department may ensure that he / she has the mandate to work immediately without waiting for directions from the higher authorities. This will save time.
- To provide his / her contact and alternate contact details to SDMA/DDMA and Revenue Department, State and District Emergency Operation Centre, all line departments and agencies.
- To be accountable for any communication/actions related to disaster management of the department.
- To take lead to prepare the department disaster management plan, Emergency Support Function (ESF) plan and Standard Operating Procedure (SOP).
- To constitute the Incident Response Team (IRT) in the department as per the need and organize training for members.
- To help the department to procure the equipment's necessary for search and rescue, first aid kits and disburse the same to IRTs and for the department if required.
- To provide regular information on disaster or task assigned to him to SEOC/ Revenue Department during and after disasters in consultation with the department head.
- To attend Disaster management meeting, training, workshops or any related programme on behalf of the department.
- To identify an alternate nodal officer and build his/her capacity.
- To set up a control room and assign another official (s) for control room duty. As per the need of the department.
- To identify staffs for deployment on-site operation centres (on-site control room during a disaster)
- To make an arrangement of an alternative communication system for the department.
- To mobilize resources for disaster response activities as per the resource inventory put in the department DM Plan if it is needed by the department or other line departments.
- To organize regular awareness programmes in the department.
- To organize the periodic mock drills at least twice a year as per the suitability of the department and update the plans at all levels and ensure participation of the department in mock drills of other agencies and other departments.
- To have a liaison with other departments and functionaries working in the field of DM.

6.3 FORMATION OF THE INCIDENT RESPONSE TEAMS

Incident Response Teams (IRTs) will be constituted at *State* and *District* level to deal with any disaster.

State level IRT for Tribal Development Department

#	Name & Designation	Role
1	Deputy Director	Chairman
2	Suprentendet Grade-II (HQ)	Convener-cum- Nodal officer
3	Research Officer (HQ)	Member
4	Supdt, Tribal Bhawan	Member
5	Representative from Admin Branch	Member

6.4 ROLE AND RESPONSIBILITY OF THE STATE INCIDENT RESPONSE TEAM

- To coordinate with SDMA, NDMA, and other concerned Government Departments. Visit the spot and assist the Circle level Response Team for pre-disaster planning
- To prepare a status report regarding the disaster.
- To facilitate execution of orders for declaring the disaster.
- Assess the staff and another logistic requirement for field operation and monitor effectiveness.
- To attend training and refresher courses for how to respond after receiving any information related to the disaster.
- IRT should be familiarized with the SOP/ESF/DM plan of the department as well as State DM Plan and their roles and responsibilities.
- IRT should prepare and update the DMP periodically by incorporating the views of stakeholders for the effectiveness of the plan.
- To ensure availability of funds at District level to meet contingency expenses
- To develop the media messages so as to update the status of disaster mitigation and response work.
- To monitor and guide the District Response Teams.
- To maintain an inventory of all related guidelines, procedures, action plans, district maps and contact numbers.
- To document the lessons learnt at different stages of disaster management and make suggestions for necessary addition/alteration.
- The department needs to plan to depute officials for the purpose or plan new recruitment if needed.
- IRT at State level shall meet at least twice in a year. 1st meeting will be held in the 1st week of January and 2nd meeting on the 1st of July.

7. DISASTER RECOVERY AND RECONSTRUCTION

7.1 DISASTER RECOVERY

The process of recovery from small-scale disasters is usually simple. Recovery operations get completed almost simultaneously with the response, relief and rehabilitation. However, in medium and large disasters involving widespread damages to lives, livelihoods, houses and infrastructure, the process of recovery may take considerable time as the relief camps continue till houses are reconstructed. Often intermediary shelters have to be arranged before the permanent settlements are developed.

7.2 DAMAGE AND LOSS ASSESSMENT

The department is not involved in the damage and loss assessment of tribal areas, this is generally being done by the district administration. Department can conduct a damage and loss assessment specifically tribal areas for better financial planning.

7.3 DISASTER RECONSTRUCTION

Post-disaster construction provides an opportunity for 'Building Back Better' so that the reconstructed assets are able to withstand similar or worse disasters in future. It is difficult to anticipate such reconstructions as these would depend on the types and location of the disasters and the nature reconstructions to be made, which would be known only after the disasters.

8. FINANCIAL ARRANGEMENTS

Section 40(2) of the Disaster Management Act stipulates that every department of the State Department while preparing the DM Plan, shall make provisions for financing the activities proposed therein. Normally the funds required for risk assessment and disaster preparedness must be provided in the budgets of every concerned department. Such funds are not very sizeable and Tribal Development department will allocate such funds within their normal budgetary allocations from coming budget year for risk assessment and preparedness. Although the department has been directly incurring funds on construction of new and maintenance of old school buildings where the mainstreaming of DRR is essential.

The marginal costs involved in mainstreaming disaster risk reduction in existing programmes, activities and projects of the departments are also not very sizable and the departments may not find it difficult to arrange such funds. Tribal Development Department plan will ensure in the existing schemes and future activities to make school buildings safer and disaster resilient.

As per the guidelines issued by the Ministry of Finance, Government of India vide Memo No.55(5)/PF-II/2011 dated 06/01/2014 for 10% flexi-funds within the Centrally Sponsored Schemes (CSS) to be utilized, inter-alia, for disaster mitigation, restoration and innovation activities in the event of natural disasters. The Tribal Development Department has the scope of using the flexi funds from the tribal sub-plan or any other related schemes by proper planning and utilization for disaster mitigation which can help to some extent in reducing the risk/vulnerability due to natural disasters to which the state of Himachal Pradesh is highly prone to.

Provision of Funds

There is a need of funds to strengthen the existing facilities both at State level as well as ULB level under the caption "Disaster preparedness" which is not available with the department. Hence, in the annual budget plan for the Tribal Development, a mitigation fund need to be created. Department of revenue has suggested keeping 10 percent of all development plan for non-plan budget disaster management issues. A budget provision of Rupees 21.50 Lakh has been proposed to ensure disaster preparedness as indicated below:

Activity	Fund
One day- bi-annual training for developing basic understanding on different hazards, their predictability, response time available, their impact and precautions and preventive measures to be taken (State level-All officers of the department and District Level- District officers of the department)	500000
Training on Basics of Disaster Management at state and district level	500000
Rapid visual screening of the selected buildings of the department can be conducted	500000
Training on Search and Rescue	150000
Procurement of Search and Rescue equipment	500000
Total	2150000

