



DISASTER MANAGEMENT PLAN

DEPARTMENT OF HIGHER EDUCATION
GOVERNMENT OF HIMACHAL PRADESH

1.

Introduction

1.1 Overview of the Department

Department of higher education, Government of Himachal Pradesh has a vast network of institutions viz. High Schools, Senior Secondary Schools, colleges and libraries (Table 1.1). The Deputy Director of Higher Education office located at each district headquarters controls the school education at the district level. Directorate of Higher Education is situated at Shimla and it controls Deputy Directors, Colleges and Libraries.

Table 1.1: Number of institutions and offices of the Department of Higher Education

SI No.	Institution/Office	No of Institution/office (AS on 31-10-2016)
1.	Directorate of Higher Education	1
2.	SCERT	1
3.	State Library	1
4.	District Library	11
5.	Deputy Director of Higher Education	12
6.	Senior Secondary Schools	1719
7.	High Schools	929
8.	Colleges	106
9.	Sanskrit Colleges	6
10.	Fine Arts College	1
11.	GCTE	1

These institutions are scattered throughout the State. Hence the hazard profile of the State described in the Himachal Pradesh State Disaster Management Plan is also applicable to the Department of Higher Education (Disaster Management Cell, Department of Revenue, 2012).

1.2 Purpose of the Plan

The main objective of the Disaster Management Plan (DMP) is to reduce the risk level through preparedness at various levels. DMP helps:

1. To bring together the information related to equipment, skilled manpower and critical supplies.
2. To know the standard operating procedures of the department at the time of disaster.
3. To fix the role and responsibility of each and every officer for disaster preparedness.
4. To help the Department in assessing its own capacity in terms of available resources and get ready to mitigate any unexpected disaster effectively and to prevent the loss of human lives and property through preparedness, prevention & mitigation of disasters.
5. To assist the line departments, block administration, communities in developing compatible skills for disaster preparedness and management.

6. To disseminate factual information in a timely, accurate and tactful manner while maintaining necessary confidentiality.
7. To develop immediate and long-term support plans.
8. To have response system in place to face any eventuality.

1.3 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:

- Identify 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;

1.4 Authorities, Codes, Policies:

Functioning of Disaster Management in Himachal Pradesh is governed as per the Disaster Management Act 2005 and Himachal Pradesh Disaster Management Plan 2012. Apart from that, various policies and schemes funded by state and central both also contain disaster risk mitigation measures. Section 40 of the Disaster Management Act 2005 provides that there shall be a Disaster Management Plan for every Department of the State. The departmental DM Plan shall be prepared by each department and shall be approved by the State Executive Committee. This plan is prepared under the provisions outlined in the Disaster Management Act 2005.

1.5 Institutional arrangements for Disaster Management:

The Education Department is under the charge of Education Minister. All policy matters and major administrative decisions are generally taken by Education Minister who is assisted by an Education Secretary who enjoys full administrative and financial powers regarding department such as sanctioning of various schemes projects and budgeting. All schemes of expansion of education, Plan and Non-Plan are first approved by Education Secretary and then submitted to Planning and Finance Department for approval. Education Secretary, in addition, is overall administrative head of the Education Department for all purposes.

Organogram of the Department of Higher Education

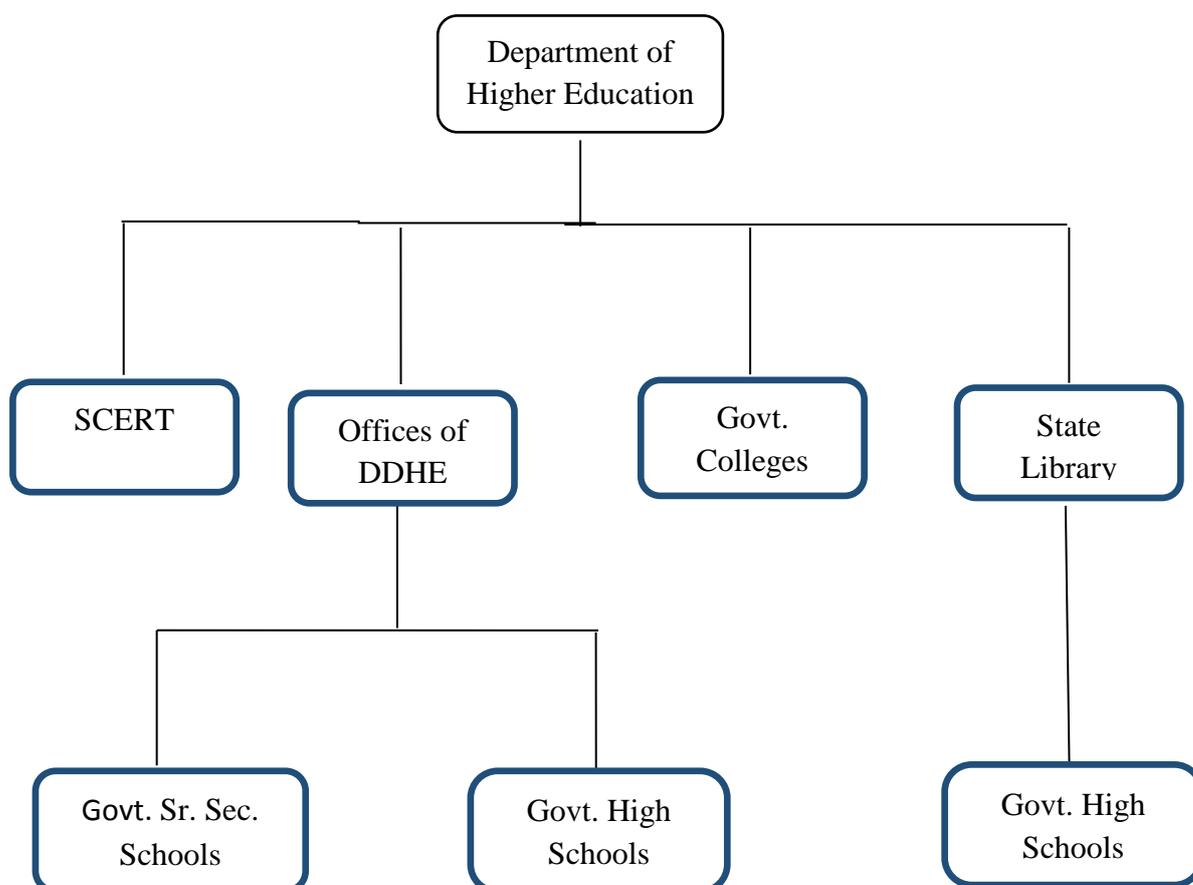


Fig 1.1: Organogram of the Department of Higher Education.

Infrastructure Available

Students' strength in the Department of Higher Education is shown in Table 1.2.

Table 1.2: Students strength available with the Department of Higher Education

SL No	Category	Number of Students	Boys	Girls
1.	Total Students	501307	265662	235645
2.	Specially enabled	2683	1499	1184

Human resources and Infrastructure available with the Department of Higher education is shown in Table 1.3 and Table 1.4 respectively.

Table 1.3: Human resources available with the Department of Higher Education

SL No	Category	Number of Students	Boys	Girls
1.	NSS	67758	43438	33320
2.	NCC	24480	67 %	33 %
3.	Scout and Guide	26291	14661	11630
4.	Rovers and Rangers	963	525	438

Table 1.4: Infrastructure available with the Department of Higher Education

Sl No	Name of office	Location	Number	Remark
1	Directorate of Higher Education	Shimla	1	Coordinates at State level
2	Deputy Director of Higher Education	Each district headquarters	12	Coordinates at District level
3	Government Colleges	Various parts of the state	106	Have a number of students, classrooms and open space. These can be used for relief operations, storage and community shelter.
4	Government Senior Secondary schools	Throughout State	1719	Have a number of students, classrooms and open space. These can be used for awareness campaign; relief operations and community shelter
5	High Schools	Throughout the State	929	Have a number of classrooms and open space. These can be used for storage and community shelter

1.6 Plan Management (Monitoring, Review and Revision):

DM Plan is a “Living Document” and would require regular improvement and updating. The plan must be updated at least once a year. The Disaster Management plan prepared by the Department shall be circulated to all its district offices. The Plan shall be shared on the Departmental portal. The plan will be updated as and when required and modified plan shall 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 into the plan.

System of Updation

Table 1.5: Review and updating of Disaster Management Plans

SL NO	Plan	Who	When	How
1.	State Plan	DHE	Pre-monsoon Pre-winter	Workshop Mode
2.	District Plan	DDHE	Pre-monsoon Pre-winter	Workshop Mode
3.	School/ College Plan	Principal/ Headmaster	Beginning of academic session	Consultation with staff, students and PTA

Dissemination of Plan

The primary responsibility for dissemination of the plan will be with the State Department of Higher Education. Department of Higher Education would involve HPSDMA for capacity building at different levels of training and dissemination. The Disaster Management Plan will be disseminated at three levels: District authorities, government departments, NGOs and other agencies and institutions within the State. The content of the plan would be explained through well designed and focussed awareness programmes. The awareness programmes would be prepared in the local language to ensure widespread dissemination up to the school level.

Disaster Management Plan will be uploaded on the department website of Higher Education. 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, Lahaul 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 Assessment of Sectoral and Departmental Risks

Department of Higher Education has a vital pool of resources located at district and village level. Besides imparting quality education some socially useful schemes are implemented through students to promote the qualities of a responsible citizen of the country through NSS, scout and guide, rovers and rangers and NCC. The services of these units of school and college students can be utilised during disasters. Teachers can be useful in an awareness campaign for preparing risk-free society in the school catchment area. Further, schools and colleges have sufficient open space and can be used as community shelters in case of emergencies.

Deputy Director Office is located at each district headquarter. All the district level offices have a landline telephone, Fax, Photocopier and the Internet. Each office of Deputy Director is connected with High and Senior Secondary School through telephone and the internet. At the district level, there is a post of Nodal Officer who is expert in Information Technology. These offices can be used as a control room.

GAPS IN EXISTING CAPACITY:

Teachers, administrative staff and students are lacking in the basic knowledge of safety (KAP Report, 2012). Educational institutions of the State, as well as the Directorate of Higher Education itself, are highly vulnerable especially to the earthquake with a lot of nonstructural hazards making these buildings to high risks. Hence there is a need to prepare a standard and uniform disaster operation procedure for the department to deal with various situations. Human resources of the department need training on management and mitigation of different type 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. For this, a pool of resource persons is needed in each district to help in the preparation of safety plans. It will also be helpful 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 in the district, college and school level to manage the crisis.

Risk involved in the department when exposed to different types of disasters in view of data available and past experiences is summarized in Table-2.1

Table 2.1: Types of risks while exposed to different disasters

Sl. No	Hazard	Risk
1	Earthquake	Very High Risk: Distribution of educational infrastructure over space is directly proportional to population distribution. In Himachal Pradesh 60% population lives in the very high-risk zone; 38 % population lives in a high-risk zone and the rest of population lives in moderate to low-risk zone. Limited awareness, Preparedness, structural weaknesses of the buildings and high population density in educational institutions reveal very high vulnerability to daytime earthquake and low capacity. This suggests very high risk.
2	Flood	High Risk: Topography of Himalayan river valleys, glacial fed rivers, damage or sudden release of water from power project dams and densely populated former river beds poses a high risk.
3	Cloudburst	High Risk: Impact of cloudburst is dual. It leads to landslides and flash floods. Settlements on river terraces are at high risk.
4	Landslide	High Risk: landslides pose risk to buildings and disruption in road and communication network. Landslides also choke rivulets and form temporarily lakes. When these lakes burst causes flash floods.
5	Avalanche	Low Risk: Six districts viz. Hamirpur, Una, Bilaspur, Mandi, Sirmour, and Solan have no risk of avalanche. Further Kangra, Chamba and Shimla have a medium risk. Kullu falls in the High-risk zone, whereas Kinnaur and Lahaul Spiti are in the Very High-Risk zone. Further, there is a small proportion of the population living in High and very Avalanche risk-prone districts. Low vulnerability suggests Low risk.
7	Fire	Medium Risk: Climatic conditions and topography of the State compel to use timber in a school building in very high quantity. Fire incidents pose risk to educational infrastructure and students.
8	Road accident	Medium Risk: Steep slopes, Sharp bends in roads, poor road conditions, overloaded buses causes accidents.

2.3 Assessment of Probable Damage and Loss

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

Senior secondary school damaged

The maximum number of a 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. We see that other than the period between 2012-2014, every year there has been a major loss to the assets of the department.

Table-2.2 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
	HP	47	8	17	21	11	0	0	12

3. Risk Prevention and Mitigation

3.1 Risk Prevention

Most of the fatalities and economic losses occur due to the poor construction practices, lack of earthquake-resistant features of the school 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 school/college building stocks and other infrastructure.

Building Vulnerability assessment is carried out in three stages i.e. Rapid Visual Screening (RVS), Preliminary Vulnerability assessment (PVA) and Detailed Vulnerability Assessment (DVA). As detailed vulnerability assessment of every single building is a very expensive and time-consuming process hence department can initially select the school building for PVA especially from the seven highly vulnerable districts of the state subsequently from the other districts. This PVA scoring will be supportive in making a decision that whether the further stage of vulnerability assessment and retrofitting is required or not in the particular school or college building.

3.2 Risk Mitigation

Risk mitigation is reducing the risks of disasters that are already there due to exposure of 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.

Earthquakes

- Construction of earthquake resistant school buildings.
- Retrofitting in already constructed buildings.

Flood

- Selection of site for the construction of school building shall be done with the level of flooding water in mind.
- Open space for emergency construction of sheds etc. shall be left to the extent possible.

Fire

- Fire extinguishers be placed in schools and teachers identified and trained for using the same in case of fire in school or in the neighbourhood

- National School Safety Programme (NSSP) – A Demonstration Project which was under hundred percent centrally sponsored schemes in which two pilots (highly vulnerable) Kangra and Kullu districts of the State were covered. Project duration was two years w. e. f. 2011-2013. Under this project, 200 schools from each district were covered. Various activities viz. Teacher's Training Programme, preparation of School Disaster Management Plan, distribution of school safety Disaster Preparedness kit, and mock drills were conducted for the selected schools. The department will try to plan in scaling up these kinds of initiatives by

financial planning under the departmental budget and CSS flexi-funds to mitigate the existing risk and awareness generation to help in delivering the Right to Safe Education in the state.

3.3 Strategies for Risk Prevention and Mitigation

The Departments that do not usually have adequate budgetary allocations on risk mitigation may have to develop strategies for risk prevention and mitigation for short, medium and long-term basis. The National and State policies, Guidelines and Plans on disaster management shall provide strong justifications and support for such investments. The Departments should make use of these instruments for justifying their proposals for risk prevention and mitigation projects. Otherwise, the Departments have always the opportunities for mainstreaming disaster risk reduction in the existing programmes, activities and projects.

The whole landmass of the Himachal Pradesh is in Seismic Zone IV or in Zone V. An Earthquake of magnitude 8 or above will lead to a large number of injuries, loss of life, and damage to educational infrastructure. In such a scenario life of school students is in more danger. If no action is taken right now, the problem will worsen due to population growth, construction of unplanned buildings and poor knowledge of construction agencies regarding geotechnical considerations in making risk free constructions (KAP report, 2012). Recently educational setup has grown with the rapid pace with the view of “Education for All” initiative. This added more unsafe classrooms in the educational infrastructure of the State.

In view of safety concerns HPSDMA has suggested some school safety steps for making schools safer which are as under: -

- i. Basic disaster awareness and sensitization
- ii. Conduct hazard hunt and secure hazards at school (structural and non-structural)
- iii. Preparation of Emergency Preparedness Plans
- iv. Conduct of Mock drills to test the plans and organised response
- v. Discuss emergency plan with parents
- vi. Link school safety with community, SMC, PTAs etc.
- vii. Discuss earthquake safety at home.

HPSDMA has made suggestions for mainstreaming actions for school safety (Guidelines for Departments under DM Act, 2005) which are as under: -

- i. Establish clear and measurable objectives for school seismic safety that can be implemented and supported by the community with the timeline.
- ii. Define the level of earthquake hazard and establish norms for school buildings in each zone.
- iii. Set forth expectations or objectives that define the desired ability of school buildings to resist earthquakes – All school buildings designed, constructed or retrofitted to prevent collapse and prioritise school buildings with pre-defined post-earthquake roles should remain functional.
- iv. Address all schools regardless of the ownership – private or public.

- v. Give initial priority to make new schools safe. A longer time frame should be established to correct seismic weakness of existing school buildings – set standards for new schools and assess the existing school buildings.
- vi. Establish programmes as long-term undertakings with a strong commitment to sustained effort rather than one-time action.
- vii. Adopt a multi-hazard approach to school safety with earthquake mitigation strategies that complement and enhance disaster counter-measures for other hazards.
- viii. Employ advisory committees as needed to assure that policy and technical decisions are consistent, and to provide long-term independent support and evaluation to the State for the seismic safety effort.

Besides this Sector, specific illustrations for DRR integration into development planning are given. Guidelines for the education department have been reproduced in the text box (NDMA Guidelines for departments under DM act, 2005 and adopted by HPSDMA, 2012).

In the light of above-mentioned guidelines Prevention, Mitigation and Preparedness Plans are prepared to reduce the impact of disasters. Following measures will be undertaken to minimise the collateral damage usually caused by the impact of any disaster:

Education Sector Specific Illustrations of DRR Integration

Policies & Legislation

- Land use hazard zoning technique used for planning for new schools
- Schools should have disaster management plans
- Quality standards & guidelines for hazard-resistant construction of schools
- Retrofitting policy for disaster resistant strengthening of existing school buildings
- Retrofitting policy for Non-structural building components (falling hazards) in schools

Advocacy & Awareness

DRR lessons in school curriculum advocate safe behaviour

Coordination & Capacity development

- Education & training on disaster risk management including for teachers
- Schools conduct disaster preparedness programmes (e.g. mock drills, first aid, search and rescue, swimming and crowd management training)
- A Contingency plan exists for continuing education during the monsoon and winter season

Risk-proofing & Monitoring

- School safety norms are followed in construction of safe schools
- Risk assessment done in site-selection and building new schools
- Retrofitting of existing schools

Engagement of Local Bodies & Communities

- Engaging community in design and monitoring of education program

3.3.1 Action Plan for Earthquake Mitigation: Action plan for earthquake mitigation are as under: -

- i. Revision and adoption of model building bye-laws for construction both in urban and rural area schools, colleges and other educational infrastructures.
- ii. Wide dissemination of earthquake-resistant building codes, the National Building Code 2005, and other safety codes.
- iii. Training of trainers in each school and colleges for professional and technical expertise.
- iv. Training of teachers for the construction of any school block or infrastructure to develop in earthquake-resistant construction.
- v. Launching demonstration projects to disseminate earthquake-resistant techniques.
- vi. Launching awareness campaigns on seismic safety and risk reduction and sensitising all stakeholders of the schools and colleges to earthquake mitigation.
- vii. Establishing appropriate mechanisms for compliance and review of all construction related guidelines to the Department of Education.
- viii. Undertaking mandatory technical audits of structural designs of Old and New major building/projects by the respective competent authorities related to schools and colleges.
- ix. Developing an inventory of the existing built environment of the educational institutions.
- x. Assessing the seismic risk and vulnerability of the existing built environment by carrying out structural safety audits of all critical lifeline structures of the schools and colleges.
- xi. Developing seismic strengthening and retrofitting standards and guidelines for existing critical schools and colleges structures.
- xii. Undertaking seismic strengthening and retrofitting of critical schools and colleges structures, initially as pilot projects and then extending the exercise to the other structures as in a phased manner.
- xiii. Preparation of DM plans by schools, colleges and other Education related main buildings visited by large number of students and parents etc., and carrying out mock drills for enhancing preparedness.
- xiv. Strengthening the EOC network and flow of information.
- xv. Streamlining the mobilisation of students, parents, teachers and other stakeholders.
- xvi. Preparing schools, colleges and surrounding community with specific reference to the management of earthquakes.
- xvii. Carrying out the vulnerability assessment of earthquake-prone areas and creating an inventory of resources for effective response.
- xviii. Introducing earthquake safety education in schools, colleges and universities and conducting mock drills in these institutions.
- xix. Strengthening earthquake safety research and development in professional technical institutions.
- xx. Preparing documentation on lessons from previous earthquakes and their wide dissemination.
- xxi. Operationalizing the local companies of Home Guards and IRBs/Police for disaster response in schools and colleges.

- xxii. Strengthening the medical preparedness in schools and colleges for effective earthquake response, etc.

3.3.2 Landslide Mitigation: The main features related to the landslide mitigation in schools and colleges to be included are: -

- i. Wide dissemination of model land use practices in hilly areas.
- ii. Training of trainers in schools and colleges and technical institutions for landslide mitigation.
- iii. Launching awareness campaigns in schools and colleges on landslide hazard and risk reduction, and sensitizing all stakeholders on landslide hazard mitigation.
- iv. Establishing appropriate mechanisms for compliance reviews of all land use of the schools and colleges premises bye-laws in hilly areas.
- v. Preparing an inventory of existing landslides, active or inactive, in and around the schools and colleges premises.
- vi. Developing an inventory of the existing schools and colleges built environment areas around existing landslides and in high hazard zones as per the Landslide hazard map.
- vii. Assessing the status of risk and vulnerability of the existing schools and colleges built environment.
- viii. Preparation of DM plans related to a landslide in the schools and colleges to carry out mock drills for enhancing preparedness in vulnerable areas especially in hilly areas which are more prone to landslides.
- ix. Strengthening the EOC and communication network from schools and colleges to the higher authorities.
- x. Streamlining the mobilization of students, teachers and other stakeholders of the schools and colleges.
- xi. Preparing schools and colleges level DM plans, with specific reference to the management of landslides disaster.

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

Incident Reporting: Any suspected event of accidental or intentional contamination should be communicated to the higher authorities and in charge of the water facility through quickest possible means. Subsequently, he will inform the same to local police, law enforcement and intelligence agencies, and request for physical quarantine of the contamination of water tank. The incident should also be reported to all pre-identified nodal agencies with a request to remain at standby.

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

Preliminary Screening: Trained personnel would be deployed for sample collection and spot testing as described in this document. The sample should be collected from the nearest point. Sample collected should be divided into two, one for spot testing and another for laboratory testing. The first set should be subjected to spot testing by prescribed methods. Once the incident and nature of contamination are established the same should be communicated to the Director, Higher Education, Shimla and district administration in precise and clear language for activating their crisis management plan.

Following the positive screening, the second half of the sample should be immediately sent to pre-identified reference laboratories.

3.3.4 Mitigation Strategy for Fires

Mitigation measure for fire safety are as under: -

- i. Vulnerable portion of the schools and colleges would be identified and mitigation actions would be taken to avoid/reduce incidents of local fires.
- ii. Education related to fire would be initiated to reduce and mitigate fire incidents.
- iii. Fire and emergency services would be strengthened in the institution.
- iv. Students would be involved in tackling fires in the schools and colleges and their participation would be ensured by giving them proper training.
- v. Fire extinguishers to be installed on the school premises.

4. Mainstreaming Disaster Risk Reduction in Development

4.1 Policy Framework on Mainstreaming

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 level 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. For example, construction of school buildings under Sarva Siksha Abhiyaan may conform to the standards of seismic safety even if this involves higher costs. If the guidelines of the programme do not permit higher costs, the State Government may bear the additional costs involved from their own sources. 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

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

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.

4.2 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 of 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.

a) 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, school, hospitals, roads, bridges and buildings, can be so designed that with marginal additional investments these structures may become resistant to the hazards of earthquake 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.

b) 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.

c) 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.

5.

Disaster Preparedness

5.1 Strategies for Disaster Preparedness

For better supervision, monitoring and preventive measures capacity building programme will be launched for officials working at various levels as per their requirements. Capacity building programmes are categorized into two types. One will be for the managers of the education department and the other for teachers. For Managers of the DHE one day advocacy programme will be organised and for teachers, the three-day training programme will be conducted. Teachers will be trained to make their school/college safe by preparing safety plans and practising mock drills. Managers of education will facilitate the efforts of risk reduction. Training for the Capacity building will be conducted at two levels:

State Level Advocacy Programme: This programme will be for senior functionaries of the education department. It will be of one-day duration. Joint Director (College), Joint Director (School), Deputy Directors of Higher Education along with faculties of training institutes from SCERT, Solan and GCTE, Dharamshala will participate in it. State Nodal Officer will organise one-day advocacy programme. Director of Higher Education/ Additional Director of Higher Education/ Joint Director will Chair the advocacy programme.

Regional level Capacity Building Programme: A similar capacity building programme will be organised at the regional level to sensitize the field staff working at the cutting edge. In this programme, personnel who have attended the State level programme will facilitate at the regional level. Here the participants will be Principal (College), Principal (School) and Headmasters. Depending upon the numbers of the participants, the training batches will be decided. A batch size should not exceed 50 participants. The training of Principal (College) will be managed by Joint Director (College) and the training of Principal (School) and Headmasters will be managed by the Principals of SCERT and GCTE. After the training of heads Teacher Training Programme (TTP) will be organised. A TTP will be of three-day duration. One Teacher from each School or college will be invited for the TTP.

5.2 Measures for Disaster Preparedness

In case of any disaster, logistics play a vital role in the delivery of services. The provision of following items is a prerequisite for safety measures in institutions.

1. **Necessary Items:** Items in this head include Stretcher, ropes, torch, alternative communication system, Siren, Public addressable system and tents etc.
2. **Fixing Non-Structural Elements:** It includes fixing of Almirah and other material that can harm during an earthquake.
3. **IEC material:** Pamphlet, brochures or booklets that can be developed to distribute in the Catchment area of the institutions.

4. **Competitive Activities:** Competitive activities on disaster management among students not only prepare students but their impact is larger. Teachers must equip themselves with the latest knowledge to evaluate students. Students also discuss such issues with their parents. Hence, the competitive activities prepare students, teachers and the society.
5. **Repair of the computer, printer, phone, fax etc.:** Most of schools and colleges have phones, computers, printers etc. These accessories may be used for warning and information during the period of emergencies. Such equipment's need to remain functional.
6. **Contingency:** It will be used to establish warning and information cell in each school/college. This cell should be able to communicate with DCR. The contingency fund can also be utilised for the requirements of various teams constituted under SDMP or CDMP.

Department of Higher Education has already taken some prevention, mitigation and preparedness initiatives that are as under:

- National School Safety Programme (NSSP) –A Demonstration Project which was hundred percent centrally sponsored schemes in which Kangra and Kullu districts of the State were covered. Project duration was two years w. e. f. 2011-2013. Under this project, 200 schools from each district were covered. Various activities viz. TTP, preparation of SDMP, distribution of school safety Disaster Preparedness kit, and mock drills were conducted for the selected schools.
- State Council of Educational Research and Training (SCERT) has also taken the initiative for creating awareness to minimise the impact of disasters. In this connection, three projects were sanctioned by the Relief Commissioner, Principal Secretary Revenue Department, Government of Himachal Pradesh. Under these projects schools of other ten districts and the remaining schools of Kangra and Kullu districts are covered with the aim to reduce the risk. Teacher training of Shimla, Solan, Sirmour, Kinnaur, Bilaspur and Una districts are being conducted at SCERT of Himachal Pradesh. Training of the remaining districts is being conducted at Government College of Teacher Education (GCTE) Dharamshala.

Activities organised in these projects are as under:

- First intervention of school safety programme is through the advocacy of School Principals and Headmasters. During the advocacy threat posed by natural calamities is discussed. This discussion is followed by Prevention, Mitigation and Preparedness initiatives. Principals and Headmasters were persuaded to spare time for the activities of School Safety Project.
- Advocacy of heads is followed by TTP. Demonstrator of Physical Education (DPE) and a Lecturer at Senior Secondary Schools; Physical Education Teacher and a TGT from high schools are invited to attend the training. Two teachers from each school are trained. In these training Hazard profile of the State, Need and Concerns of School Safety, Lifesaving skills, Structural and Non-Structural Mitigation measures; School Disaster Management Plan

(SDMP), the operation of fire extinguishers and rescue methods of evacuations are discussed. Schools were asked to prepare their respective safety plans.

- The schools attending the TTP are given printed reading material along with a DVD loaded with IEC material in the form of PDF files, Word documents, Powerpoint presentations and a collection of documentaries. These schools are also given five hundred rupees to be used as prize money for organising student's competitive activities.
- One selected Senior Secondary school from a developmental block is facilitated to organise a field survey and submit a report of the same. For this purpose, these schools were given rupees 6580/- as financial assistance. This survey was to be conducted with the help of 10-20 students. These surveys were conducted to assess the seismic awareness and structural risk in the school catchment area. Such activities also create awareness among students and residents of school surroundings.
- In selected schools, mock drills have also been conducted with the help of Fire Brigade officials, teachers and students to build a culture of preparedness. Schools of the State have been asked to conduct mock drills at least four times in a year. Two dates have been fixed viz. 4th April-the Kangra earthquake anniversary and 13th of October- on the eve of International Day of Risk Reduction.
- In selected schools NGOs, have also organised awareness activities. Besides awareness campaign SEEDS India has done retrofitting and conducted mock drills.

Some of the key Pre-Disaster Activities to be carried out by Department of Education:

- Formation of Disaster Management Cell and manning the same by senior personnel drawn from key Directorates.
- Incorporating costs for preventive and mitigation measures for earthquake, flood, fire and cyclonic storm-prone areas to construct disaster resistant school buildings.
- In association with Fire Dept. getting fire extinguishers installed in schools and teachers identified and trained in operating them.
- Awareness Generation Programmes about Hazard, the kind of preparedness required and how to act at the time of disaster shall be organized in schools on monthly basis.
- Disaster Management is made an integral part of the school curriculum.
- The Department shall get quality films made on hazard wise disaster preparedness and organize their viewing by children and their parents.
- The Department shall in association with Nehru Yuva Kendra organize locality based youth clubs and get them groomed in escort services, relief work and taking care of children, women, old and sick.
- Making adequate arrangements for getting hand pumps installed, storage facilities created, toilet and bathrooms built in those schools where communities do take shelter during the flood. Concerned departments shall either make the arrangements or make funds available for the same. HPSDMA/DDMAs shall coordinate.

6.

Disaster Response and Relief

6.1 Response Plan

Mechanism for Early Warning and Dissemination

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 Incident Response Team. Mass media like TV, Radio, and Press should also be included for awareness.

The State and District Control room will be activated to function round the clock in the affected district. The State IRT shall furnish the status report about the establishment of the control room at the district level. Deputy Director will be responsible to provide all kinds of support to the control room at the district level.

Trigger Mechanism for Response

After the issue of early warning, Deputy Directors of Higher Education of the vulnerable districts will explain the detailed response plan at district level meeting of District Disaster Management Authority constituted in every district in conformity with GOI guidelines for planning, coordinating and implementing various activities.

Response Plan for Responding Effectively and Promptly

The Deputy Directors of non-affected districts will prepare 3 separate teams of NSS, NCC, Scout and Guide, Rangers and Rovers for deployment to the affected areas on the request of State IRT. The first team will be replaced after specified time say 7 days by the second team and so on. All the field staff will be asked to remain at their respective headquarter with necessary preparations as per the standard operating procedure.

The control room will collect, collate and transmit information regarding matters relating to the natural calamities and relief operations undertaken, if any, and for processing and communicate all such data to concerned quarters. The list of volunteers and community resources that are already available should be in readiness to support response measures.

The Control Room shall be manned round the clock during the peak period of disaster till the relief operations are over. For this purpose, one officer, one assistant and one peon will be on duty in suitable shifts. The Officer-In-Charge of the Control Room shall maintain a station diary and such other records as may be prescribed by the department. The particulars of all the information received and actions taken should be entered in the station diary chronologically.

The Deputy Director shall furnish a daily report to the head of the office on the important messages received and actions taken thereon. The head of the office shall indicate the particulars to be released for public information.

Appointment of Nodal Officers

Joint Director of Higher Education (College) will be the nodal officer at the state level and will be supported by Controller (Finance) and an Officer on Special Duty. Department of Higher Education will serve as a support agency for regulating relief operations with the help of NSS, NCC, Scout and Guide, Rangers and Rovers during the disaster. The department will also assist the District administration for spreading the information of do's and don'ts to the people of the affected areas. The Deputy Director of Higher Education will be the nodal officer at the district level to perform emergency support functions.

Roles and responsibilities of the nodal offices are as under: -

1. 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.
2. 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.
3. To be accountable for any communication/actions related to disaster management of the department.
4. To take lead to prepare the department disaster management plan, Emergency Support Function (ESF) plan and Standard Operating Procedure (SOP).
5. To constitute the Incident Response Team (IRT) in the department as per the need and organize training for members.
6. To help the department to procure the equipment necessary for search and rescue, first aid kits and disburse the same to IRTs and for the department if required.
7. 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.
8. To attend Disaster management meeting, training, workshops or any related programme on behalf of the department.
9. To identify an alternate nodal officer and build his/her capacity.
10. To act as per the need of the department, and set up a control room and assign another official (s) for control room duty.
11. To identify the staffs for deployment on-site operation centres (on-site control room during a disaster)
12. To make arrangement of alternative communication system for the department, after consultation with the department,
13. To mobilise 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.
14. To organise regular awareness programmes in the department.
15. To organise 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.
16. To have a liaison with other departments and functionaries working in the field of DM.

Formation of the Incident Response Teams

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

State Level IRT: State-level IRT of the DHE is shown in table 6.1

Table 6.1: State-level IRT for Department of Higher Education

Sl. No	Post	Role
1.	Director	Chairman
2.	Addl. Director (Admn.)	Member
3	Addl. Director (Colleges)	Member
4	Addl. Director (Schools)	Member
5.	Joint Director (Colleges)	Convener-cum-Nodal Officer
6.	Joint Director (Schools)	Member
7.	Joint Controller (F&A)	Member
8	Supdt. (Colleges)	Member
9.	Supdt. (Schools)	Member
10.	Supdt. (Stores)	Member
11	Supdt. (Gen.)	Member

Role and Responsibility of the State Incident Response Team is:-

- i. To coordinate with SDMA, NDMA, and other concerned Government Departments.
- ii. To visit the spot and assist the District Response Team for pre-disaster planning
- iii. To prepare a status report regarding the disaster.
- iv. To facilitate execution of orders for declaring the disaster.
- v. To assess the staff and another logistic requirement for field operation and monitor effectiveness.
- vi. To attend training and refresher courses for how to respond after receiving any information related to the disaster.
- vii. To be familiar with the SOP/ESF/DM plan of the department as well as State DM Plan and their roles and responsibilities.
- viii. To prepare and update the DMP periodically by incorporating the views of stakeholders for the effectiveness of the plan.
- xi. To ensure availability of funds at District level to meet contingency expenses.
- xii. To develop the media messages so as to update the status of disaster mitigation and response work.
- xiii. To monitor and guide the District Response Teams.
- xiv. To maintain an inventory of all related guidelines, procedures, action plans, district maps and contact numbers.
- xv. To document the lessons learnt at different stages of disaster management and make suggestions for necessary addition/alteration.
- xv. To plan to depute officials for the purpose or to 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 April and 2nd meeting in the 1st week of October.

District Level IRT: For district level, IRT members are shown in table 6.2

Table 6.2: District level IRT for Department of Higher Education

SL NO	Post	Role
1	Principal (College)	Chairperson
2	Deputy Director	Convener-cum-Nodal Officer
3	Nodal Officer (IT)	Member
4	ADPEO	Member
5	Section Officer (F&A)	Member
6	Supdt-I	Member
7	Supdt-II	Member

Role and Responsibility of the District Incident Response Team is:-

- i. To coordinate with Department of Higher Education and DDMA.
- ii. To activate Disaster Management Plan.
- iii. To procure required resources as per incident specific action plan.
- iv. To manage the overall response activities in the field.
- v. To deploy adequate staff for the response and monitor its effectiveness.
- vi. To attend training and refresher courses to know how to respond after receiving any information related to the disaster.
- vii. To familiarise with the SOP/ESF/DM plan at District and State level of the department as well as State DM Plan and their roles and responsibilities.
- viii. To prepare and update the district DMP periodically by incorporating the views of stakeholders for the effectiveness of the plan.
- ix. To develop the media messages to update the status of disaster mitigation and response work.
- x. To collect and store disaster-related information for post-incident analysis
- xi. To visit the affected areas to assess the extent of the damage.

Institutional level IRT: For Schools/ Colleges the IRT is shown in table 6.3

Table 6.3: Institutional IRT for Department of Higher Education

SL NO	Post	Role
1	Principal/Headmaster	Chairperson
2	Senior most teacher	Member
3	DM in charge	Convener-cum-Nodal Officer
4	SMC/PTA President	Member
5	Sports teacher	Member
6.	NCC/NSS/Scout &Guide; Rangers and Rovers	

Role and Responsibility of the Institutional Incident Response Team:

- To prepare the school disaster management plan.
- To evaluate the school Disaster Management plan
- To carry out the mock drill twice a year
- To update the plans at regular intervals (at least once a year, and after any significant disaster) to ensure that the plan is workable.
- To look into the structural safety requirements of the school for various hazards (earthquake, fire, floods, cyclone, etc.)
- To earmark fund arrangements for carrying out preparedness and mitigation measures in the school.
- To coordinate with District control room/ EOCs during a disaster the IRT shall.
- To help and monitor the working of different teams engaged in relief operation during an emergency in the institution.
- To look into media management
- To mobilise relief and external support in case necessary for those who have taken shelter in the school (children and outsiders)
- To identify separate shelter places for the school children and also for outsiders in case necessary.
- To form Institutional safety teams.

Institutional Safety Teams: Every Institution will form following safety teams as per guidelines of NDMA and HPSDMA on school safety plans.

1. Awareness Generation, Warning and Information Team
2. Evacuation Team
3. Search and Rescue Team
4. First Aid Team
5. Fire Safety Team
6. Site Security Team
7. Bus Safety Team

IRT shall meet at least twice in each academic session after fifteen days of the meeting of District IRT. Similarly, district IRT shall meet twice in an academic session within fifteen days after getting the proceedings of the meetings/ instructions/ guidelines from State IRT. State IRT's 1st meeting shall be held in the 1st week of April and 2nd meeting in the 1st week of October every year.

Delegation of Authority: At the district level, quick response in case of any disaster is hampered due to want of earmarked funds and power to spend. Therefore, following financial powers need to be delegated to Deputy Directors to facilitate rescue and relief measures in case of any disaster. The expenses should be made from district fund and can be reimbursed later after sanctioning of funds from Relief Commissioner. The details of a delegation of power are in the table given below.

Table 6.4: Delegation of financial power

SL NO	Nature	Maximum Limit of expenditure
1.	Transportation	50,000/-
2.	Material & Equipment	100,000/-
3.	Temporary shelters	100,000/-
4.	Logistic arrangements	100,000/-
5.	Contingency	50,000/-

6.2 Relief and Rehabilitation

Relief and rehabilitation of the persons affected by disasters is an important function post-disaster response. Typically, the tasks of relief and rehabilitation include the following:

- a) Food and Nutrition
- b) Water and sanitation
- c) Health
- d) Medical response
- e) Clothing and utensils
- f) Shelter
- g) Relief camps

Many Departments and agencies of the State Governments will be required to perform important functions relating to relief and rehabilitation. The response plan of the Department should provide detail with the logistic, financial and administrative support necessary for discharging these functions and the manner in which these functions shall be discharged.

DISASTER SPECIFIC RESPONSE PLAN

Disaster-specific response for the DHE is summarized in table 6.5

Table 6.5: Disaster specific response plan for Department of Higher Education

Sl No	Major Disaster	How	Mobilization required	Cost involved
1.	Earthquake	Provision of temporary shelters in open spaces	NCC, NSS, Scout and Guide, Rovers and Rangers, Local volunteers, NGOs, Police, NDRF	Construction of damaged School/College Building & Cost for procuring additional furniture and Teaching Aids
2.	Flood	Provision of temporary	NCC, NSS, Scout and Guide, Rovers and	Construction of damaged School/College Building &

		shelters in open spaces	Rangers, Local volunteers, NGOs, Police, Divers, NDRF	Cost for procuring additional furniture and Teaching Aids
3.	Cloud Burst	Provision of temporary Shelters in open spaces	NCC, NSS, Scout and Guide, Rovers and Rangers, Local volunteers, NGOs, Police, NDRF	Construction of damaged School/College Building & Cost for procuring additional furniture and Teaching Aids
3.	Landslide	Provision of temporary shelters in open spaces	NCC, NSS, Scout and Guide, Rovers and Rangers, Local volunteers, NGOs, Police	Construction of damaged School/College Building & Cost for procuring additional furniture and Teaching Aids
4.	Fire	Provision of temporary Shelters in open spaces	Fire Brigade, NCC, NSS, Scout and Guide, Rovers and Rangers, Local volunteers, NGOs, Police.	Construction of damaged School/College Building & Cost for procuring additional furniture and Teaching Aids
5.	Avalanche	Provision of temporary Shelters in open spaces	NCC, NSS, Scout and Guide, Rovers and Rangers, Local volunteers, NGOs, Police	Construction of damaged School/College Building & Cost for procuring additional furniture and Teaching Aids
6.	Drought/Heat Wave	Provision of drinking water	NCC, NSS, Scout and Guide, Rovers and Rangers, Local volunteers and NGOs,	Water Transportation cost

Supplies in Emergencies

The sources for procurement of tents and temporary shelters within the district and nearest locations are identified, and the suppliers kept informed about the emergency situation, which might require action at their level for production and supply to the identified areas within the shortest possible time. Pre-arrangement for a tie-up with Wholesalers and FCI for procuring food materials will be done. Besides, mid-day meal schools have to provide breakfast and dinner in case of disasters. During an emergency, the food materials become a rare commodity and there is a problem for arranging them.

The occurrence of any disaster will be immediately communicated to the district control room and DDMA. The responsibility of communication lies with the warning and information cell of the school or college. Search and rescue team will start evacuation followed by first aid treatment. This cell should immediately apprise the district headquarters of the calamity and the action which has already been taken. School or college should also ask for more assistance from the district headquarters and should not hesitate to bring to the notice of district officers

about their difficulties. If there is a disruption in telecommunication facilities, the special messenger should be sent to communicate with district headquarters. In case of severe nature of calamity, the Deputy Commissioner of the concerned district should get in touch with the SDMA. He will brief the SDMA about the nature of the natural calamity and the action which he has already taken and further assistance required by him. This should be done without any loss of time.

Norms of Relief

After the disaster, the first attempt will be to count the number of students, teachers and ministerial staff of the School or college. The names of the missing students or the officials along with their possible location in building or room will be given to Search and Rescue team of the institution. Every School or College of the DHE will start search and rescue operations with its own teams. After the process of evacuation is over in the school, the complex schools will be evacuated. The evacuation teams of educational institutions will rescue the public of the catchment area after ensuring the safety of their institutions. NCC/ NSS/ Scout and Guide/ Rangers and Rovers will also be deputed to regulate the relief operations outside the department if desired by the DDMA or on the demand of other departments provided they have completed the evacuation of schools. Expenditure on the vehicle for mobilization of teams and for the arrangement of food, water, and shelter etc. for rescue teams will be borne by the DDMA or the concerned department. An early initiative of relief measures will also win a goodwill gesture from students, their family and affected people of the catchment area. After evacuating the institutions have to address following issues:

- 1. Health:** After evacuating the students and officials, First Aid treatment will be given to the affected and seriously injured will be referred for medical treatment. In the post-disaster scenario, in community shelters, overcrowding, inadequate quantity and quality of water, poor environmental and sanitary conditions, inadequate shelter and food supply leads to increased risk of spreading diseases and epidemics. Under such circumstances, the medical response has to be quick and arrangement of medical resources warrant special attention.
- 2. Food and Nutrition:** Schools already have the arrangement of the kitchen for the preparations of mid-day meal. These facilities have to be upgraded to prepare breakfast and dinner during a severe disaster. For the additional supply of ration, an understanding with the Food and Supply department has to be made especially for disasters.
- 3. Water:** Supply of water is invariably affected by natural disasters. Availability of safe drinking water becomes doubtful, particularly in hydro-meteorological disasters. A severe earthquake also damages existing pipeline water supply. To meet out the scarcity of water in emergencies, natural sources of water near these institutions need to be frequently cleaned and made ready as a backup plan for the sources of water. Besides this IPH department will be contacted to supply an adequate amount of water for drinking, cooking and personal hygiene.
- 4. Shelter:** School building and homes of students may get damaged or destroyed in a severe natural calamity. Community shelters or tents have to be arranged for the stay

of students till the normalcy. Situations may compel the schools to run classes in tent houses even for long times. Priority should be given to acquiring tents donated by the community. District headquarter may be contacted for the supply of tents from district stores.

- 5. Uninterrupted Schooling:** After completing the search and rescue operations class work in the educational institutions should start at the earliest. Teachers may have to start in the initial days with the attention-diverting activities to students suffering from social and psychological losses. For actual class work to start necessary teaching aids such as chalk, blackboard, maps, diagrams, stationery etc. may be required to be mobilized from district headquarters.

Relief measures will vary with the nature and degree of natural calamity. Information on the amount of damage done will help in deciding the extent of relief, reconstruction or rehabilitation. An educational institution has to make arrangement for food, water, medicine, clothes, tents, teaching aids, books, alternative lightening system etc. The detailed loss of life and property will be assessed immediately after the completion of rescue operations. The following measures may require being taken in the event of a calamity: -

1. Evacuation of the students and teachers to a safer place;
2. Arrangement of shelter accommodation for the students who lost their families or due to damage to classrooms;
3. Arrangement for medical facility;
4. Provisions of Free ration school or college kitchen for a certain period of time;
5. Arrangement of safe drinking water;
6. Provision of beddings like blankets and clothing to the victims;
7. Arrangements for teaching aids;
8. Informing the relatives of the students or teachers who have been affected;
9. Disposal of dead bodies and medical aid to the injured persons;
10. Processing the cases of deaths or injuries for relief assistance;
11. Provision of Sanitation and public health measures like Spraying of medicines, disinfectants should be undertaken
12. Provision to cope with the hostile climatic conditions of the state.
13. Special arrangements for girls or children with disability;
14. Provision of funds for reconstruction or repair of institutional buildings;

The losses of life and property will be reported in the prescribed formats as per guidelines laid in the HP Disaster Management and Relief Manual 2012. As per Relief Manual the report of the first/preliminary information in the form given in Annexure – B of the manual may be compiled and sent to Relief Commissioner. This should be followed up with a detailed report containing a description of the event, damage/loss details, causes, pictures etc. A standard reporting format for damage reporting during monsoon or any other occasion specifically desired by the Relief Commissioner is given at Annexure – C. Generally, in case of large-scale

and monsoon damages the State submits a memorandum to the GOI for allocation of funds out of NDRF. For this purpose, the consolidated report of damages for the district should be sent in the form given in Annexure – D. In case of a disaster like an earthquake a damage assessment reporting format is given at Annexure – E should be more relevant.

In case of a severe disaster, the number of injuries or deaths will be processed for the necessary certification and relief as given in the HP Disaster Management and Relief Manual, 2012.

Minimum Standard of Relief

In case of a severe earthquake or another natural calamity, the homes of people may be destroyed along with school or college buildings at the mass level in the State. After completing search and rescue operation, an attempt will be made for the arrangement of medical treatment of the injured, food and water. These arrangements will be followed by classroom teaching at the earliest. For this mobilization of food items, medicines, teaching aids, tents and clothes from the department store will be arranged by the district headquarter in consultations with the school or college as per their requirement. The relief material to the remote part of the State will need air dropping. It can be done with the help of air force helicopters or airport authorities. Department will depend upon DDMA for the lifting of relief material to such places.

SDMC or CDMC need to ensure that teaching-learning process should start at the earliest. This can only be done when teachers and managers of education are self-sufficient and relying on their own resources to protect and care students. Only a prepared school can provide relief effectively. Students are the most affected by disasters. Their houses may be destroyed or parents lost in disasters which can cause social and psychological changes in innocents. On the other hand, their studies also suffer. Under such circumstances, they need to be provided with all necessary measures needed to carry on their studies that are summarized as under:

1. Free of cost textbooks and stationery;
2. Free school uniform;
3. Stay arrangement;
4. Exemption from school fee;
5. Processing the relief cases as per provisions in HP Disaster Management and Relief Manual, 2012 or their revision as per guidelines of the Himachal Pradesh Government.

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

Till date, the department has been assessing the direct loss to the infrastructure and reconstruction which has to evolve to an approach where the indirect losses can also be accessed and addressed at the time of recovery and 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.

Rehabilitation Plan

A very important task before the School Disaster Management Committee or College Disaster Management Committee is to create a safe learning environment at the earliest.

School management will provide all the human and material resources till the rehabilitation of affected children in association with DDMA, SDMA and NDMA. School Children need to be provided food, safe drinking water, shelter and continuous schooling till the rehabilitation of all the displaced people. A close relationship between government and community actions will be established till the restoration of basic and alternative means of livelihood of their families.

School Children need special attention in case of loss of their parents and wards. Besides human and material resources they need social psychological rehabilitation. For housing rehabilitation, the existing inhabited settlements may be completely reconstructed at a new site for which, if required, land acquisition will be done. Housing rehabilitation would also be carried out by way of up gradation of existing damaged houses through repairs and retrofits.

Infrastructure such as roads, water supply, sewerage, school, health centres will be rehabilitated on priority.

Action Plan for Reconstruction

Reconstruction is time and funds absorbing phase of disaster management. The construction department will be persuaded to include disaster resilient features in new constructions. Reconstruction programmes will be within the confines and the specification as laid down by the by the government known as National Building Codes. The work of the new construction will be completed in a long time. Schools are to run in shelter accommodation by the time new construction is complete. Essential services in shelters/camps will be established in the shortest possible time.

Financial Mechanism

It is very difficult to estimate the budget requirement for relief and rehabilitation phase of disinterment phase of disaster management. Funds required for this head will depend upon nature and intensity of natural calamity. However, the budgetary requirement can be reduced considerably by addressing structural and non-structural mitigation measures.

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 Department of Higher Education 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 sizeable and the departments may not find it difficult to arrange such funds. Higher Education department plans will ensure 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 higher education department has scope of using the flexi funds from the CSS like Rashtriya Madhyamik Shiksha Abhiyan (RMSA), Sarva Shiksha Abhiyan (SSA) & Rashtriya Uchchatar Shiksha Abhiyan (RUSA) 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.