

## CHAPTER-I

### PERFORMANCE REVIEWS

#### DEPARTMENT OF DISASTER MANAGEMENT

#### 1.1 PERFORMANCE AUDIT OF DISASTER MANAGEMENT

##### Highlights

A scheme, 'Calamity Relief Fund (CRF)', was conceived on the recommendations of the Ninth Finance Commission (January 1991) to build a safe and disaster resilient India by developing a holistic, proactive, multi-disaster oriented and technology driven strategy through a culture of prevention, mitigation, preparedness and response. The State received ₹ 499.43 crore (Central share: ₹ 376.34 crore and State share: ₹ 123.09 crore) in the CRF, against which ₹ 472.21 crore was spent during the period 2005-10. The performance audit of Disaster Management revealed State Government's lackadaisical approach towards implementation of important aspects of disaster prevention, mitigation and preparedness. The State Government had yet to frame the guidelines, policies and rules as envisaged in the Disaster Management Act, 2005. Further, the State Disaster Management Authority was virtually non-functional since its inception in October 2007. Important points are indicated below:

➤ *The State Disaster Management Authority formed in October 2007 was virtually non-functional as it met only once (January 2008). The State Government also failed to ensure incorporation of disaster prevention into the development process as envisaged in the act.*

*[Paragraph 1.1.6.2 & 1.1.8.1]*

➤ *In absence of critical infrastructure such as trauma centre, the affected population could not be given immediate medical attention.*

*[Paragraph 1.1.8.5]*

➤ *Assessment of structural and non-structural safety of school buildings and identification of necessary mitigative action was not included in the school safety programme, leaving 39 per cent of school buildings unattended.*

*[Paragraph 1.1.8.6]*

➤ *Reliable communication system was inadequate as the delay in sharing of disaster information ranged from one to more than 24 hours.*

*[Paragraph 1.1.9.3]*

➤ *Despite incurring an expenditure of ₹ 22.55 crore, the construction works were incomplete for want of release of second installment. Restoration works undertaken under the CRF scheme were delayed by 12 to 24 months since the occurrence of disaster.*

*[Paragraph 1.1.10.3 & 1.1.10.4]*

➤ ₹41.77 crore was sanctioned from CRF for inadmissible construction works in violation of norms of the scheme.

[Paragraph 1.1.10.5]

➤ In absence of Rehabilitation & Resettlement policy, 80 identified villages of selected districts could not be rehabilitated.

[Paragraph 1.1.10.8]

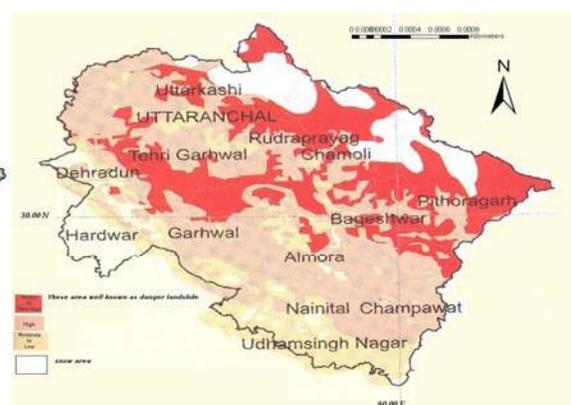
### 1.1.1 Introduction

The State of Uttarakhand, due to its complex terrain and ongoing tectonic activities, is highly prone to hazards like earthquakes, landslides, cloud bursts, and flash floods. The State also experiences a large number of forest fires and road accidents every year. Of the 13 districts of the State, four districts fall completely and five partially in Zone V of Earthquake Risk Map of India. The remaining parts of the State fall in Zone IV. Earthquakes are the most devastating disaster in the mountains and are unpredictable. However, no major earthquakes (> 6 magnitude) after Chamoli (1999) have been experienced in Uttarakhand. In the last five years (2005 onwards), Uttarakhand has also experienced a series of landslides/cloud bursts in Uttarkashi (2005), Ramolsari (2005), Devpuri (2007), Baram (2007) and Law-Jhekla (2009).

Chart-1.1.1 : Earthquake Risk Map of Uttarakhand



Chart-1.1.2 : Landslide hazard zonation of Uttarakhand



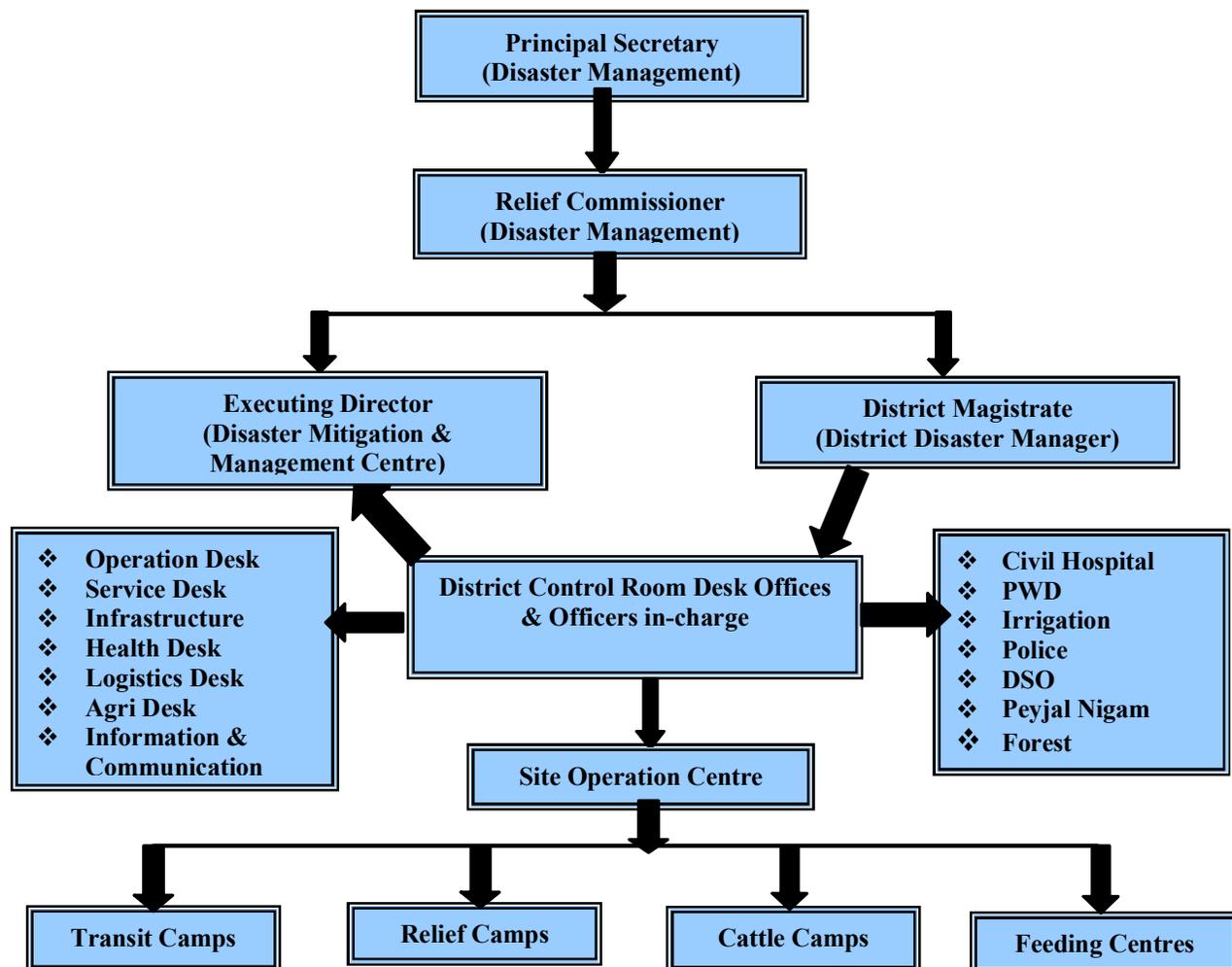
Source: Geological Survey of India

### 1.1.2 Organisational Set-up

Department of Disaster Management of the Government of Uttarakhand (GOU) is the nodal department in the State responsible for co-ordinating and implementing all disaster management related affairs. This includes pre-disaster hazard and risk assessment, planning, framing of appropriate policies, inter-departmental coordination, training and awareness and mainstreaming of disaster risk reduction related works together with coordination of relief and rescue efforts during the disaster and rehabilitating and restoration in the post-disaster phase.

- **State level:** The Department is headed by Principal Secretary, Disaster Management & Rehabilitation and relief and rehabilitation related matters are looked after by the Additional Secretary of the department. The department also has an autonomous institution namely Disaster Mitigation and Management Centre (DMMC) for undertaking disaster related studies and for providing technical support to the Department. DMMC is also responsible for managing the State Emergency Operations Centre (SEOC), throughout the year.
- **District level:** District Magistrate through District Emergency Operations Centre (DEOC) under the control of District Disaster Manager.
- **Local level:** Tehsil/Block/Village through Site Operations Centre under the control of the Site Manager.

The structure of disaster management system in the State at different levels is as follows:



### **1.1.3 Audit Objectives**

The objectives of the performance audit were to assess the State Government's preparedness in dealing with disasters, measures adopted for obviating the impact of disasters, reaction time taken in responding to emergencies and efficiency and effectiveness of post disaster relief measures. To meet the objectives, the following aspects were examined to see whether:

- the lessons learnt from earlier disasters had been used for formulation of effective policies for disaster management;
- proper institutional mechanism had been set up for disaster management including pre-disaster risk assessment, mitigation, prevention and preparedness;
- proper arrangement of co-ordination committees existed both at the State and district level;
- emergency operation control centres were adequately equipped with telephones, wireless sets and manpower;
- funding for relief activities was adequate;
- in the event of a disaster, the coordination amongst the departments was effective and functional;
- the special assistance through National Calamity Contingency Fund (NCCF), CRF was forthcoming as per needs;
- general public awareness campaigns were adequate;
- post-disaster activities relating to provision of immediate assistance, restoration of infrastructural services, re-construction of houses, etc. were efficient, economic and effective;
- arrangements were in place for ample training modules and imparting training to state level officials, private sector and NGOs; and
- system of monitoring of relief/rehabilitation/reconstruction activities by Government was efficient and effective.

### **1.1.4 Audit Criteria**

The audit findings were benchmarked against the following criteria:

- orders issued by GOI and State Government pertaining to sanction and release of funds for rescue, relief and rehabilitation;
- guidelines issued by the MHA for the implementation of NCCF;
- provisions of the National Disaster Management Act 2005, Disaster Management Act 2005 of the State;
- National Policy of Disaster Management;

- prescribed norms of expenditure; and
- targets and schedules prescribed by Government for rehabilitation activities.

### **1.1.5 Audit Scope and Methodology**

Performance Audit of Disaster Management was carried out during May 2010 to August 2010 and covered the period 2005-06 to 2009-10. Out of 13 districts in the State, five districts<sup>1</sup> were selected for test-check on the basis of seismic zone and Probability Proportional to Size With Replacement (PPSWR) method. Information and data was collected from the Departments<sup>2</sup> of selected districts. Apart from these, information and data was also collected from five line departments/ executing agencies<sup>3</sup> of selected districts through questionnaire/audit memos.

Before commencing the performance audit, the audit objectives, criteria and scope were discussed (May 2010) with the Principal Secretary, Department of Disaster Management, GOU in an Entry Conference. Audit conclusions were drawn after scrutiny of relevant data and records of the related departments and executing agencies. Audit methodology also included physical verification of losses/damages and interaction with the affected population. The audit findings were discussed (27 December 2010) with the Secretary, Department of Disaster Management, GOU in an Exit Conference. The audit observations made in this report by audit were accepted by the department and it was stated that due care would be given by the department to audit recommendations in future.

### **Audit findings**

Audit findings are mentioned in the succeeding paragraphs:

### **1.1.6 Policy Statement**

#### ***1.1.6.1 Policy and planning***

The Government of India (GOI) brought about a paradigm shift in its approach to disaster management based on the conviction that development can not be sustainable unless all aspect of disaster prevention, mitigation and preparedness are built into the development process. A strategic roadmap, National Disaster Management Framework (NDMF), drawn up by the GOI, was shared with all the State Governments with the advice to develop their own State specific roadmaps, taking the national roadmap as a broad guideline. This roadmap provided basis for preventing disaster and remaining prepared for disaster situations. The Disaster Management Act, 2005 (DM Act) envisaged that a State Authority shall have the

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<sup>1</sup> Chamoli, Dehradun, Pauri, Pithoragarh and Uttarkashi.

<sup>2</sup> Disaster Management, Secretariat, DMMC, District Magistrate, Public Works Department & Chief Medical Officer.

<sup>3</sup> Zilla Panchayat, Rural Engineering Service, Public Works Department, Block Development Offices and Jal Sansthan.

responsibility for laying down policies and plans for disaster management in the State.

Audit scrutiny revealed that GOU formed State Disaster Management Authority (SDMA) in October 2007. However, despite a lapse of nearly three years, the State authority could not formulate rules, regulations, policies and guidelines (August 2010).

#### ***1.1.6.2 Setting up of State Disaster Management Authority***

As envisaged in the DM Act, the SDMA, headed by Chief Minister and eight other members, was constituted (October 2007) and were to meet as and when necessary. Audit noticed that the Authority met only once (January 2008) despite the fact that 474 lives were lost in 1,902 incidents over the period 2005-10. Further, 9,162 villages covering a population of 29.24 lakh were affected during the Monsoon season of 2010 and 214 lives were also lost during this season. In the absence of minutes of the meeting held in January 2008, audit could not verify the number of resolutions/directions issued by SDMA and their follow-up action by the respective departments. Audit noticed absence of any comprehensive guidelines prescribing the duties and responsibilities of various Government functionaries on the occurrence of a natural calamity and the methods to be adopted for assessing damages, losses and providing timely compensation to victims. Consequently, vital decisions relating to the disaster affected people were made on an ad-hoc basis and no long term strategies on disaster preparedness existed in the State. Thus, the SDMA was virtually non-functional since its inception.

#### ***1.1.6.3 Setting up of State Advisory Committee***

Under Section 17 of DM Act, the SDMA was to constitute an advisory committee consisting of experts to make recommendations on various aspects of disaster management. Though the advisory committee was constituted (February 2008), it met only once (March 2008) so far. In the meeting, a number of recommendations were made regarding identification and retrofitting of life-line buildings i.e. schools, hospitals etc. conducting mock drills, framing of rehabilitation policy and monitoring of works of repairs of Government buildings and roads. However, these were not followed up by the various executing departments as discussed in the succeeding *paragraphs 1.1.7 to 1.1.10* of this report.

### **1.1.7 Financial Management**

#### ***1.1.7.1 Funding pattern***

The institutional arrangements for response and relief to natural disasters are well established. For the purpose of financing post calamity relief assistance, a CRF fund comprising Central and State share in the ratio of 75:25 was set up (January 1991) as per the recommendation of the Ninth Finance Commission. A National Calamity Contingency Fund (NCCF) was also created at the national level by the

GOI with the objective of supplementing the State's efforts in providing relief assistance during severe calamities.

### 1.1.7.2 Receipt of funds vis-à-vis expenditure

The funds received under CRF/NCCF during the period 2005-10, year-wise expenditure and closing balances were as under:

Table – 1.1.1

| Year              | Previous year balance | Central share |             | State share   | Total<br>(3+4+5) | Grand Total<br>(2+6) | Expenditure   | Closing balance<br>(7-8) |
|-------------------|-----------------------|---------------|-------------|---------------|------------------|----------------------|---------------|--------------------------|
|                   |                       | CRF           | NCCF        |               |                  |                      |               |                          |
| (1)               | (2)                   | (3)           | (4)         | (5)           | (6)              | (7)                  | (8)           | (9)                      |
| 2005-06           | 3.87                  | 71.02         | -           | 23.67         | 94.69            | 98.56                | 57.16         | 41.40                    |
| 2006-07           | 41.40                 | 72.44         | 7.05        | 24.15         | 103.64           | 145.04               | 98.84         | 46.20                    |
| 2007-08           | 46.20                 | 73.94         | -           | 24.64         | 98.58            | 144.78               | 94.94         | 49.84                    |
| 2008-09           | 49.84                 | 75.50         | -           | 25.17         | 100.67           | 150.51               | 76.34         | 74.17                    |
| 2009-10           | 74.17                 | 76.39         | -           | 25.46         | 101.85           | 176.02               | 144.93        | 31.09                    |
| <b>G. Total :</b> |                       | <b>369.29</b> | <b>7.05</b> | <b>123.09</b> | <b>499.43</b>    |                      | <b>472.21</b> |                          |

Source : Information obtained from the Department.

### 1.1.7.3 Non-investment of balances under CRF

The GOI guidelines prescribe that the CRF balances should be classified under the head '8235-General and other Reserve Funds - 111- Calamity Relief Fund' in the accounts of the concerned State Government and should be invested in Central Government dated Securities, Auctioned Treasury Bills, Interest earning deposits and Interest earning deposits in Co-operative Banks to secure interest for the State Government.

However, if the State was not in a position to invest the fund in the manner prescribed above, it could be permitted by the Ministry of Finance (GOI) to constitute CRF under the head '8121 – General and other Reserve Funds- Calamity Relief Fund' in the interest bearing section of the public account. The State Government should pay interest to the CRF at the rate applicable on over drafts under the scheme of the RBI. The interest was to be credited on a half yearly basis.

Scrutiny of records revealed that the State Government neither made any investment from the CRF nor kept it in 8121 – Interest Bearing Reserves in violation of GOI guidelines. There were large closing balances ranging between ₹ 41.40 crore and ₹ 74.17 crore during the period 2005-2010 relating to CRF lying in the Current Account which could have been invested. Audit analysed that due to non investment in government securities there was a potential loss of interest of ₹ 18.32 crore (*Appendix-1.1*).

On being pointed out, the department confirmed (August 2010) that unutilized balances at the end of each financial year were not invested by them.

#### **1.1.7.4 Non-opening of Personnel Ledger Account (PLA)**

GOI guidelines clearly provide for opening of PLA in the State and districts, to facilitate the smooth utilisation of funds. Scrutiny of records of the Department of Disaster Management, GOU and five selected districts revealed that neither the department nor the district level offices except Chamoli district had opened the respective PLAs. Instead, bank accounts had been opened at both the levels in violation of the GOI guidelines to avoid the payments being routed through Treasuries. By not routing these payments through the Treasuries, there was a risk of leakage and misuse of funds. However, department replied that out of ₹ 14.79 crore lying in current account, an amount of ₹ 11.79 crore had been deposited (March 2010) in the State Disaster Response Fund and the balance amount was lying in the current account as of August 2010. The reply of the department did not hold good as the State Disaster Response Fund is meant for the State's own fund for disaster management.

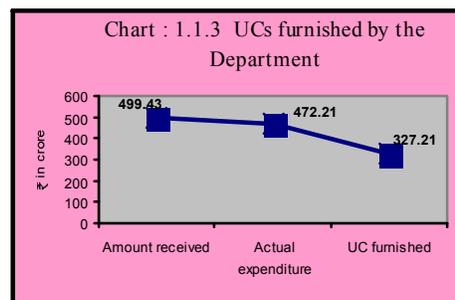
#### **1.1.7.5 Non-submission of Utilization Certificates (UCs)**

Scrutiny of the records of the Department revealed the following:

CRF guidelines envisage for the remittance of Central Government's share to the State Government in two installments (on 1<sup>st</sup> June and 1<sup>st</sup> December) in each financial year. There were delays in submission of Utilization certificates by GOU due to which there was a delay ranging from 54 days to 184 days in the release of funds by GOI during 2005-10 (*Appendix-1.2*).

Out of ₹ 499.43 crore released by GOI, ₹ 472.21 crore (95 per cent) (*Paragraph 1.1.7.2*) were spent by the department over the period 2005-10, of which UCs for ₹ 327.21 crore<sup>4</sup> were furnished to the GOI. UCs for funds amounting to ₹ 145.00 crore were not furnished by the department as of March 2010. The actual delay in submission of UCs could not be assessed by audit as the records pertaining to dates on which the UCs were submitted, were not made available. This indicated the poor reporting and monitoring mechanism both at the state and district levels of GOU.

Department reported that ₹ 472.21 crore had been spent during the year 2005-10. This was not consistent with the fact that there were cases of continuous surrender of CRF amount (*refer paragraph 1.1.10.1*) which led to the mismatch of actual expenditure incurred and UCs furnished. Even the UCs submitted for ₹ 327.21 crore claimed by the State were based on funds allotted to district administration



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<sup>4</sup> Year 2005-06: ₹ 57.16 crore, 2006-07: ₹ 105.80 crore, 2007-08: ₹ 84.48 crore and 2008-09: ₹ 79.77 crore.

and not on the actual spending by the various agencies. In the absence of any control record, audit could not track the actual utilisation of fund.

### **1.1.8 Disaster Prevention**

As mentioned in paragraph 1.1.6.1 above, although the State Government had not framed its own State specific policy for disaster management as required by the DM Act, most of the important features of the DM Act were covered in the first meeting (January 2008) of SDMA. The status of implementation in respect of other important features of the Act, however, left much to be desired as discussed below:

#### ***1.1.8.1 Mainstreaming of disaster prevention into the development process***

The DM Act envisaged that each department of the State Government which had a role in prevention/mitigation should (i) take necessary measures for prevention of disaster, mitigation, preparedness and capacity-building in accordance with the guidelines laid down by the SDMA, (ii) integrate into its development plans and projects the measures for prevention of disaster and mitigation and (iii) allocate funds for prevention of disaster, mitigation, capacity-building and preparedness.

Scrutiny revealed that none of the departments had taken any specific measures for prevention, mitigation and preparedness in their development plans and projects. Further, no funds were allocated for the same by any of the State departments and instead, they remained dependent on CRF which was confirmed by all the line departments audited including department of disaster management. Thus, the State Government could not ensure incorporation of disaster prevention measures into the development process.

#### ***1.1.8.2 Techno-legal regime***

In view of construction boom and rapid urbanisation, the National Policy of Disaster Management (NPDM) envisaged the need to review municipal regulations such as development control regulations, building bye-laws and structural safety features. These regulations were to be reviewed periodically to identify safety gaps in view of earthquake, flood, landslide and other disasters and required to be modified suitably in line with the revised building codes of the Bureau of Indian Standards (BIS). Undesirable practices compromising safety during disaster were also to be addressed in the regulations. Similarly, the need for the introduction of suitable regulations for rural areas was also to be emphasised. The Housing Agencies were responsible for enforcing compliance with BIS codes and for reviewing planning and building regulations in respect of Government and private buildings.

Audit scrutiny revealed that no regulations were formulated. Instead, only instructions/ orders were issued by the Housing Department to various agencies<sup>5</sup>. However, their enforcement and compliance were not found on record and also no building codes of the BIS were subsisting in the selected district authorities.

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<sup>5</sup> Development Authorities, Special Area Development Authority, Nagar Nigam, Nagar Palika Parishad and Nagar Panchayats.

### **1.1.8.3 Retrofitting of life-line buildings**

GOI had advised the States to take necessary action for detailed evaluation and retrofitting of existing lifeline buildings like hospitals, administrative buildings, schools, cinema halls or multi-storied apartments in which people congregate, to ensure their compliance with BIS norms.

The State Government had established **Hazard Safety Cell** (May 2005) to ensure compliance of building byelaws and safe construction practices and provide technical support to the State Government in carrying out retrofitting of lifeline buildings and systems. The cell has so far identified only around 20,000 such buildings in five Cities/Towns<sup>6</sup> which need retrofitting. Audit noticed that the members of the cell did not meet frequently to identify and suggest remedial measures. On being pointed out, the department stated that in the absence of any statutory powers, the members of the safety cell were not taking interest in their work and thus, no remedial measures were taken yet. The reply of the department was not justifiable as the members of the cell were to achieve competence in hazard resistant design of buildings and structures of building codes, review the architectural and structural designs and to carry out review of government buildings. Therefore, the government should have ensured to see that the members of the cell meet regularly to make necessary recommendations for retrofitting of life line buildings.

In the event of a major earthquake striking the State, the possibility of collapse of hospitals, important Government buildings, schools and colleges etc. could not be ruled out, causing substantial loss of lives and property. Audit further observed that 12 to 88 *per cent* of houses in the selected districts were constructed of stone walls. Barring Dehradun, other four districts have, on an average, 80 *per cent* stone walled structures categorized as Very High Damage Risk in the event of an Earthquake. The details of buildings of selected districts are as under:

**Table – 1.1.2**

| Name of District | Category A <sup>7</sup> |            | Category B <sup>8</sup> | Category C <sup>9</sup> |           | Category X <sup>10</sup> | Total buildings | % of stone wall buildings on total buildings |
|------------------|-------------------------|------------|-------------------------|-------------------------|-----------|--------------------------|-----------------|--|
|                  | Mud                     | Stone wall | Burnt brick wall        | Concrete wall           | Wood wall | Other materials          |                 |  |
| Chamoli          | 2,954                   | 1,46,649   | 11,622                  | 1,761                   | 772       | 2,320                    | 1,66,078        | 88   |
| Pauri            | 3,665                   | 2,26,332   | 49,959                  | 1,777                   | 2,165     | 3,789                    | 2,87,687        | 79   |
| Dehradun         | 41,033                  | 40,847     | 2,34,502                | 3,821                   | 6,419     | 9,390                    | 3,36,012        | 12   |
| Pithoragarh      | 778                     | 1,24,809   | 20,447                  | 1,807                   | 1,162     | 1,596                    | 1,50,599        | 83   |
| Uttarkashi       | 757                     | 70,467     | 17,463                  | 1,276                   | 8,434     | 2,642                    | 1,01,039        | 70   |

*Source : Information obtained from Building Material and Technology Promotion Council.*

<sup>6</sup> Bageshwar – 1,165, Dehradun – 10,918, Joshimath – 1,708, Mussoorie – 3,344 & Nainital – 2,865.

<sup>7</sup> Category A : Building in field-stone, rural structures, un-burnt brick houses, clay houses.

<sup>8</sup> Category B : Ordinary brick building, buildings of the large block & prefabricated type.

<sup>9</sup> Category C : Reinforced building, well built wooden structures.

<sup>10</sup> Category X : Other materials not covered in A,B & C.

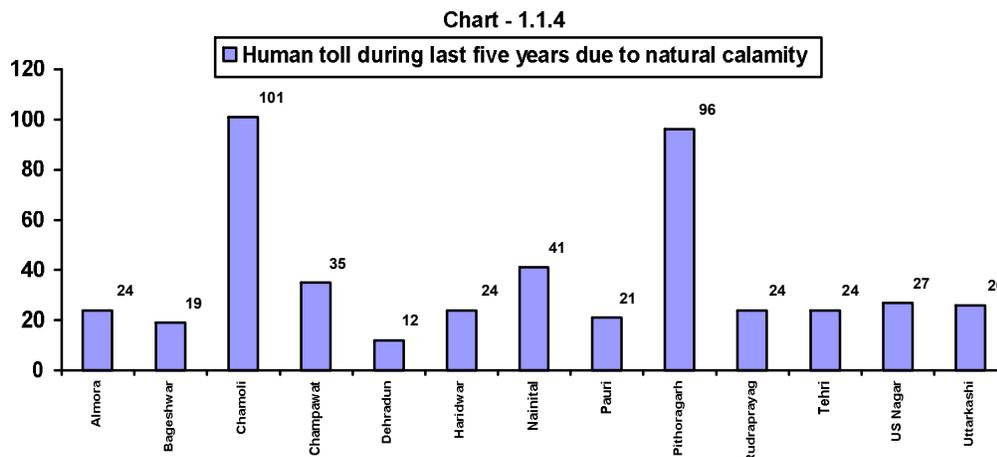
On being pointed out, department stated that for this purpose, an agreement had been signed between DMMC and Nanyang Technological University, Singapore for training and capacity-building programme on seismic strengthening for master and local builders in India (January 2010). The reply of the department was not satisfactory as the department took two years to initiate the State Advisory Committee's recommendation regarding the retrofitting of these high risk building. Further it was also noticed that GOU in collaboration with MHA and UNDP had prepared a study report in 2007 for safe construction practices in Uttarakhand. The report advocated that the houses in seismic zone could be built through Koti Banal Architect method, a traditional and time tested way of building houses in wooden material, however, this practice was not encouraged by the department.

#### ***1.1.8.4 Slow progress of vulnerability assessment***

With the advent of Satellite Remote Sensing and Geographic Information System (GIS), the information generation related to earth surface has become easier in terms of data base generation, storage, retrieval and data analysis.

Audit scrutiny revealed that basic infrastructure of the State like health, police and fire stations, Food Corporation of India (FCI) Godowns were mapped. For urban risk management and vulnerability assessment of buildings, six cities/towns were identified. Of these, studies relating to Dehradun and Rudraprayag were under preparation and the Study Report in respect of Mussoorie, Nainital, Joshimath and Bageshwar were finalized (May-July 2010).

Audit observed that even though the GIS centre at DMMC, Dehradun was making all efforts to prepare comparable data which would allow assessment of disaster management programme in six cities/towns in the State, nothing was done in the most vulnerable districts (zone IV and V) of Chamoli, Pithoragarh, Champawat, Rudraprayag and Uttarkashi so far. These districts had witnessed highest number of casualties on account of various natural calamities during last five years (*Appendix-1.3*) as shown in the chart 1.1.4:



An analysis revealed that majority of casualties (26 per cent) was due to landslides during the last five years. About, 20 per cent of casualties from hailstorm, storm & epidemics, 19 per cent each from excessive rain and cloudburst, eight per cent from avalanche and four per cent each were from fire and flood.

Thus, the disaster management for preventive action in the vulnerable districts needs to be strengthened by the Government.

#### **1.1.8.5 Medical and Mass Casualty**

Medical preparedness is a critical component of any Disaster Management Plan (DMP). DMP for hospitals includes developing and training of medical teams and paramedics, capacity building, trauma and psycho-social care, mass casualty management and triage. These plans also address post-disaster disease surveillance systems, networking with hospitals, referral institutions and accessing services and facilities such as availability of ambulances and blood banks. The position of availability of these critical infrastructural facilities in the selected districts as on 31<sup>st</sup> March 2010 is shown in the table below:

**Table – 1.1.3**

| Name of district | No. of hospitals |     |     |       | Total Bed Capacity | Extent of Expansion | No. of TC | No. of Vehicles | No. of Ambulance | Emergency GS |
|------------------|------------------|-----|-----|-------|--------------------|---------------------|-----------|-----------------|------------------|--------------|
|                  | DH               | CHC | PHC | Total |                    |                     |           |                 |                  |              |
| Chamoli          | 1                | 5   | 4   | 10    | 246                | -                   | --        | 17              | 11               | 6            |
| Dehradun         | 4                | 6   | 2   | 12    | 757                | 60                  | 3         | 6               | 13               | 5            |
| Pauri            | 1                | 5   | 10  | 16    | 322                | 110                 | 1         | 10              | 13               | 15           |
| Pithoragarh      | 3                | 4   | 4   | 11    | 322                | -                   | --        | 15              | 12               | 10           |
| Uttarkashi       | 1                | 3   | 3   | 7     | 180                | 90                  | -         | 7               | 8                | -            |

*Source: Information obtained from CMOs. (DH = District Hospital, CHC = Community Health Centre, PHC = Primary Health Centre, TC = Trauma Centre & GS = Generator Set)*

Thus, it would be evident that there were no trauma centres in almost all the test checked districts barring district Dehradun and Pauri. However, trauma centres at Chamoli and Uttarkashi districts were under construction. The possibilities of expansion of bed capacity were limited, with district Pithoragarh and Chamoli being among the most vulnerable districts, which did not have any plan for expansion. It remains to be seen in the event of threatening disaster or a disaster how the health department would be able to fulfill its mandate. On being pointed out, the office of the CMOs stated that the availability of infrastructural facilities were not being taken care of by the State plan funds meant for disaster management. Scrutiny in this regard revealed that no fund was earmarked by the concerned department for disaster management.

In absence of critical infrastructure such as trauma centre, the affected population could not be given immediate medical attention, depriving them of the basic medical facility.

#### **1.1.8.6 School Safety Initiative**

School safety programme was introduced in GOU under Government of India-United Nations Development Programme (GOI-UNDP) supported Disaster Risk Management Programme (DRMP). It recognizes students as a vulnerable group and seeks to ensure their participation in dealing with disasters. It seeks to bring

forth awareness amongst the students regarding various aspects of disaster safety and increase their capabilities in various life saving skills, disaster risks assessment, resources identification, preparation of DMP for their schools and so on. During 2007-08 to 2009-10, 25 training programmes were conducted by the department for 1,122 teachers and students covering a minimal percentage, which was 0.24 per cent of total population of students and teachers of selected districts.

*Sarva Shiksha Abhiyan – in educating people's role regarding disaster management, Central Board of School Education has introduced Disaster Management in the school curriculum of social sciences from class VIII-X. State Government also included the same at class VI, VII, IX & X.*

In the aftermath of any major disaster, school buildings are often utilized for shelter and coordinating relief works. It is, therefore, important to ensure that these are strong enough to survive the disaster impact. Scrutiny revealed that assessment of structural (Reinforcement of cement concrete) and non-structural (Stone Built) safety of school buildings and identification of necessary mitigative action was not included in the school safety programme. Audit noticed that out of 6,088 school buildings in the five selected districts, 2,371 buildings (39 per cent) were stone built. Thus, lives of 4,34,652 students and 34,602 teachers could be vulnerable in the event of a threatening disaster or a disaster.

In a recent instance of cloudburst in Sumgad Motor Marg, district Bageshwar, the ceiling of a School collapsed. The incident took lives of 18 school children and left two children seriously injured. Had adequate measures regarding the retrofitting of school buildings been taken by the department the impact of the mishap could have been avoided or minimised. The district administration took 12 hours to transmit the information of the happening to the State Headquarters.

Assessment of structural and non-structural safety of school buildings and identification of necessary mitigative action was not included in the school safety programme, leaving 39 per cent of school buildings unattended.

When enquired about retrofitting of old structural buildings, the department replied that only four schools<sup>11</sup> were selected for retrofitting in the State as on August 2010, which indicated that the retrofitting process was very slow in the State and needs to be expedited.

## Pre-disaster Activities

### 1.1.9 Preparedness

Preparedness focuses on plans to respond to a disaster threat or occurrence. It includes in its objectives to improve capacity of those likely to be affected, system and reconstruction to ensure reduction in vulnerability. Efficacy of plans is tested

<sup>11</sup> Two schools each in Dehradun and Tehri.

and refined through training, seminars and mock drills. The position in this regard is enumerated below:

- 1,663 State Armed Police personnel, Revenue Police and Home Guards were trained for search and rescue operations during the period 2003-09.
- Search and rescue equipment such as concrete cutter, steel cutter, spreader and hydraulic were provided in eight districts only.
- Out of 14 Satellite phones 10 phones were provided in districts for immediate communication barring Haridwar, Udham Singh Nagar and Dehradun districts.
- Out of 13 districts, mock-drill exercises were conducted in only four districts (Uttarkashi, Chamoli, and Bageshwar & Pithoragarh).

#### ***1.1.9.1 Community based disaster preparedness***

DM Act states that the State Government shall lay down guidelines for prevention of disaster at the district and local level, as during any disaster, communities are not only the first to be affected but also the first responders.

Community participation ensures local ownership, addresses local needs, and promotes volunteerism and mutual help to prevent and

*Community sensitization meeting paves the way for community decision making process. Munsiyari Block of district Pithoragarh has witnessed severe landslides in the year 2009. As a result many villages were swept away. Community sensitization meetings with help of the representatives from local self-government, trained volunteers, local NGOs were to be organised for identifying the need for disaster preparedness and mitigation initiatives. During interaction with local people by audit it was found that no such meetings were organised by the concerned authorities.*

minimise damage. Therefore, the district administration should encourage and support initiatives from community based organisations (CBOs), local NGOs and private sector for promoting community based mitigation strategies through community needs assessment exercises. Accordingly, Village Disaster Management Committees (VDMCs) were formed by the department.

Scrutiny revealed that out of 16,826 villages in the State, VDMCs were established in 6,546 villages only (39 per cent) as of August 2010. No records were available in the department for preparing the plans by the VDMCs that would have catered to the training needs and other mitigative measures.

#### ***1.1.9.2 Shortage of man-power in Emergency centres***

In pursuance to DM Act, the establishment of Emergency Operations Centres (EOCs) at the State Level and District level and equipping them with contemporary technologies and communication facilities and their periodic upgradation were to be accorded priority. SEOC/DEOCs are the nerve centres to support, co-ordinate and monitor the disaster management activities. In a disaster situation, the district magistrate is the central authority exercising emergency powers to issue directives to all departments to provide **Emergency Response Service**.

Scrutiny revealed that though SEOC was established (July 2006), it was running without adequate manpower. The Government had created eight posts for operation of SEOC in July 2006, but the same were yet to be filled (August 2010). Presently the SEOC was being run by contractual and staff on deputation. In the absence of permanent staff, the inventories like call register and log registers were not being maintained by the SEOC. Similarly, DEOCs were established in every district barring Nainital. These emergency centres had not been provided with adequate man-power for their smooth operation.

Audit scrutiny showed that State Government had created 117 posts for DEOCs as late as November 2009 but the same were yet to be filled. The department also accepted the fact that absence of adequate and skilled man power resulted in inadequate preparedness of centres in combating a threatening disaster or a disaster. This failure of the Government in empowering these important centres has also affected proper upgradation of District Disaster Management Action Plan (DDMAP), maintenance of data bank and inventory of resources.

Thus, an expeditious action to overcome the situation would require to be taken by the Government.

#### **1.1.9.3 Warning and Communication**

A warning system is essential to indicate the onset of a disaster. Warning confirms the event while prediction indicates the probability. In most disaster situations, experience had shown that loss of life and property could significantly be reduced with adequate preparedness measures and appropriate warning system. A system of pre-disaster risk assessment, forecasting and warning dissemination helps in improving preparedness for disaster management.

Scrutiny revealed that communication equipment such as satellite phones, police wireless, SMS network and video conferencing were established in the DEOCs. However, the warning and communication systems were not sufficient in almost all the selected test checked districts as illustrated below:

- Under the Indian Telegraph Act, 1885, the satellite phone users are required to seek license from GOI for fulfilling certain conditions regarding security. Audit noticed that license of 14 satellite phones (13 for each districts and one for DMMC) were not renewed till date (August 2010) despite the fact that the validity of these phones had expired of late in December 2005.
- Reliable communication system was inadequate as the sharing of disaster information was delayed by one to more than 24 hours. Out of this, 69 to 87 *per cent* cases were delayed by above three hours. The details are as under:

**Table – 1.1.4**

| Year | No. of cases | Time taken for sharing disaster information through Action Taken Report |           |           |            |             |                |
|------|--------------|---|-----------|-----------|------------|-------------|----------------|
|      |              | 0-1 hour  | 1-3 hours | 3-6 hours | 6-12 hours | 12-24 hours | Above 24 hours |
| 2008 | 121          | 4 (3%)  | 12 (10%)  | 24 (20%)  | 20 (17%)   | 33 (27%)    | 28 (23%)       |
| 2009 | 138          | 7 (5%)  | 32 (23%)  | 34 (25%)  | 29 (21%)   | 26 (19%)    | 10 (7%)        |
| 2010 | 73 *         | 6 (8%)  | 17 (23%)  | 28 (38%)  | 10 (14%)   | 12 (17%)    | 0              |

Source: Information extracted from the records of SEOCs.

\* upto July 2010

On being pointed out, the department accepted the delay factor and stated that daily reports and returns got stalled due to the demography of the State, but no appropriate reply was given in respect of non-renewal of satellite phone licenses. Non-renewal of licenses could have led to stopping of the facility by the GOI and consequently, the vulnerable population would have been at risk in the event of a threatening disaster or disaster.

#### ***1.1.9.4 Capacity Building - Training***

DM Act envisages to promote general education, awareness and community training in regard to the forms of disaster to which different parts of the State are vulnerable and the measures to be taken by such community to prevent, mitigate and respond to such disaster. DM Act also advocates facilitating community training and awareness programmes for prevention and mitigation of disaster with the support of local authorities, Government and NGOs.

As no policies, rules, norms and guidelines were laid down by the GOU, the department could not formulate the training modules, calendar and targets. However, Audit found that the department trained 4,013 Government officials and 3,157 non-government officials at state level and 2,456 Government officials and 3,532 non-government officials at district level during the period 2005-10. Audit did not see any involvement of NGOs in the training process of disaster mitigation. Some of the vital training programmes conducted by the department and their deficiencies are discussed below:

#### ***1.1.9.5 Preparing of Master Trainers***

- **Engineering sector for construction of seismically safe buildings**  
*“Earthquakes don’t kill people, unsafe houses do”<sup>12</sup>*

The first step to improve the construction, quality and safety level of buildings is to prepare manpower trained in earthquake resistant construction technology. Engineers of the State executing agencies need training, so that the construction undertaken by these Government agencies is seismically safe. In addition, Civil and Structural Engineers in the private sector also need to be trained so that the housing stock coming up in the private sector is compliant to the BIS. GOI launched two national programmes namely; National Programme for Capacity building of Engineers in Earthquake Risk Management (NPCBEERM) and National Programme for Capacity Building of Architects (NPCBAERM) in 2004-05.

Scrutiny of records revealed that the State Government did not train architects under NPCBAERM as of August 2010. Against a target of 360 practicing engineers (60 *per cent*: Government Engineers and 40 *per cent*: Private Engineers) under NPCBEERM, only 213 Government Engineers<sup>13</sup> were imparted two week’s training. On being pointed out, the department replied that due to the

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<sup>12</sup> Quote: IIT Roorkee.

<sup>13</sup> Year 2007: 107 and 2008: 106.

non- availability of any database of private engineers, the target could not be achieved.

▪ **Doctors and para-medical staff as response to prevention and control of epidemics**

As per the Act, as part of Disaster Mitigation and Medical Preparedness, National Disaster and Management Authority (NDMA) was to organise various training programmes in paramedics, capacity building and trauma etc., from time to time. Audit found that no such training programmes were organised by the State Government. However, only two days training programmes<sup>14</sup> on Basic Life Support (BLS), Advanced Trauma Life Support (ATLS), Emergency Medical Response and, more importantly, Mass Casualty Management at Disaster Site under the medical preparedness programme were organised by NDMA, through which a total of 50 doctors from Uttarakhand were trained.

It was also noticed that no master trainers were trained to impart training to the staff at the district/block/village level engaged in the prevention and mitigation of disaster management. In the absence of such master trainers, audit could not ascertain the exact number of paramedical staff trained. However, as intimated by Disaster Management Department, only one Auxiliary Nursing Mid-wife (ANM) was imparted search & rescue training at State level in the last five years. Audit team visited the health centres of two selected districts (Pithoragarh & Uttarkashi), where 48 ANMs and Accredited Social Health Activists (ASHA) intimated that no disaster related training had been given to them.

**1.1.9.6 Search and Rescue**

A hazard becomes a disaster only when it affects human settlements and causes loss of life and damage to property. The extent of vulnerability of the area, people and property to a hazard or the probability of its occurrence defines the extent of risk. DM Act stresses the need for vulnerability analysis and risk assessment for evolving appropriate preventive measures and mitigation strategies.

Scrutiny of records showed that:

- The training on search and rescue was given only to the fire-service, police, revenue police and Pradeshik Rakhshak Dal. But the other lead agencies like Medical, Peyjal and Irrigation were not involved in this exercise.
- These training schedules were not adequate to cater to the needs of the people which are under threat from various disasters.
- The involvement of local people was also not taken care of in the training module for the preparation of youth volunteers.
- The role of NGOs was also not identified to ensure their involvement and participation.

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<sup>14</sup> Year 2006 (35) and 2009 (15).

### **1.1.9.7 Public Awareness Campaign and Mock Drills**

NPDM advocates that during any disaster, communities are not only the first to be affected but also the first responders. Therefore, efforts should be made to educate the masses through Public Awareness campaigns and mock drills. This would help encourage women and youth to participate in decision making committees and action groups for management of disasters. As such, the communities, who are the first responders to any disaster were to be given adequate training and education in first aid, search and rescue, management of community shelters etc.

These exercises were to be conducted fortnightly as had been recommended by State Advisory Committee, but audit scrutiny revealed that no such exercises were being conducted on regular basis. Out of 13 districts, only four districts<sup>15</sup> (31 *per cent*) were covered once. It was also observed that no training modules had been prepared by the department which should have ensured plan based training. No records/data in respect of gender base training programme conducted was available in the test checked districts. During joint visit of audit and representatives of district administration in the six disaster affected villages and interaction with the villagers, it was observed that no training was organised by the district administration resulting in non- participation of community in disaster management.

### **1.1.10 Post -disaster Activities**

As per the DM Act, post disaster activities mainly include gratuitous relief, supplementary nutrition, assistance to farmers, and assistance for repair/restoration of damaged houses.

#### **1.1.10.1 Improper Assessment of damages/losses**

As envisaged in Section 36 of the DM Act, 2005 the State level Committee/district level committee are required to make assessment of losses that may occur due to a threatening disaster or a disaster.

Audit could not assess the reliability, authenticity and accuracy of the damages/losses assessment made by the Government since the basic data relied upon for estimating the losses were neither available in the Department nor in the test checked districts. Audit noticed that:

- In Pauri district, ₹ 12.72 lakh was sanctioned to Block Development Office (BDO), Thalain in 2006-07 for repair of four school buildings. These works were not started and the entire amount was surrendered to district administration in July 2010 on the plea that two works amounting to ₹ 6.36 lakh were met from regular departmental budget (Sarva Shiksha) and remaining two were not started due to non-availability of tenderers.

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<sup>15</sup> Bageshwar, Chamoli, Pithoragarh & Uttarkashi.

- Ten works valued at ₹ 29.99 lakh were sanctioned to three executing agencies<sup>16</sup> in 2005-06 and 2007-08 for meeting the restoration work that included repair of schools, roads, drinking water supply schemes etc. The works were not started and the entire amount was surrendered to district administration after a lapse of two to four years. The executing agencies were reluctant to start these works because these agencies held that the funds provided were inadequate. Therefore, agencies remitted the funds to the district administration, but the district administration refused to get these funds back on the plea that this amount was deemed to have been spent and the required UC had been submitted to the department.
- In district Bageshwar an amount of ₹ 10.56 lakh was sanctioned for repair and restoration work of three Drinking Water Supply schemes in the year 2006-07. The work was not started and the amount was surrendered to the department by district administration in March 2008 on the plea that these works were met from regular departmental budget.

This was indicative that the assessment of losses/damages and requirement of funds/release of funds were made without due care and the projections were arbitrary. Further, no follow up mechanism existed to watch the progress of the works subsequent to release of funds. This also led to funds remaining unutilized for long periods which could have been utilized in some other disaster related works.

#### 1.1.10.2 Delay in assistance

DM Act envisaged that assistance to the victims' families should be provided within the maximum period of 15 days after calamities. During the year 2005-10, an amount of ₹ 11.36 crore was granted to 19,742 victims. Out of these cases, audit checked records of 250 cases (50 claimants in each district) on random basis which revealed the following:

- In 47 cases (19 per cent), the gratuitous relief was provided to the victims after a delay of 10 to 561 days vide details as under:

Table – 1.1.5

| Name of district | No. of victims | Amount sanctioned (₹ in crore) | Amount spent (₹ in crore) | Delay in assistance |                                       |
|------------------|----------------|--------------------------------|---------------------------|---------------------|---------------------------------------|
|                  |                |                                |                           | No. of cases        | Delay after considering 15 days norms |
| Chamoli          | 2,748          | 2.84                           | 1.76                      | -                   | -                                     |
| Dehradun         | 3,378          | 1.79                           | 0.91                      | 6                   | 10 to 561                             |
| Pauri            | 4,505          | 1.72                           | 1.22                      | 3                   | 25 to 160                             |
| Pithoragarh      | 2,575          | 2.73                           | 2.28                      | -                   | -                                     |
| Uttarkashi       | 6,536          | 2.28                           | 1.56                      | 38                  | 24 to 406                             |
| <b>Total</b>     | <b>19,742</b>  | <b>11.36</b>                   | <b>7.73</b>               | <b>47</b>           |                                       |

Source: Information extracted from the records of the respective offices.

On being pointed out in audit, the district administration replied that due to long procedural formalities which included settlement of objections, timely

<sup>16</sup> Public Works Department, Block Development Offices and Nagar Parishad, Pauri.

compensation could not be made to the claimants. The reply of the district administration was not justifiable as the district authorities should have made efforts to simplify the compensation related procedures to avoid delay in release of assistance to the victims.

- In Uttarkashi district, eleven cases of 9 December 2009 incident were not given full compensation by the district administration as on August 2010 despite the fact that the district administration surrendered an amount of ₹ 6.06 lakh in March 2010.

#### **1.1.10.3 Irregular release of funds**

During the period 2005-10, under CRF, 1,361 works were sanctioned at an estimated cost of ₹ 28.22 crore to different executing agencies<sup>17</sup> in the test checked districts. As per the DM Act, all the affected works under the disaster should have to be executed immediately. Scrutiny of records revealed that against the sanctioned amount of ₹ 28.22 crore, ₹ 22.55 crore were released by the district administration to these agencies as first installment. The second installment amounting to ₹ 5.67 crore was not released due to non-submission of utilisation certificate by the respective executing agencies. As the second installment was not released yet, 641 works remained incomplete. The details are as under:

**Table – 1.1.6**

*(₹ in crore)*

| Name of district | Year    | Total no. of works | Sanctioned amount | 1 <sup>st</sup> Installment | 2 <sup>nd</sup> Installment | Incomplete works |
|------------------|---------|--------------------|-------------------|-----------------------------|-----------------------------|------------------|
| Pithoragarh      | 2005-06 | 209                | 0.93              | 0.69                        | 0.24                        | 29               |
|                  | 2006-07 | 175                | 1.57              | 1.19                        | 0.38                        | 85               |
|                  | 2007-08 | 355                | 4.10              | 3.13                        | 0.97                        | 178              |
| Pauri            | 2008-09 | 16                 | 0.71              | 0.40                        | 0.31                        | 15               |
|                  | 2009-10 | 29                 | 0.94              | 0.66                        | 0.28                        | 26               |
| Uttarkashi       | 2007-08 | 171                | 4.93              | 4.84                        | 0.09                        | 4                |
|                  | 2008-09 | 116                | 4.00              | 3.81                        | 0.19                        | 25               |
|                  | 2009-10 | 290                | 11.04             | 7.83                        | 3.21                        | 279              |
| <b>Total :</b>   |         | <b>1,361</b>       | <b>28.22</b>      | <b>22.55</b>                | <b>5.67</b>                 | <b>641</b>       |

*Source: Information extracted from the records of district administration*

The norm is silent regarding release of funds by district administration to executing agencies on installment basis. However, since the works were of immediate nature, the question of second installment should not arise. This again raises doubt whether the works carried out were actually relief works as admissible in CRF guidelines. Thus, despite incurring expenditure of ₹ 22.55 crore, 47 per cent works were incomplete and had deprived the affected population of the basic infrastructure.

#### **1.1.10.4 Delayed sanction and execution of works**

The DM Act envisaged that all the affected works under the disaster should be executed immediately and should be completed within 60 days in hilly areas and 45 days in plain areas. Works relating to repair/restoration of immediate nature of damaged infrastructure in eligible sectors include (i) Roads and Bridges,

<sup>17</sup> BDO, RES, District Panchayat, PWD, Jal Sansthan & Peyjal Nigam.

(ii) Drinking Water Supply works, (iii) Irrigation, (iv) restoration of low transmission lines, (v) Primary Education, (vi) Primary Health Centres and (vii) Community Assets owned by Panchayats.

a) Scrutiny of records of selected districts as well as executing agencies<sup>18</sup> revealed that the funds were sanctioned to these agencies after a substantial delay vide details as under:

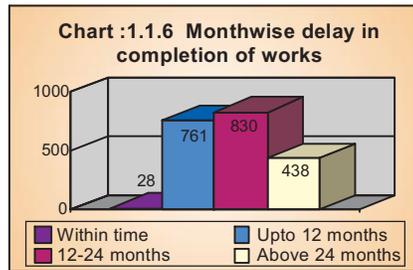
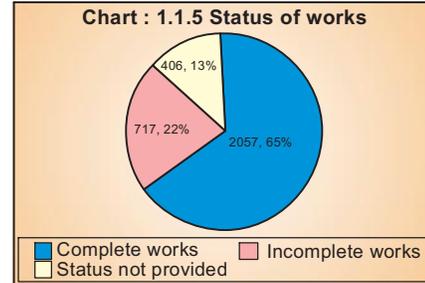
Table – 1.1.7

| Name of District | Date of damage <sup>19</sup> | Total sanctioned works | Date of demand | Date of sanction | Date of release of fund to executing agencies | Delay (month) |
|------------------|------------------------------|------------------------|----------------|------------------|---|---------------|
| Chamoli          | May-Sept.                    | 1,325                  | July-Oct.      | Aug-Mar          | Aug-Mar                                       | 6             |
| Dehradun         | July-Aug                     | 203                    | May-Jan        | Oct- Mar         | Oct- Mar                                      | 7             |
| Pauri            | NA                           | 295                    | NA             | NA               | NA  | -             |
| Pithoragarh      | July-Sept.                   | 1,479                  | Nov-Dec        | Dec-Mar          | Feb-Mar                                       | 6             |
| Uttarkashi       | July-Sept.                   | 1,194                  | May-Oct        | Oct-Mar          | Oct-Mar                                       | 6             |

Source: Information provided by district administration

The average delay in sanction and release of funds to the concerned executing agencies was six months. On being pointed out, the district administration replied that due to delayed releases from the Government the sanctions to the executing agencies got delayed. The reply was not justified as delayed issue of sanction in these cases defeated the very purpose and objective of CRF norms and also deprived the affected population of the intended relief.

b) In the test checked districts, a total of 3,180 works amounting to ₹ 79.03 crore were scrutinised relating to five selected executing agencies for the period 2005-10. Audit scrutiny revealed that out of 3,180 works, 717 works (22 per cent) amounting to ₹ 20.25 crore were incomplete as of March 2010 and status of 406 works (13 per cent) was not made available by the executing agencies. It was



also observed that out of 2,057 completed works (65 per cent), only 28 works (2 per cent) were completed within the prescribed timeframe of two months. 761 works (37 per cent) were delayed by one year, 830 works (40 per cent) were delayed by 12 to 24 months and 438 works (21 per cent) were delayed by more than 24 months. On being pointed out in audit, the agencies replied (May-

August 2010) that the works could not be completed due to delayed release/sanction of funds. The details are in **Appendix-1.4**.

<sup>18</sup> Public Works Department, Rural Engineering Services, Zilla Panchayat, Block Development Officer & Jal Sansthan.

<sup>19</sup> The date falls between May to September of the respective year of the report period.

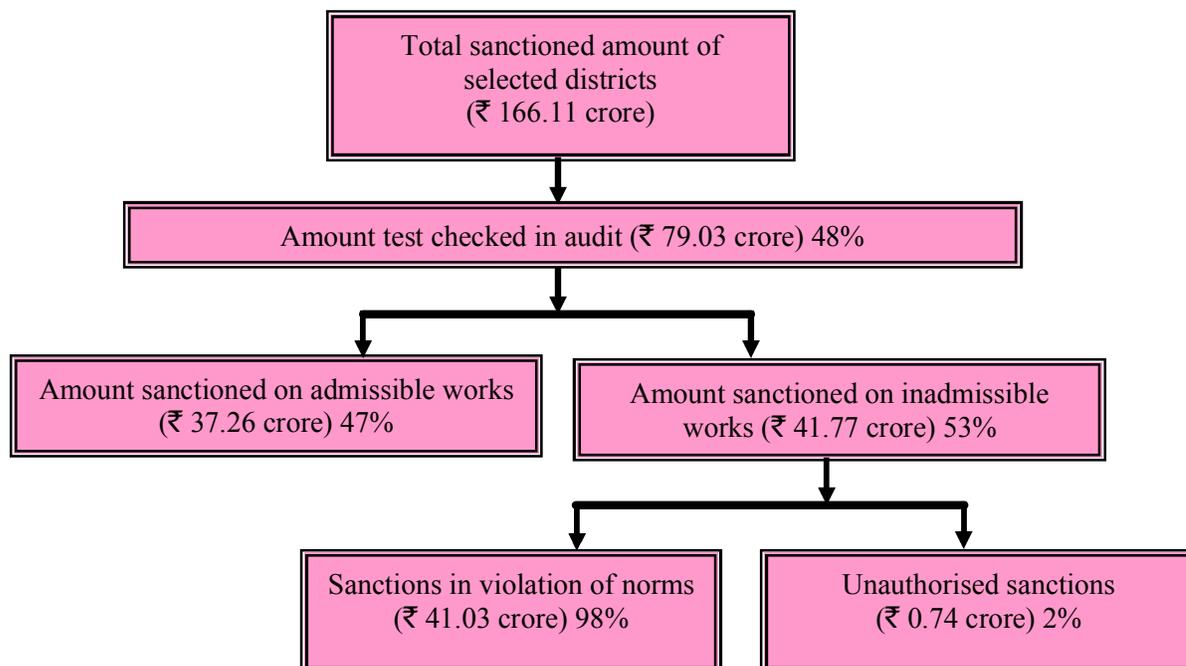
The works of repair and restoration are to be finished within prescribed time to bring immediate relief to affected people. Audit scrutiny in subsequent paragraphs 1.1.10.5 to 1.1.10.7 revealed that 782 development works were carried out from the CRF violating CRF guidelines. Thus, delay and non-completion of works led to doubt that the works carried out were strictly for relief purposes.

**1.1.10.5 Implementation of relief measures under CRF**

In terms of the GOI guidelines, the funding of relief is not in the nature of a compensation for loss but an emergent assistance to help overcome stress by providing immediate relief to the victims of natural calamities such as cyclone, drought, earthquake, fire, flood, hailstorm, cloud burst, landslides, avalanche and pest attacks.

The assistance for repair/restoration of damaged infrastructure under CRF is permissible only for identified sectors and only for repairs of immediate nature. Such expenditure is to be normally incurred within a short span, mostly during the initial period of a disaster. The departments are required to have adequate annual maintenance budget for regular maintenance of their infrastructure and such regular maintenance expenditure is not to be borne out of CRF. As per Para 9.13 of Twelfth Finance Commission, the repair/ restoration of damaged infrastructure, where detailed analysis/estimation is required, is to be met from plan funds.

During the period 2005-06 to 2009-10, a total of 4,496 works worth ₹ 166.11 crore were sanctioned in the test-checked districts to various executing agencies under the CRF scheme, of which, 3,180 works valuing ₹ 79.03 crore were selected for detailed scrutiny. A finance inverse tree summarizing the audit check is shown below:



As would be seen from the above, the State Government used the CRF funds almost like a discretionary fund and ignored the prescribed norms under the scheme as amplified below:

**1.1.10.6 Execution of works in violation of norms**

a) Audit scrutiny in five districts revealed that 764 works (24 per cent) during 2005-10 valued at ₹ 26.32 crore were in violation of CRF norms. The 764 works sanctioned including cement concrete works (259), Khadinja works (Brick roads) (132), and protective works (207) and culverts (166) were of capital nature and did not come under the purview of CRF (**Appendix-1.5**). On being pointed out, the district administration replied that these items of works got damaged due to heavy rains and were, therefore, repaired under CRF. The reply of the district administration was not in line with the prescribed norms, which allows only execution of repairs/restorations works barring permission for fresh work.

Further, in an attempt to ascertain the status of the works, joint physical verification of 19 villages/places was conducted with representatives of the district administration. During physical verification and interaction with the local population, audit noticed that all the works were not carried out as per the CRF norms in these villages. Some of such works have been mentioned at Sl. No. 1 to 3 below:

|  |   |
|--|---|
| <p>1. The internal road/drain of Gangnani-Happy Home School at Srinagar, Pauri was damaged in July 2009 and the sanction worth ₹ 8.13 lakh was made in March 2010 i.e. after six months. The work was executed from CRF fund on the plea that during the monsoon the kuccha Nalla gets overflowed and the muddy water becomes a threat to the nearby habitation. At the time of verification, the road works were in progress.</p> |  <p style="text-align: center;"><i>Picture : Construction of internal road at Srinagar (Pauri)</i></p> |
| <p>2. The internal road and protection wall of police line, Pauri was damaged in July 2008 and an amount of ₹ 4.97 lakh was sanctioned in March 2009 unauthorisedly from CRF funds after seven months. The work should have been executed from normal budget of the department.</p>  |  <p style="text-align: center;"><i>Picture : Safety wall and drainage in police line, Pauri</i></p>   |

3. The repair of internal road in Vasant Vihar Enclave (Dehradun) was carried out at a sanctioned cost of ₹ 3 lakh (2008-09). These works fall under the administrative control of Local Bodies and should have been maintained/ repaired by the same body. Instead this work was got done under the CRF clearly in violation of CRF guideline.



*Picture: Repair of internal road in Vasant Vihar Enclave (Dehradun).*

b) In addition to the above, six major sanctions amounting to ₹ 14.71 crore<sup>20</sup> were made in violation to CRF guidelines. As per guidelines, infrastructure development was to be met from normal State Budget. The details of some of these sanctions are highlighted below:

- Monsoon Nalla in Joshimath, Chamoli got damaged in 2008. This damage was not caused by any natural calamity but due to a large quantity of waste that had been dumped by the construction agency of Auli Winter Games at Auli, Joshimath (Chamoli). The Government, in March 2010, decided to repair the Nalla through CRF budget and sanctioned an amount of ₹ 4.77 crore for this purpose to Nagar Palika Parishad, Joshimath (March 2010).
- Government sanctioned (January 2006) ₹ 0.94 crore for construction of 36.6m span valley bridge over the river Mandakni on the Jolgibi - Munsiyari road, Pithoragarh on the basis of estimates prepared by Temporary Division, PWD, Askot. This was a construction of fresh bridge and thus, did not fall under the purview of CRF norms.
- Government sanctioned (January 2009) ₹ 0.40 crore for construction of 80 m long and 20 m high protection wall in Badrinath colony, Dehradun. The work was executed through Military Engineering Service, Division, Dehradun. The work was sanctioned on the recommendations of the local MLA. Scrutiny of records of District Magistrate, Dehradun revealed that this work was investigated by the district administration which found that the works did not qualify under the CRF category.



<sup>20</sup> Monsoon Nalla, Joshimath, Chamoli : ₹ 4.77 crore, 36.6 m span valley bridge, Pithoragarh : ₹ 0.94 crore, protection wall in Badrinath Colony, Dehradun : ₹ 0.40 crore, 70 m span bridge, Manna village, Badrinath, Chamoli : ₹ 1.41 crore, Gola river, Haldwani: ₹ 4.58 crore and Raskiya Nala, Nainital : ₹ 2.61 crore.

### 1.1.10.7 Unauthorised repair/renovation of private small hydro-power project

Audit scrutiny revealed that sanctions worth ₹ 0.74 crore for carrying out 12 works of repair and renovation in ten private hydro-power stations, tehsil office and SSP office, were issued by the district administration against the CRF guidelines. The instances were as under:

a) The relief of ₹ 0.41 crore<sup>21</sup> was sanctioned to private small hydro-power projects for undertaking repair/renovation works of power channel clearly in violation of CRF rules which envisages that the funds shall be provided to power corporations for carrying out immediate repairs to Low Transmission lines only.

b) An amount of ₹ 0.25 crore was sanctioned (March 2010) by district authorities, Uttarkashi to renovate the existing campus of Tehsil Headquarters, Dunda, which included kitchen, latrine, protection wall, boundary wall, generator room and laying the bituminous semi-dense concrete of approach road. The expenditure on the work was required to be met from the regular budget of department concerned, and as such the sanction issued under CRF was irregular and un-authorised.



c) An amount of ₹ 0.08 crore was sanctioned (July 2009) by district authorities, Uttarkashi to renovate the existing campus of Senior Superintendent Uttarkashi residence and Police lines Uttarkashi, which included repair of windows, tiles work in the lobby, plaster work and paint works. These petty works undertaken under CRF were unjustified as these should have been met from the regular annual budget of the department concerned.

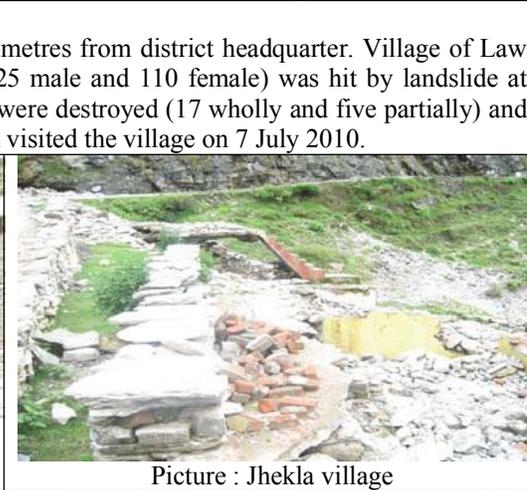
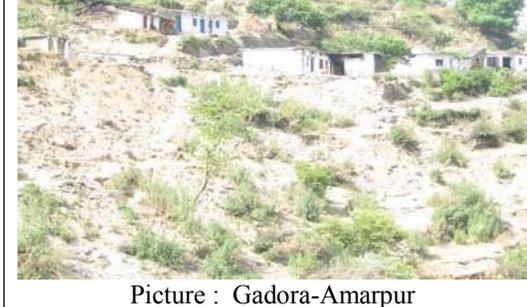
### 1.1.10.8 Rehabilitation

Rehabilitation is a major aspect of Disaster Management as it involves hectic exercise of shifting the habitations from vulnerable areas to safer places. Scrutiny revealed that GOU could identify only 100 villages vulnerable involving a population of 15,372 of 3,039 families on the basis of survey conducted by the geological survey (June 2008). In 80 villages, with a population of 10,110 covering 1,976 families of the five selected districts, no measures were taken by the GOU for rehabilitation, despite a lapse of two years after their identification.

On being pointed out, the department replied (August 2010) that these villages could not be rehabilitated due to non existence of Rehabilitation and Resettlement (R&R) policy. However, the policy was under preparation. The reply was not justified as the GOU should have effected the rehabilitation process as per the guidelines of National R & R Policy.

<sup>21</sup> Chamoli : ₹ 0.24 crore, Pithoragarh : ₹ 0.11 crore and Uttarkashi : ₹ 0.06 crore.

Further, in the six affected villages which audit visited, it was found that at least 498 people affected by various disasters, particularly the landslides were not identified/ placed on the priority list of rehabilitation. The relief/restoration works in all the six affected villages had not been carried out properly. The case study of three major affected villages is as under:

|   |  |
|---|--|
| <p><b>1. Baram-Malla Sain (Pithoragarh)</b><br/>Baram is located at a distance of 82 kilometres from district headquarter and has five habitations that include Malla Sain, Talla Sain, Patal, Gatta Bagar and Baram. Baram has a population of 904 of which 490 are male and 414 female including 180 children in the age group 0-6 years (Census of India, 2001). The landslide took place in Baram in the midnight of 5 September 2007. Five houses were destroyed and the event took toll of 10 human lives. Audit team visited most affected habitation Malla Sain on 8 July 2010.</p> |    |
| <p><i>Picture : Malla Sain village (House debris)</i></p>   |  |
| <p><b>2. Law &amp; Jhekla (Pithoragarh)</b><br/>Law &amp; Jhekla is located at a distance of 93 kilometres from district headquarter. Village of Law and Jhekla with a population of 235 people, (125 male and 110 female) was hit by landslide at midnight of 8 August 2009. Twenty two houses were destroyed (17 wholly and five partially) and the event took toll of 26 human lives. Audit team visited the village on 7 July 2010.</p>   |   |
| <p><i>Picture : Law village</i></p>   | <p><i>Picture : Jhekla village</i></p>   |
| <p><b>3. Gadora, Amarpur (Chamoli)</b><br/>Gadora, Amarpur is located at a distance of 55 kilometres from district headquarter. Village of Gadora, Amarpur with a population of 57 people, (32 male and 25 female) was hit by cloud burst in 2009. Eight houses were destroyed in the calamity. Audit team visited the village on 17 April 2010.</p>  |  |
| <p><i>Picture : Gadora-Amarpur</i></p> <p>Joint visit by audit and representatives of department of these villages revealed that:</p> <ul style="list-style-type: none"> <li>▪ The village level bodies had not been framed in these villages.</li> <li>▪ No remedial/preventive measures had been taken by the administration to lessen the impact of the future disasters.</li> <li>▪ Role of ANM and ASHA had not been defined by the EOC, Pithoragarh thereby making them non-functional at the time of disaster.</li> </ul>  |  |

- Water supply in village Baram had not been repaired and supply was being made on ad-hoc basis.
- The villagers of Baram and Gadora held that the assessment of land and property and the compensation made by the administration was not adequate.
- The entire infrastructure in village Law-Jhekla that had got damaged has not been repaired.
- The administration reached the affected area in village Law-Jhekla after 10 hours of the event.
- The villagers of Gadora are ignorant about the District Disaster Management Action Plan as their involvement had not been ensured in the mitigation process. They had also not been trained about the Dos and Don'ts in the event of a threatening disaster or disaster. No training programme was conducted by any agency.
- The administration reached the affected area of village Gadora for verification after two months.

Further, villagers had migrated to safer areas on their own due to prevailing insecurity. These villagers were generally peasants and were dependant upon the agricultural land but being under constant fear psychosis, they were not able to cultivate their land. As has been envisaged in the NPDM, the development processes should have been initiated in these affected villages through various central and State Governments schemes, which were in vogue i.e. Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGA), National Rural Health Mission (NRHM) and Atal Adarsh Gram Yojna. However, the department failed to take appropriate action in time.

### 1.1.11 Monitoring and Evaluation

#### *National Level*

The Ministry of Home Affairs (MHA), which is the nodal Ministry for overseeing the operation of CRF is required to monitor the CRF scheme. The State Government was required to furnish by 30 September every year an Annual Report on natural calamities in the format prescribed by the MHA. Further, a half yearly return containing item-wise details of expenditure from the CRF/NCCF was also required to be sent to the MHA for monitoring and release of installments of Central share of CRF. The MHA was also to undertake evaluation of the expenditure incurred out of CRF through an independent agency for at least six States in a year so as to ensure that the evaluation for all States was done at least once in five years.

However, despite monitoring and evaluation mechanism prescribed for the scheme, audit scrutiny revealed that (i) Annual Report for the year 2009-10 was not furnished by the Government as of August 2010. (ii) Half yearly returns on item-wise details of expenditure were not sent at all. (iii) Although stipulated in the guidelines, the MHA had neither taken up evaluation of the CRF scheme nor got the evaluation done by any independent agency even once during the last five years 2005-10.

#### *State Level*

The Department of Disaster Management had laid down procedure for obtaining monthly reports (physical and financial) from district administration for inclusion

in the half yearly and annual reports, which were required to be submitted to MHA. These reports were also required for effective monitoring and release of funds. However, audit scrutiny revealed that – (i) Out of 13 districts, only four districts<sup>22</sup> were regularly submitting these reports. (ii) No standard formats and returns were prescribed by the department for these reports.

The absence of a proper monitoring mechanism, led to poor monitoring of the disaster related activities.

On being pointed out, the department stated that in the absence of any monitoring and evaluation cell, the department was not in a position to assess the progress of the works both physically and financially. The reply of the department was not justifiable as the department should have ensured proper monitoring of these works to avoid unnecessary delays in the execution of works under CRF.

#### ***District Level***

The district administration is the nerve centre to monitor, coordinate and implement the actions for disaster management. In a disaster situation, the district administration is the central authority exercising emergency powers to issue directives to all departments to provide emergency services. For this purposes, the district administration should obtain status reports from executing agencies to whom relief and restoration funds are released.

However, scrutiny revealed that – (a) District administration had not prescribed any format for the returns and reports. (b) No implementation status report was submitted by the executing agencies to district administration. Due to lack of monitoring, there were delays in execution of work as discussed earlier in ***paragraph 1.1.10.4.***

It would be evident that effective monitoring and evaluation of implementation of the CRF scheme was lacking at all the levels and the checks and balances envisaged in the scheme were not followed and thus, implementation of the scheme effectively remains to be ensured in the State.

#### **1.1.12 Conclusion**

The State of Uttarakhand due to its complex terrain and ongoing tectonic activities is highly prone to hazards like earthquake, landslide, cloud burst and flash flood. Thus, making Disaster Management an integral part of the Governance is of paramount importance. Although the Disaster Management Act came into existence in 2005, no rules, regulations, policies and guidelines were framed by the State Government. SDMA was not functional as it had met only once during 2005-10. Important aspects of disaster prevention such as mainstreaming of disaster mitigation/prevention into development process, preparation of plan schemes for vulnerability reduction and preparedness, enforcement of techno legal regime etc. were yet to be put into effect. Critical

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<sup>22</sup> Almora, Chamoli, Haridwar and Rudraprayag.

infrastructure like trauma centres & communication was limited in the State. GIS mapping to identify landslide prone areas, declaration of unsafe areas, shifting of habitations from such areas and prevention of settlement in hazard prone sites had not been carried out in the most vulnerable cities. Life line buildings such as hospitals, schools, offices, community centres etc. had not been identified for retrofitting. There were no training schedules, modules and targets prepared by the department to cater to the needs of the people. In disaster management, the main focus of the State Government had been on post disaster relief activities and very little initiatives were taken on prevention, preparedness and rehabilitation. Even in the execution of post-disaster activities, expenditure was incurred on inadmissible works. Monitoring of disaster management activities by the state and the district level functionaries was virtually non-existent.

### **1.1.13 Recommendations**

- *The department should take immediate steps to formulate the policy guidelines, rules and norms.*
- *The State Government should ensure effective functioning of the SDMA by convening regular meetings and reviewing follow up action of its recommendations.*
- *The State Government should ensure that disaster management plan is developed so that disaster management measures are included in the development process.*
- *The State Government should codify building bye-laws to ensure safe construction practices in the State.*
- *Hazard Safety Cell should be empowered suitably to carry out its functions effectively.*
- *Government should take steps to provide critical infrastructure such as trauma centre, so that the affected population could be given immediate medical attention.*
- *Government should take steps to prepare training modules and calendars to upgrade the skills of personnel, NGOs & communities engaged in disaster prevention and mitigation.*
- *Government should prioritize assessment of structural and non-structural safety of school buildings and identify necessary mitigative action to be included in the school safety programme.*
- *Department should take immediate steps to form Village Disaster Management Committees in the remaining villages of the State.*
- *Government should take immediate steps to prepare a comprehensive Rehabilitation & Resettlement policy to rehabilitate the disaster affected villages.*
- *Monitoring and evaluation mechanism as prescribed by GOI should be made functional immediately.*