

**DRAFT**



**GOVERNMENT OF HIMACHAL PRADESH**

**State Forensic Science Laboratory.**

**DISASTER MANAGEMENT PLAN**

**2017**

**State Forensic Science Laboratory,  
Directorate of Forensic Science,  
Himachal Pradesh, Junga-171218, Shimla Hills.**

## **Chapter-1: Introduction**

### **1.1 Overview of the Department**

Himachal Pradesh got full statehood on 25th January 1971 and since then the State has progressed by leaps and bounds. Efforts were on to have its own State Forensic Science Laboratory which came to fruition in 1988 so as to become self reliant in the application of science in the investigation of crime and the administration of justice besides keeping pace with the modernized criminals and to meet their challenges in the times ahead.

Mass casualty incident (MCI) / Disaster is an event, which causes a great loss that may be in the form of human lives or infrastructure. Disasters causing mass casualties can be classified as: 1) Natural Disasters that may be either due to geological causes like earthquakes, landslides, tornadoes, etc., or medical causes as seen in the epidemics. 2) Manmade disasters, as for example, accidents like Road Accidents, airplane crashes, stampede etc., or warfare and terrorism. With development and modernization the major causes for mass casualties have shifted from natural to the man made causes.

### **1.2 Purpose of the Plan**

Need for disaster management plan for Forensic Medicine expert so that Medical officers and Forensic expert can efficiently work during mass disaster. There are certain fundamental principles which should be thoroughly understood by everyone who may have responsibility for helping the victim of a disaster, it is important that these principles be applied in the proper sequence; otherwise they lose effectiveness or cause even more deaths and injuries.

When a mass fatality incident occurs, identifying the bodies is an intensive and, in some cases, time consuming process, which is often perceived as taking too long by the surviving relatives. In most cases it is not the recovery of the bodies and recording their description that takes so long. It can often take much more time to obtain and collect the ante mortem information needed to identify the victim, especially if that information has to come from abroad.

A lack of understanding of the international procedures used to identify victims and the time the identification process, can often lead to dissatisfaction amongst surviving relatives and the relevant authorities regarding the speed of the identification process.

Following a mass fatality incident partnership between the countries is of paramount importance. The identification process can be expedited by prompt consultation between

the representatives of the countries involved, with consideration to the magnitude of the disaster and an understanding of the Disaster Victim Identification (DVI) process itself.

Local authorities, also the relevant diplomats of the affected countries can play a vital role in alleviating the suffering of surviving relatives by communicating clearly and specifically regarding the situation and events, as well as the progress of the investigation.

### **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:**

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:**

Junga is situated at a distance of 26 KM from Shimla, 22 KM from Kandaghat and 18 KM from Chail. It is a hilly place having a forest cover of Kail, Deodar, Cheel, Oak and other trees.

#### **Infrastructure:**

The buildings of State Forensic Science Laboratory, Himachal Pradesh, and Junga have covered area of about 28000 square feet. The work is in progress for planned expansion of additional divisions /specialties in the State FSL.

There are six scientific Divisions:

- i. Biology & Serology Division.
- ii. Chemistry & Toxicology Division.
- iii. Physics & Ballistics Division.

- iv. Documents and Photography Division.
- v. Narcotics & Drugs Psychotropic Substances Division
- vi. DNA Profiling Division

Biology & Serology; Chemistry & Toxicology Divisions are fully functional since 1990. In Physics and Ballistics Division, examination of some physics cases has started in 1999, however, for Ballistics work examination of cases started during the year-2002 and the division is fully functional. As regards Documents and Photography Division, the division is fully functional since October 2000. The analysis of narcotics drugs and psychotropic substances started in November 2006. Also in changing crime scenario measures are being taken to address new challenges of modernized crimes timely and objectively by adopting innovations of science and technology in the Forensic Sciences. The State FSL has seventy four sanctioned posts of scientific and supporting staff.

The state Government also created two Regional Forensic Science Laboratories on each at Mandi and Dharmshala in the year 2006, which have been setup in rented buildings at both the places during the financial year 2008-09.

### Organogram & Human Resources of the State Forensic Laboratory

#### DIRECTOR - 1

BIOLOGY & SEROLOGY DIVISION	CHEMISTRY & TOXICOLOGY DIVISION	OFFICE	PHYSICS & BALLISTICS DIVISION	DOCUMENTS & PHOTOGRAPHY DIVISION.	NDPS DIVISION	DNA PROFILING DIVISION
Asstt. Director-1	Asstt. Director-1	Superintendent. -1	Asstt. Director-1	Asstt. Director-1	Asstt. Director-1	Deputy Director -1
Scientific Officer-1	Scientific Officer-1	Sr. Assistant. - 2	Scientific Officer-1	Scientific Officer-1	Scientific Officer-1	Asstt. Director-2
Scientific Asstt.-2	Scientific Asstt.-2	Jr. Scale Steno-2	Scientific Asstt.-1	Scientific Asstt.-1		Scientific Officer-2
Laboratory Asstt.-3	Laboratory Asstt.-3	Clerks-4	Laboratory Asstt.-2	Laboratory Asstt.-2		
Lab. Attendant-3	Lab. Attendant-3	Stenotypist-4	Lab. Attendant-2	Lab. Attendant-2		
		Computer -1				
		HC-1 (Guard)				
		Constable-4				
		Constable Driver-3				
		Peons-7				
		Mali-1				
		Sweeper-2				

### Regional Forensic Science Laboratory Mandi & Dharamshala

**DEPUTY DIRECTOR - 1**

<b>BIOLOGICAL SCIENCES DIVISION</b>	<b>CHEMICAL SCIENCES DIVISION</b>	<b>PHYSICAL SCIENCES DIVISION</b>	<b>MINISTERIAL STAFF</b>
Assistant.Director-1	Assistant Director-1	Assistant Director-1	Sr.Assistant-1
Scientific Officer-1	Scientific Officer-1	Scientific Officer-1	Clerk-1
Scientific Assistant-1	Scientific Assistant-1	Scientific Assistant-1	Jr.Scale Steno-1
Laboratory Assistant-1	Laboratory Assistant-1	Laboratory Assistant-1	Stenotypist-1
Laboratory Attendant-1	Laboratory Attendant-1	Laboratory Attendant-1	Peon-2
			Sweeper-1
			Constable Driver-1

### **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 stake holders.

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**

The primary responsibility for dissemination of the plan will be with the State Forensic Science Laboratory. They would involve HPSDMA for capacity building at different levels for training and dissemination. The Disaster Management Plan will be disseminated at three levels: District authorities, government departments, hospitals/ health centers 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 in the department website of department. A printed document will be supplied to all the stakeholders.

## **Chapter-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, snow storms, 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 and bring back economy a few years ago. 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 Assessment of Sectoral and Departmental Risks**

Department Management of the dead is one of the most difficult aspects of disaster response. It has profound and long-lasting consequences for survivors and communities. Globally, disasters claim thousands of lives each year. However, care of the deceased is often overlooked in disaster planning and the absence of guidance for first responders has recently been highlighted following several large disasters.

Immediately after a major disaster, identifying and disposing of human remains are often done by local communities. Forensic specialists may not be available or unable to rapidly access the affected area. There are simple steps that first responders can take to ensure the dead are treated in a dignified way and that can assist in their identification. Sooner is better for victim identification. Decomposed bodies are much more difficult to identify and require forensic expertise.

#### **Gaps in Existing Capacity:**

During a multiple-casualty incident, a large casualty caseload adversely affects the quality of trauma care given to individual patients. From a trauma care perspective, the goal of the hospital emergency plan is to provide severely injured patients with a level of care that approximates the care given to similar patients under normal conditions. Therefore, the realistic admitting capacity of the hospital is determined primarily by the number of trauma teams that the hospital can deploy. Effective triage of these casualties is often not straightforward, with high over triage rates. Simplified triage algorithms may be a practical alternative to more elaborate schemes. The concept of minimal acceptable care is the key to a staged management approach during a mass-casualty incident. However, any plan without provision for the dead during a mass casualty incident will obviously be found lacking, leaving a massive and unprepared crisis.

It is difficult to get most people to consider the unthinkable, yet unimaginable mass casualty incidents will always occur. This inevitability of MCI should not give rise to a fatalistic attitude, for that removes the need to plan and prepare. Today, mass casualty management itself is considered as a discipline. It requires the cooperation and coordination of various professions such as administration, police, medical, forensic experts, fire service, civil defence, public work services (including water and power supply, transport and telecommunication etc), seismologists, hydrologists, geologists, NGOs etc. All these disciplines and professions are essential at different levels in the course of management. In India, there is a dire need to incorporate forensic medicine specialist on the pattern of western countries where Forensic Pathologist plays an integral role in the management of mass disaster. He/She is a key member in both Disaster Victim Identification as well as Disaster Investigation teams.

## **Chapter-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 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 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 each single building is a very expensive and time consuming process hence department can initially select the 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 further stage of vulnerability assessment and retrofitting is required or not in the particular.

**Forensic Department usually possess the evidences of many criminal cases which itself can be hazardous in nature for this the Laboratories should develop premise for such material which can help in rapid disaster recovery in post disaster situation. Similarly the data and information stored in the information system of the department should have a backup disaster recovery plan in place for business continuity management.**

#### **Role of Forensic Expert**

Role of Forensic Expert is of immense value due to medico-legal nature of all the cases especially in 'Man Made Disasters' like terrorist attack etc., and when MCI Recommendations are that emergency services to be brought under the supervision of Forensic Medicine Department and posting of Inters for two weeks in the casualty under the supervision of Forensic Experts.

#### **Role as a Leader:**

Forensic Expert being an expert of medico legal nature of cases and also having administrative e knowledge and experience of working with law enforcement persons, must come forward and play a role as a Leader in such disastrous situations.

#### **Role as a doctor:**

The primary role of doctors should be to function as a doctor and they should not be diverted, to other functions, and keeping in mind the directions of S.C. regarding treatment offered to a patient in emergency situation. No patient left unattended & treatment must not be delayed in the name of medico-legal nature of the cases.

### **Role as a Coordinator:**

Forensic Expert must act as a Coordinator of following's activities:

- Nursing staff,
- NGO's (like Red Cross for ambulance services, setting up first aid team, help in providing food, drink, and temporary shelters for victims and rescuers, supply of drugs and equipments, help in rehabilitation, supply of cloths blankets etc.)
- Volunteers (like NCC, NSS etc.) for rescue, first aid, evacuation etc. the volunteer's should act in coordination with professionally trained persons. The volunteer's help should correspond as closely as possible to his training and experience- (Grab & Eng.-1969).

### **Public Health Work Personnel:**

- To perform any work that would lessen the chance of a 'Secondary Disaster' and then take other activity to support the rescue operation.

### **The usual task to be performed includes:**

- Removing traffic jams or road blocks so that clear passage may be available for relief vehicles, ambulance, and fire brigade vehicles etc.
- Prevention of any untoward effects like break down of electric, water, and gas supply.
- To assist Fireman in obtaining adequate water for Fire Fighting.
- Rescue operations particularly of removing victims from under debris etc.

### **Prevention of Health Problems:**

Prevention of 'Secondary Disaster': 'Secondary Disaster' means 'Disaster After Disaster' or 'Disaster Over Disaster' due to law and order problems during treatment or at any stage of disaster management, like public outrage, conflicts between hospital staff and attendants of patient's or so called self made local leaders, creating strike like situation.

### **Disaster Victim Identification**

The DVI process is an internationally recognized sequence of activities that has been developed over several years. It has been tested in large scale disasters in many regions across the world and has proven to be a reliable method by which victim data in the form of post-mortem material can be matched against missing person data. The aim of this matching process is to positively identify human remains.

Whilst technology in the form of evolving software products has greatly enhanced efficiency levels during DVI operations, it should be remembered that these developments cannot replace specialist skills that are critical when dealing with victim's families and friends, or when arriving at conclusions of identity through the close analysis of relevant data.

These skills should be incorporated into coordinated and cohesive teams to ensure that the following phases of the DVI process are performed effectively and efficiently:

- Phase 1: Scene (processing human remains and property at the disaster site).
- Phase 2: Post-mortem (detailed examination of human remains in mortuary).
- Phase 3: Ante-mortem (collection of missing person data from various sources).
- Phase 4: Reconciliation (matching post-mortem and ante-mortem data).

### **Mitigation/Prevention Efforts by FSL: Exit Routes defined**

1. Main Administrative Block:
  - a) Ground floor and basement: All the personnel at the ground floor (crime branch, NDPS section) and basement (firing range, physics division) need to exit out the building from the door leading to Biology and DNA block and reach the parking by following the trail on the south of Biology and Chemistry block.
  - b) First floor: All the personnel at first floor (AD Documents, AD DNA and Cyber Forensic Unit) need to exit out the building from the door leading to Chemistry division and reach the parking by following the trail on the south of Chemistry block.
  - c) Second floor and Top floor: All the personnel at the second floor (AD Chemistry and Establishment Branch) and top floor (Director DFS, PA, VC facility) need to exit out the building from main door and follow the main entry road to the parking ground.
2. Chemistry Block: All the personnel at the chemistry block (Chemistry and Toxicology Division, Building material and voice analysis section of Physics division) need to exit out the building from main entry door at the ground floor and reach the parking by following the trail on the south of Chemistry block.
3. Biology Block: All the personnel at the Biology Block (Biology and Serology Division, Documents division) need to exit out the building from main entry door at the ground floor and reach the parking by following the trail on the south of the Biology and Chemistry block.
4. DNA Block: All the personnel at the DNA (DNA, Division, Physics division and NDPS division) need to exit out the building from the independent entry door provided at each floor reach the parking by following the trail on the south of Biology and Chemistry block. DNA personnel and the basement can exit from the door to the north of the basement.

## Chapter-4: 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 Senior Officials of the department and the other for Lab Assistants/support staff/Technical Staff. For Senior Officers of the FSL one day advocacy programme will be organised at State level and for others two/three day sensitization programme will be conducted. The team members of FSL will be trained to make their laboratories safe by preparing safety plans and practicing mock drills. Managers of FSL will facilitate the efforts of risk reduction. Trainings for Capacity building will be conducted at two levels:

**State Level Advocacy Programme:** This programme will be for senior functionaries of the department. It will be of one day duration. Director, Joint Director, Assistant Director, and Deputy Directors of Higher FSL will participate in it from all the offices of the FSL. State Nodal Officer will organise one day advocacy programme. Director/Joint Director will Chair the advocacy programme. This programme can be conducted in coordination with the Department of Health & Family Welfare and Police Department or other stakeholders of the department to mainstream the efforts in the major stakeholder departments.

**Regional level Capacity Building Programme:** A similar capacity building programme will be organised at the regional level to sensitize the field/district staff working at the cutting edge. In this programme, personnel who have attended the State level programme will facilitate at regional level. Here the participants will be Scientific Officers, Lab Assistant/Technicians/ Other staff members including the Mandi & Dharamshala officials. Depending upon the numbers of the participants, the training batches will be decided. A batch size should not exceed 50 participants. This training will include basic Search & Rescue, fire safety and evacuation drills.

### 5.2 Measures for Disaster Preparedness

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

1. **Necessary Items:** Items in this head include power backups, 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 falling hazards that can harm during earthquake.

3. **IEC material:** Pamphlet, brochures or booklets that can be developed to distribute in the Catchment area of the institutions.
4. **Repair of computer, printer, phone, fax etc:** Most of laboratories have phones, computers, printers etc. These accessories may be used for warning and information during the period of emergencies. Such equipments need to remain functional.
5. **Contingency:** It will be used to establish warning and information cell in each building. This cell should be able to communicate with District Emergency Operation Centre. The contingency fund can also be utilised for the requirements of various teams constituted.

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

- 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 storm prone areas to construct disaster resistant buildings.
- In association with Fire Dept. getting fire extinguishers installed in laboratories 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 laboratory on monthly basis.
- Making adequate arrangements for alternate laboratories/mobile laboratories, adequate functional power backup systems in the existing laboratories.

**Efforts & Recommendations:**

**Dealing fire breakout:**

- Fire fighting equipment:- Fire fighting equipment like fire extinguishers and sand buckets have been installed at various areas that may be susceptible to fire breakout.
- Installation of fire alarms:- Fire alarms need to be installed at various zones of the lab that may be susceptible to fire.
- Fire proof vaults and cabinets for storage of case property: Fire proof vaults need to be created in addition to fire proof cabinets for storage of case property and important documents.
- Exit routes in case of Fire: Exit routes in case of a fire breakout have been identified and demarcated.

**Dealing earth quakes:-**

- Exit routes: Exit routes in case of an earth Quake have been identified for each block and their respective floors. All the staff personnel have been made aware of the emergency exit route in case of an earth quake.

- Creation of earthquake proof vaults for storing case property: FSL deals with the analysis of crime case exhibits which are received from crime investigation agencies. The crime case exhibits may include physical evidence in diverse forms; like biological material, explosives, viscera, documents, firearms, weapons, clothes, narcotic substances, computers, mobiles, corrosive chemicals etc. The evidence material is a very important material with respect to various crimes and need to be preserved in all circumstances. Earth quake proof vaults need to be created to store case property.
- Further, keeping in view the diverse nature of the exhibits, the vaults need to design as per the requirement of each division.

#### **Exiting the building in case of an eventuality:-**

- **Alarms for Emergency Exit:-**
  - ✓ Alarms need to install at various location for alerting personnel for an emergency exit.
  - ✓ The control of the alarms shall be with the security department further alarms should be easily accessible to any individual who is first to sense an emergency.
- **Gathering after Exit and further action:-**
  - ✓ All the personnel have been directed to assemble in parking ground by following the exit routes.
  - ✓ Once all the personnel have assembled, any one missing shall be identified and efforts to trace the whereabouts of the missing shall be initiated.
  - ✓ Simultaneously the disaster management authorities, ambulance, local police, fire brigade and home guards shall be intimated about the eventuality.
  - ✓ Machinery available at the premises shall be pressed into action deal the eventuality till the arrival of specialised man power and machinery.
  - ✓ First aid kits have been provided at various regions in the building and the same can be put to use.

## **Chapter-5: Disaster Response and Relief**

### **5.1 Response Plan**

Disasters and serious incidents, whether or not caused by human intervention, often lead to large numbers of casualties and fatalities. Following incidents such as these many public and private bodies set out to alleviate the suffering of the injured victims and surviving relatives as much as possible.

Victim identification forms part of this process. The return of an identified body to the surviving relatives not only enables them to pay their last respects to their loved ones in a fitting way, but can also aid their own grieving process.

In today's global society it is unusual for disasters to have no more than national impact: it is often the case that people from several nations are involved. The governments of the countries whose citizens have fallen victim to a disaster share the responsibility for ensuring that the victims are treated with dignity through a transparent process.

Authorities can play a vital role in this process. This can be achieved not only by facilitating the identification process and providing support, but also by communicating honestly and effectively regarding the Disaster Victim Identification process and how it is expected to progress. Communication particularly the methods of identification and providing realistic time frames can make an important contribution to help alleviate the suffering of surviving relatives.

HP State Government had sanctioned funds for setting up of Disaster Victim Identification Cell (DVI Cell) in the year 2014-15 and accordingly the Directorate of Forensic Science, Himachal Pradesh has established a DNA based Disaster Victim Identification Cell (DVI Cell) at the State Forensic Science Laboratory, Junga in the year 2015-16.

The DVI Cell facility which is first of its kind dedicated facility in the nation was formally inaugurated by the Honorable Chief Minister on 16th December 2015. DVI Cells have also been created at Range Forensic Labs at Mandi and Dharamshala respectively.

The facility has capacity to store biological tissue samples from hundreds of victims in the event of a disaster to carry out DNA profiling for the same. The facility can store samples at ultra low temperatures for long time and even in the event of power failure has backup system to keep the samples frozen.

The genesis of the facility is closely linked to the Holiday Horror tragedy that occurred at the Larji Dam in 2014, whereby 25 engineering students from Hyderabad were washed away by the sudden discharge of water from the Larji Dam. Identification of the victims became an issue with passage of time as conventional anthropological methods are not applicable to bodies in advanced stages of putrefaction.

HP State FSL took the initiative and carried out DNA profiling of the bodies recovered from the Dam and accordingly made liaison with Andhra Pradesh FSL to obtain the DNA profiles of the parents of the victims. Based on the DNA profiling results, bodies were sending by the Administration to right kin. This also saved the parents of the victims from the emotional trauma of traveling to the site of tragedy. Quite recently, in the month of April 2017 a bus fell in to a deep gorge in Nerwa area of Shimla District. As per record 45 individuals lost their lives in the accident. In this accident one of the bodies has been rendered unrecognizable by the impact of the accident.

The DVI Cell of the state FSL in currently carrying out the DNA profiling of the remains of the body to match it with the kin. As sampling of the right tissue material for DNA profiling imperative for proper DNA profiling; training workshop for Medical Officers was organized by the Directorate of Forensic Science at it Range Forensic Science lab (RFSL)at Dharamshala in 2015. Further during the Larji tragedy a trained technical staff from RFSL Mandi, was provided to the Zonal Hospital Mandi for proper sampling of tissue material.

Interpol has also given guidelines regarding identification of the victims of disaster and Disaster Victim Identification guide elaborately mentions the use of scientific tools, especially DNA for identification of victims.

### **Trigger Mechanism for Response**

After issue of early warning, Deputy Directors of FSL 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. At State level the FSL the State nodal officer will coordinate with the SEOC and SDMA for the response.

### **Appointment of Nodal Officers**

Director/Assistant Director of FSL will be the nodal officer at state level and will be supported by Controller (Finance) and an Officer on Special Duty. FSL will serve as a support agency for regulating relief operations with the help of Police Department & Health department during the disaster.

**Roles and responsibilities of the nodal officers:** Roles and responsibilities of the nodal officer are as under:-

1. 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. 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. Accountable to any communication/actions related to disaster management of the department.
4. Take lead to prepare the department disaster management plan, Emergency Support Function (ESF) plan and Standard Operating Procedure (SOP).
5. Constitute the Incident Response Team (IRT) in the department as per the need and organize training for members.
6. Help the department to procure the equipments necessary for search and rescue, first aid kits and disburse the same to IRTs and for the department if required.
7. 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. Attend Disaster management meeting, trainings, workshops or any related programme on behalf of the department.
9. Identify an alternate nodal officer and build his/her capacity.
10. As per the need of the department, set up control room and assign other official (s) for control room duty.
11. Identification and staffs for deployment on site operation centers (on site control room during a disaster)
12. In consultation with the department, make arrangement of alternative communication system for the department.
13. 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. Organise regular awareness programmes in the department.
15. 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 liaison with other departments and functionaries working in the field of DM.

## **Chapter 6: Financial Resources for Implementation of DMP**

Section 40(2) of the Disaster Management Act stipulates that every department of the State, 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 Board. Such funds are not very sizeable and HPPCB will allocate such funds within their normal budgetary allocations from coming budget year for risk assessment and preparedness.

State Forensic Laboratory should make financial allocations in preparing and executing the disaster management plan. The Director (Finance) should plan for the following:

- Funds for Prevention and Mitigation Activities
- Funds for Preparedness and Training Activities
- Funds for Response Activities (including pre-authorization to draw money from treasury in the event of an immediate emergency)
- Funds for Disaster Risk Insurance

## **Annexures:**

- Important Contact nos. of Officials.
- Any Disaster Management Committee if formed.
- Disaster Management related any notifications by the Department.
- If any SOP developed by the department.