

**REPORT OF THE  
COMPTROLLER AND AUDITOR GENERAL OF INDIA  
ON  
PERFORMANCE AUDIT OF  
NATURAL DISASTER IN UTTARAKHAND, JUNE 2013  
(RESPONSE, RELIEF & RESTORATION OF THE DAMAGED  
INFRASTRUCTURE OF IMMEDIATE NATURE)  
FOR THE YEAR ENDED 31 MARCH 2014**



**Government of Uttarakhand  
Report No. 2 of the year 2015**

**REPORT OF THE  
COMPTROLLER AND AUDITOR GENERAL OF INDIA**

**ON**

**PERFORMANCE AUDIT OF  
NATURAL DISASTER IN UTTARAKHAND, JUNE 2013  
(RESPONSE, RELIEF & RESTORATION OF THE DAMAGED  
INFRASTRUCTURE OF IMMEDIATE NATURE)**

**FOR THE YEAR ENDED 31 MARCH 2014**

**GOVERNMENT OF UTTARAKHAND**

*REPORT NO. 2 OF THE YEAR 2015*

*Source of Photographs: All the photographs included in the Report have been authenticated by the  
Department of Disaster Management, Government of Uttarakhand.*

# Contents

|  |       |          |
|--|-------|----------|
| PREFACE  |       | iii      |
| EXECUTIVE SUMMARY  |       | v        |
| <b>CHAPTER 1 - Introduction</b>  |       | <b>1</b> |
| <b>CHAPTER 2 – Audit Approach</b>  |       |          |
| Institutional Frame Work as per Disaster Management Act                                  | 2.1.1 | 5        |
| Legislative Frame Work   | 2.1.2 | 6        |
| Audit objectives   | 2.2   | 6        |
| Audit Criteria   | 2.3   | 6        |
| Audit Scope and Methodology  | 2.4   | 7        |
| Acknowledgement  | 2.5   | 8        |
| <b>CHAPTER 3 – Factors which aggravated the Disaster of June 2013</b>                    |       |          |
| Factors that led to and aggravated the magnitude of the disaster                         | 3.1   | 9        |
| Monitoring of potential threat posed by the impact of climatic changes upon the Glaciers | 3.1.1 | 10       |
| Slope instability and Stabilisation measures   | 3.1.2 | 11       |
| Disposal Policy for Debris   | 3.1.3 | 11       |
| River side constructions and aggradations  | 3.1.4 | 12       |
| Enforcement of town planning and building by-laws  | 3.2   | 13       |
| Conclusion   | 3.3   | 13       |
| Recommendations  | 3.4   | 14       |
| <b>CHAPTER 4 – Preparedness</b>  |       |          |
| Institutionalisation of Disaster Mitigation and Management                               | 4.1   | 15       |
| Mainstreaming Disaster Management into developmental plans                               | 4.2   | 19       |
| Hazard Safety Cell   | 4.3   | 19       |
| Standard Operating Procedures (SOPs)   | 4.4   | 20       |
| Provision of Intermediate Shelters   | 4.5   | 20       |
| Non-identification of sites for safe relief camps  | 4.6   | 21       |
| Preparation and maintenance of Database  | 4.7   | 22       |
| Preparedness for maintenance of supplies   | 4.8   | 22       |
| Medical preparedness   | 4.9   | 23       |
| Safety of livestock  | 4.10  | 24       |
| Conclusion   | 4.11  | 24       |
| Recommendations  | 4.12  | 25       |
| <b>CHAPTER 5 – Financial Arrangements</b>  |       |          |
| Availability <i>vis-à-vis</i> application of funds                                       | 5.1   | 27       |
| Fund availability and expenditure under CMRF   | 5.2   | 28       |
| Expenditure incurred in the test-checked districts                                       | 5.3   | 29       |
| Other Audit findings   | 5.4   | 29       |
| Conclusion   | 5.5   | 30       |
| Recommendations  | 5.6   | 30       |

|   |         |           |
|---|---------|-----------|
| <b>CHAPTER 6 – Government Response to Disaster, Rescue and Relief</b>   |         |           |
| Government response to disaster   | 6.1     | 31        |
| Early warnings  | 6.1.1   | 31        |
| Immediate response of State machinery   | 6.1.2   | 32        |
| Response of the District Level Administrative machinery   | 6.1.3   | 33        |
| Rescue operations   | 6.2     | 35        |
| Initiation of rescue operations   | 6.2.1   | 35        |
| Ineffectiveness of rescue operations on account of insufficient logistical support                              | 6.2.2   | 36        |
| Non-availability of trained manpower in rescue and evacuation activities  | 6.2.3   | 37        |
| Hampering of rescue operations due to failure of Communication Network and lack of Early Warning Infrastructure | 6.2.4   | 38        |
| Relief activities   | 6.3     | 39        |
| Review of Standards of relief   | 6.3.1   | 39        |
| Assessment of relief  | 6.3.2   | 39        |
| Immediate relief to the disaster victims  | 6.3.3   | 40        |
| Delay in disbursement of assistance   | 6.3.3.1 | 40        |
| Flaws in documentation of the Preliminary Report  | 6.3.3.2 | 41        |
| Violation of assessment and authentication norms  | 6.3.3.3 | 42        |
| Finalisation of payments without technical reports  | 6.3.3.4 | 42        |
| Excess payment of assistance from SDRF  | 6.3.3.5 | 42        |
| Short payment of assistance from SDRF   | 6.3.3.6 | 43        |
| Non-uniformity in relief distribution   | 6.3.3.7 | 43        |
| Non-adherence to the prescribed format by the Veterinary Officer  | 6.3.3.8 | 44        |
| Doubtful assistance   | 6.3.3.9 | 44        |
| Conclusion  | 6.3.4   | 44        |
| Recommendations   | 6.3.5   | 45        |
| <b>CHAPTER 7 – Restoration of essential public infrastructure</b>   |         |           |
| Restoration of essential public infrastructure  | 7.1     | 47        |
| Restoration of essential services   | 7.1.1   | 47        |
| Assessment, Sanction and Completion of restoration works  | 7.1.2   | 48        |
| Partial release of funds  | 7.1.3   | 50        |
| Execution of works in violation of norms  | 7.1.4   | 50        |
| Rehabilitation of affected population   | 7.2     | 54        |
| Conclusion  | 7.3     | 54        |
| Recommendations   | 7.4     | 55        |
| <b>CHAPTER 8 – Internal Control Frame Work</b>  |         |           |
| Introduction  | 8.1     | 57        |
| Control Environment and Risk Assessment   | 8.1.1   | 57        |
| Control Activities  | 8.1.2   | 58        |
| Information and Communication   | 8.1.3   | 59        |
| Monitoring  | 8.1.4   | 60        |
| Conclusion  | 8.2     | 60        |
| Recommendations   | 8.3     | 61        |
| <b>Glossary of abbreviations</b>  |         | <b>63</b> |

## Preface

**T**his Report of the Comptroller and Auditor General of India contains the results of Performance Audit of ‘Natural Disaster in Uttarakhand, June, 2013 (Response, Relief and Restoration of Damaged Infrastructure of immediate nature)’. The report has been prepared for submission to the Governor of the State of Uttarakhand under Article 151 (2) of the Constitution of India.

The report emanates from scrutiny of files and documents pertaining to Department of Disaster Management, Government of Uttarakhand, Disaster Mitigation and Management Centre, five District Disaster Management Authorities and five line departments. Information/data was also obtained from Wadia Institute of Himalayan Geology and India Meteorological Department.

The instances mentioned in the Report are those, which came to notice in the course of performance audit conducted during September 2014 to February 2015 covering the period from June 2013 to March 2014, instances relating to the period subsequent to March 2014 have also been included, wherever necessary. The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

## Executive Summary

Uttarakhand witnessed a devastating natural disaster in the form of torrential rains of unseen magnitude on 16-17 June 2013. It caused widespread destruction and also led to heavy losses to the physical infrastructure, agriculture fields, human and animal lives and roads. The Government was eventually able to start rescue and relief operations on 18<sup>th</sup> June 2013. A total of 1.14 lakh stranded pilgrims/ locals<sup>1</sup> were evacuated by air and another 0.36 lakh were evacuated by transporting them on mules or on foot. Five districts namely, Bageshwar, Chamoli, Pithoragarh, Rudraprayag and Uttarkashi were severely affected.

A performance audit of ‘Natural Disaster in Uttarakhand, June 2013 (Response, Relief and Restoration of the Damaged Infrastructure of Immediate Nature)’ was carried out from September 2014 to February 2015 to assess the Government efforts in conducting rescue and relief operations, providing relief, restoring damaged infrastructure and rehabilitating affected people. Specific findings are enumerated below:-

### **(i) Factors which aggravated the Disaster of June 2013**

The recommendations of Expert Committee on glaciers were not implemented; there was no policy to regulate use of explosives for infrastructure developmental works in the fragile Himalayan terrain. Ministry of Environment and Forests, Government of India’s directions regarding the safe disposal of muck generated from excavation in course of construction activities had not been implemented by the State. Control over riverside constructions was not exercised and town-planning and building by-laws were not enforced.

### **(ii) Preparedness**

The State Government has not formulated State Disaster Management policy and guidelines for the purpose of integration of measures for prevention of disaster and mitigation and for providing standards of relief to persons affected by disaster in the State. The State Disaster Management Authority was virtually non-functional and was not able to put in place the State Disaster Management Plan prior to June 2013 disaster. The State was not able to factor in the mitigation measures in the regular State budget and mainstream disaster management into development

<sup>1</sup> Data provided by the Department of the Disaster Management.

process. The Emergency Operation Centres both at the State and District levels, were running without adequate manpower, equipment and essential communication networks. The District Disaster Management Authorities could not activate the envisaged command system, which would have taken care of search, rescue and relief operations in the aftermath of the disaster. The line departments had not developed mitigation plans and Standard Operating Procedures for effective response mechanism. Non-identification of safe relief camp sites puts the lives of the affected people at risk during the disaster. The State Government did not have any mechanism in place to register the Char-Dham pilgrims. Adequate storage of rations and medicines were not maintained by the district authorities.

### **(iii) Financial Arrangements**

In order to meet the requirement of funds, the GoI committed a package of ₹ 7,981.04 crore to be made available over the period 2013-14 to 2015-16 for relief and restoration activities. A total of ₹ 733.53 crore from various fund sources had been spent on rescue and relief operations and restoration of essential services as on March 2014. The State was not able to make final adjustments of various fund sources. Separate accounts had not been maintained by the DDMA's despite clear instructions from the Government.

### **(iv) Government Response to Disaster, Rescue and Relief**

State machinery as well as district administration could not respond effectively, on account of poor weather and lack of preparedness, to mitigate widespread loss of human lives during 15-17 June 2013. Rescue operations could be started only on 18<sup>th</sup> June 2013 which was delayed, as the Department had certain constraints and limitations in carrying out the rescue operations. The helipads were not available for the smooth operation of air evacuation. Lack of co-ordination amongst various line departments was also noticed. Necessary search and rescue equipment like emergency lights, inflatable lights, solar lights, gas cutters, wood cutters, etc. were not available in the District Emergency Operation Centres of the affected districts. The services of available trained manpower of 7,849 persons could not be utilised. The operation was also hampered by non-availability of sound communication network.

Delay in disbursement of assistance was noticed in 30,928 cases out of 33,488 cases (92 per cent). Flaws in documentation of the Preliminary Report were noticed. An excess payment amounting to ₹ 59.33 lakh from SDRF in 1,122 cases was noticed. There was lack of uniformity in authentication of losses and disbursement of relief.

### **(v) Restoration of essential Public Infrastructure**

The Government was not able to restore essential services permanently (electricity, water and road connectivity) in the affected areas in the prescribed time limits. Damage to infrastructure was not properly assessed. There were delays in sanction of works by District Level Screening Committees as well as District Disaster Management Authorities and progress of restoration works was also very slow. Against the sanctioned amount of ₹ 127.04 crore, an expenditure of ₹ 90.07 crore had been incurred as of February 2015 in completion of 1,746 works. A majority of works had been completed with a delay ranging between two months to more than 12 months. 159 works, sanctioned at an estimated cost of ₹ 24.11 crore were sanctioned and executed in violation of norms of State Disaster Relief Fund.

### **(vi) Internal control Frame Work**

The SDMA was not able to evolve disaster management strategy underlying risks and plans to address such risks effectively and was virtually non-functional. The Standard Operating Procedures were not in existence. The Government had not reviewed the codes and norms. The preliminary reports were not being cross verified with the relevant records. The Government had no mechanism in place to register the Char-Dham pilgrims. In absence of separate grievance redressal system, most of the complaints regarding financial relief could not be attended to. Prescribed procedure for obtaining monthly reports had not been implemented by the Department. In the absence of any reports, there was no monitoring to watch the progress of works.





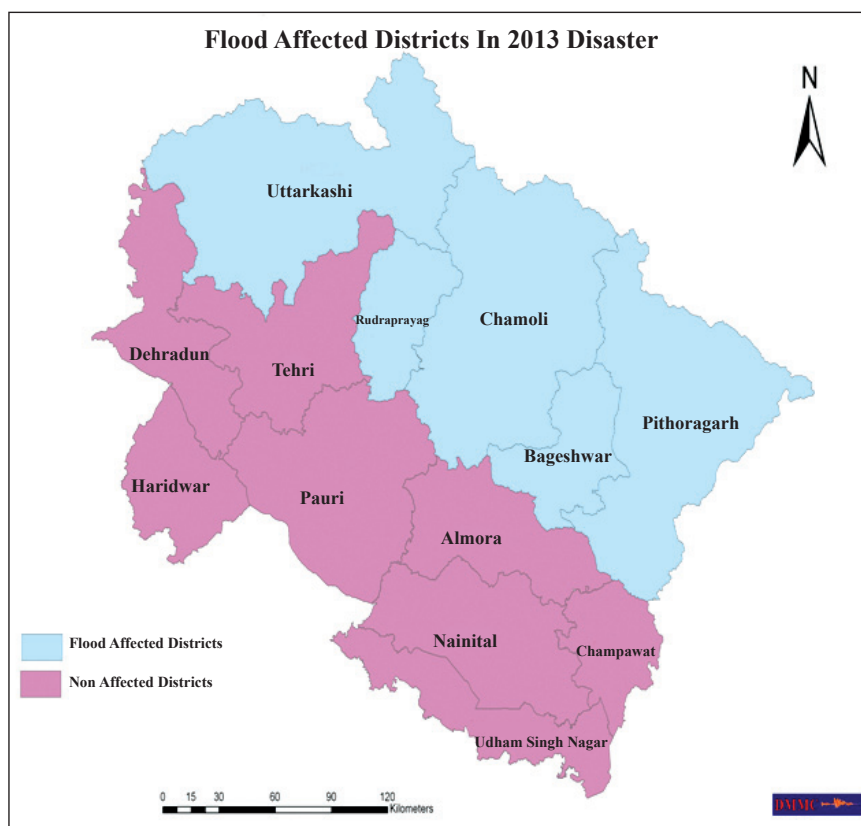
*Chapter* **1**

**INTRODUCTION**

# CHAPTER- 1 : INTRODUCTION

Disaster means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to and destruction of property, or damage to, or degradation of, environment and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area. The disaster that struck the higher reaches of the Himalayas in the State of Uttarakhand in June 2013, was an extreme climatic event, resulting in damage to life and property on an unprecedented scale.

High intensity rainfall (> 400 mm) on 16-17 June 2013 in different parts of the State of Uttarakhand caused devastating flash floods that triggered widespread landslides. The flash floods together with landslides caused widespread destruction and also led to heavy losses to the physical infrastructure, agricultural fields, human and animal lives, and roads. The evacuation of affected people was started on 18<sup>th</sup> June 2013 and completed in the last week of September 2013. A total of 1.14 lakh stranded pilgrims/ locals were evacuated by air. Another 0.36 lakh were evacuated by transporting them on mules or on foot.



Source: DMMC, Dehradun

Though five districts were severely affected by the June 2013 disaster, the State Government eventually declared all the 13 districts in the State as disaster affected. The five severely affected districts were Bageshwar, Chamoli, Pithoragarh, Rudraprayag and Uttarkashi. The position of damages in the State as a whole due to June 2013 disaster, is depicted in the table below:-

**Table: 1.1**

|                    |        |
|--------------------|--------|
| <b>Human lives</b> | 4,209  |
| <b>Houses</b>      | 19,309 |
| <b>Livestock</b>   | 17,838 |
| <b>Land (ha)</b>   | 13,637 |
| <b>Crop (ha)</b>   | 10,899 |

The extent and intensity of the tragedy had a multiplier effect. All the famous shrines of Uttarakhand State such as Badrinath, Kedarnath, Gangotri, Yamunotri and Hemkund Sahib located in the northern high mountainous, snow bound areas were badly affected. The ancient Shri Kedarnath shrine, one of the most sacred pilgrimage places located in the upper Mandakini Valley of district Rudraprayag, was amongst the worst affected areas in

**Rambara before and after disaster**

*Source: Government of Uttarakhand*

the State with maximum damage and casualties reported from there. The entire Shri Kedarnath town was converted into a dumping ground of glacial debris and boulders within a short span of time. Further downstream, the Rambara town was completely destroyed while the Gaurikund and Sonprayag towns were badly affected. This cataclysmic event turned the whole valley geologically more fragile and vulnerable to landslides, debris flow and rock falls. This natural



**Kedarnath before and after disaster**

*Source: Government of Uttarakhand*

hazard turned into a major disaster as the town was overcrowded with pilgrims and local population.

The Government had no database of Char-Dham<sup>1</sup> Yatris in place which could be used to ascertain the exact number of pilgrims that visit the Char-Dham. Therefore, in the absence of the same, the Government could not come out with a definite number of pilgrims who had either been in Kedarnath during the disaster or had got stranded enroute the Char-Dham between 15 and 17, June 2013.

---

<sup>1</sup> Char-Dham (Yamunotri, Gangotri, Kedarnath and Badrinath).



*Chapter* **2**

**AUDIT APPROACH**

# CHAPTER- 2 : AUDIT APPROACH

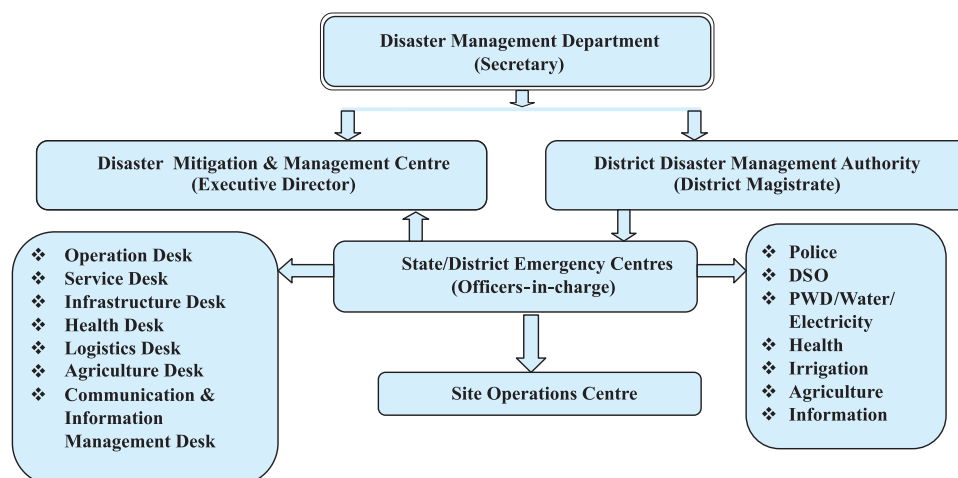
## 2.1 Frame Work

### 2.1.1 Institutional Frame Work as per Disaster Management Act

The Department of Disaster Management of the Government of Uttarakhand is the nodal Department in the State responsible for co-ordinating and implementing all disaster management related activities.

- **At the State level**, the Department is headed by the Secretary, Disaster Management & Rehabilitation. All relief & rehabilitation related matters arising from a disaster, are looked after by the Department. The Department also has an autonomous institution, the Disaster Mitigation and Management Centre (DMMC), for undertaking disaster related studies, mass awareness campaigns and capacity building, and for providing technical support to the Department. The DMMC is also responsible for managing the State Emergency Operations Centre (SEOC) round the clock, throughout the year.
- **At the District level**, the District Magistrate manages all disaster management related activities through the District Disaster Management Authority (DDMA). A District Emergency Operations Centre (DEOC) has been established in all the districts. These DEOCs are meant to be operational 24x7 round the year.
- **At the Local level**, in the aftermath of any disaster, there is a provision for establishing Site Operations Centre at Tehsil, block or village level under the control of the Site Manager.

The structure of the existing disaster management system in the State is as follows:-



### 2.1.2 Legislative Frame Work

Government of India (GoI) notified the Disaster Management Act (read as Act hereinafter) in December 2005, followed by a National Policy on Disaster Management in 2009. The policy clearly lays down the institutional, legal, financial and coordination mechanism at the National, State and local levels.

The National Disaster Management Authority (NDMA) at the national level, the State Disaster Management Authority (SDMA) at the state level and the District Disaster Management Authority (DDMA) at the local level have been provided as part of the institutional framework under these Acts. A typical Disaster Management (DM) Plan comprises six elements *viz* prevention, mitigation, preparedness, response, rehabilitation and reconstruction & recovery.

## 2.2 Audit objectives

The Performance Audit was conducted to assess whether:-

- policy was formulated for disaster mitigation and plans incorporating pre-disaster risk assessment and prevention had been prepared by the State Government;
- any institutional mechanism had been in place for effective disaster preparedness;
- special assistance provided through the National Disaster Response Fund (NDRF)/ the State Disaster Response Fund (SDRF) for quick response, relief, and restoration of immediate nature of damaged infrastructure, was adequate and timely & its utilisation was proper;
- a prompt and effective response was initiated and the system in place for identification of beneficiaries, needs assessment and flow of immediate response including rescue & relief to the affected population, was efficient and effective;
- planning for restoration of immediate nature of the damaged infrastructure & rehabilitation activities was robust and effective; and
- an adequate internal control structure was in place.

## 2.3 Audit Criteria

The audit criteria used for assessing institutional support, efforts of response, relief and restoration of the damaged infrastructure of immediate nature were derived from the following sources:-

- Provisions of the National Disaster Management Act 2005, National Policy on Disaster Management, and the State Disaster Management Act 2005;

- Guidelines issued by the Ministry of Home Affairs for the implementation of National Disaster Response Fund;
- Rules of CM's Relief Fund;
- Norms prescribed for assistance and expenditure from NDRF/SDRF; and
- Orders issued by the Government of India and the State Government pertaining to sanction and release of funds for rescue, relief, restoration of the damaged infrastructure and rehabilitation of immediate nature.

## 2.4 Audit Scope and Methodology

**The Performance Audit of Natural Disaster in Uttarakhand, June 2013 (Response, Relief and Restoration of the damaged infrastructure of immediate nature)** was carried out from September 2014 to February 2015, and covered the period right from the immediate aftermath of June 2013 disaster to the activities related to restoration of the damaged infrastructure of immediate nature undertaken up to March 2014. Five districts (*Bageshwar, Chamoli, Pithoragarh, Rudraprayag and Uttarkashi*) were severely affected in the June 2013 disaster. Out of these five severely affected districts, four districts (*Chamoli, Pithoragarh, Rudraprayag and Uttarkashi*) were selected for detailed scrutiny based on the number of casualties and the extent of damage to infrastructure in these districts. Of the remaining eight districts, one district i.e. Tehri, adjacent to these four severely affected districts, was selected on the basis of quantum of funds released to the district for immediate relief. The audit of the CMRF and the PMRF was not conducted as the Rules of these funds do not provide for the audit by the CAG of India.

The records of the Department of Disaster Management (DDM), the DMMC, and the DDMA of the test-checked districts along with five line departments<sup>1</sup>, were scrutinized in the course of audit. In case of restoration of works, the award of contracts was not covered in audit. In addition to this, data/ information from departments/ agencies providing essential services<sup>2</sup>, were also obtained and analysed. A joint physical verification of 36 severely affected villages covering 439 villagers of test-checked districts was also taken up by the representatives of State Administration and officers of the Audit to ascertain the status of relief initiatives and restoration works. Audit also analysed the follow-up to the recommendations of the previous audit reports on the subject. The same is mentioned at appropriate places in the report.

---

<sup>1</sup> Public Works Department, Jal Sansthan, Peyjal Nigam, Irrigation and Panchayats.

<sup>2</sup> Health, Electricity, Animal Husbandry and Supply.



Before commencing the performance audit, the audit objectives, criteria and scope were discussed (August 2014) with the Secretary to the GoU in an Entry Conference. Audit findings were discussed with the Additional Secretary, Disaster Management in an Exit Conference held on 30 April 2015 and replies of the Government have been incorporated in the report at appropriate places.

## **2.5 Acknowledgement**

We acknowledge the co-operation and assistance extended by the Secretary, Disaster Management, the Executive Director of DMMC, the District Magistrates of the five test-checked districts, the Wadia Institute of Himalayan Geology, the India Meteorological Department, other line departments (Health, Electricity, Animal Husbandry and District Supply Officer) and the staff at all levels for providing all assistance during the performance audit.

We are also thankful to the DDMA's and the District Disaster Management Officers who facilitated audit and provided their valuable inputs during the conduct of this audit.



*Chapter* **3**

**FACTORS WHICH AGGRAVATED  
THE DISASTER OF JUNE 2013**

## CHAPTER- **3** FACTORS WHICH AGGRAVATED THE DISASTER OF JUNE 2013

Disaster can strike any part of the world at any time. It may be a result of natural (*e.g.* floods) or man-made causes, or a mixture of the two, and can occur suddenly or develop slowly. In such a situation, the emphasis is on saving lives, alleviating poverty, hardship, and maintaining human dignity. Throughout the emergency response, relief, rehabilitation and reconstruction activities of the post-disaster phase, order has to be maintained and normalcy has to be restored.

While it is conceded that the forces of nature cannot be tamed, it is conceivable that given proper advance warning, preventive measures could have been initiated by the SDMA prior to the June 2013 disaster which would have, in turn, helped in reducing the impact of the intense and untimely rainfall and subsequent land slides and flooding of Kedarnath, Alaknanda, Bhagirathi, Kali and Gauri River Valleys. Prior to June 2013 disaster, Uttarakhand had witnessed two major land slides in the districts of Uttarkashi and Rudraprayag due to unprecedented rainfall in 2012 which had resulted in loss of 92 lives. However, the Government failed to take cognizance of the underlying risk factors and take any corrective measures at any stage subsequently.

In the exit conference and subsequent replies, the Government stated that it had been alive to the situation at the grass-root level and had been undertaking all mitigation measures after the disasters of 2010 and 2012. Further, it was also stated that necessary clearing of debris from the river beds and construction of embankments at various places along the course of the rivers had been initiated. The reply of the Government is not acceptable as the Government convened the maiden meeting of SDMA in connection with the situation that had arisen after the 2010 and 2012 incidents only in May 2013. Further, the river bed clearance and construction of embankments had been undertaken only after the June 2013 disaster *i.e.* in September 2013 and November 2013.

### **3.1 Factors that led to and aggravated the magnitude of the disaster**

The fragile terrain of the State is, by virtue of its very origin, prone to natural disasters. The natural terrain conditions combined with climatic/ weather conditions and haphazard human intervention resulted in the unprecedented disaster in the Kedar and Mandakini Valleys and in other parts of the State as discussed in the following paragraphs:-

**3.1.1 Monitoring of potential threat posed by the impact of climatic changes upon the Glaciers**

The higher reaches of the State of Uttarakhand fall in the heavy snow zone which is susceptible to snow/ice related disasters. Concerned with the frequent media and scientific reports on the rapid receding of Himalayan glaciers and the likely consequences of such developments on the State of Uttarakhand, the Government of Uttarakhand constituted (June 2006) an Expert Committee on Glaciers for a fresh appraisal of the hazard potential of glaciers and to suggest remedial measures. The Expert Committee submitted its report in October 2007. The Committee had made the following recommendations:-

**(A) Short term recommendations:**

- The available glacier inventory to be super-imposed on the habitat map of Uttarakhand to identify most glacial hazard prone regions requiring immediate redressal.
- Database on glacier recession, hydrological and climatological data to be prepared.
- The supra-glacial lakes around Kedar Ganga and Kedar Bamak in the Bhagirathi Valley should be monitored, together with stream discharge.
- Generation of guidelines and public awareness material for glacier related hazards.
- Restriction on tourists accessing the snouts of most vulnerable glaciers like Gaumukh of the Gangotri glacier and the Satopanth Glacier.
- A mechanism may be worked out to bring out a glacier bulletin to be propagated through audio/video media.

**(B) Long term recommendations:**

- Preparation of glacier and glacial lake inventory.
- Snow cover mapping and assessment along with the pattern of maximum snow cover during winter.
- Strengthening of monitoring system.
- Risk assessment to understand the impact of glaciers on safety of dams, reservoirs and power projects.
- Integrating all the information generated for Himalayan glaciers under Geographical Information System environment.

Audit of data/information showed that the GoU did not take any remedial measures as suggested by the Committee. In the exit conference and subsequent replies, the Government stated that in

pursuance of the recommendations of the said Committee, the number of persons visiting Gaumukh is being regulated. The reply of the Government is not acceptable, since the regulation of human intervention in Gaumukh is just one of the short term recommendations of the Committee which has been considered by the Government. Action on the remaining 10 recommendations made by the said Committee is yet to be taken.

### ***3.1.2 Slope instability and Stabilisation measures***

Uttarakhand is located in the midst of young and unstable mountains and the area is subject to intense rainfall. The occurrence of tragedies around monsoon has been a regular occurrence in this hill State, which are mainly due to landslides and flow of debris. The Disaster Mitigation and Management Centre (DMMC), had, after the Ukhimath incident (September 2012), recommended to the GoU for banning use of explosives for infrastructure developmental works in the fragile Himalayan terrain, as such explosions induce instability in the surrounding rock strata. Further, the National Institute of Disaster Management, in its study report, has stated (August 2013) that the current methods of debris removal using machines such as JCBs, Bulldozers and cutting of mountainsides for purposes of road widening or building new roads being employed in the State at present with little or no knowledge of site geology/ geo-technology, have proved to be unscientific and ecologically damaging.

Thus, the Government was required to frame a policy to regulate and codify the use of explosives during such activities. However, data/information provided by the Department showed that no such policy had been formulated.

### ***3.1.3 Disposal Policy for Debris***

The direction of the MoEF (1986) relating to muck disposal states that the muck generated from excavation in course of construction activity must be disposed of in a planned manner so that it takes the least space, is not too hazardous to the environment and does not contaminate any land or water source. The DMMC had also recommended (2012) to the GoU for formulation of sound, effective and implementable debris' disposal policy that would ensure that excavated material of all kinds are mandatorily disposed of at sites earmarked for the purpose. In the absence of clear guidelines to the contrary, the excavated material is routinely disposed of along the hill slopes. Sliding down along the slope, this material often overruns the agricultural fields and water sources besides causing significant loss of vegetation cover on vulnerable hill slopes. Such unscientific disposal also poses risks of landslides. Such debris ultimately reach the river bed and reservoirs causing problem

of aggradations<sup>1</sup> and reduced reservoir capacity. During the floods of June 2013, intermingling of excavated material with the stream water enhanced its erosion potential manifold which resulted in the disaster. Illustrations below establish the need for a policy to address disposal of debris:-

- (i) During joint physical verification in village Jaily in district Rudraprayag, it was observed that muck generated while cutting hillside for constructing a fresh road was being thrown down the hill slopes. With the passage of time, the muck got accumulated and ultimately came down in the monsoon season of 2013 creating wide spread devastation in the village.
- (ii) The MoEF, GoI, study report (April 2014) on the impact of under construction Hydropower projects during June 2013 disaster showed that inadequate maintenance of muck dumping sites was witnessed by the Expert Body teams during their field tours. Most of the muck dumping sites were along the river banks or on the banks of nearby smaller tributaries. Several muck dumping sites of the under construction projects of the Phata-Byung and Singoli-Bhatwari being developed by M/s Lanco Kondapalli and M/s Larsen and Toubro respectively in the district Rudraprayag were in a damaged condition and much of the muck had been washed away. Audit had also made observations in this regard in its Performance Audit Report ending March 2009 on Hydropower Development through Private Sector Participation. However, the Government had not taken any concrete steps by not framing the relevant debris disposal policy.
- (iii) During joint physical verification, villagers of two villages<sup>2</sup> in district Rudraprayag were of the opinion that the major cause of destruction during June 2013 disaster was the indiscriminate disposal of muck by M/s Larsen and Toubro Hydropower project.

#### **3.1.4 River side constructions and aggradations**

As per the Geological investigation report of DMMC (2014), at a number of places along the riverbeds, constructions were observed on the river borne material in close proximity of the rivers and even at levels nearing the river bed level. It is this kind of construction that has sustained most damage during the floods of June 2013. The Wadia Institute of Himalayan Geology has, in its study report (2014), attributed the loss of human and animal lives and damage to property in the river valleys to unscrupulous construction and encroachment along the riverbeds and flood plain areas. Therefore, the DMMC, in its recommendations to the Government, had suggested strict regulations for developmental initiatives in close vicinity of streams and rivers. For this, appropriate legislative interventions were needed for formulating a policy in this regard.

<sup>1</sup> Process that operates in all fluvial systems.

<sup>2</sup> Gabni Gaon and Bhatwari Sunar.

If the constructions in the proximity of streams and rivers were regulated and the recommendations of DMMC (2012), emphasising the need for banning construction especially in the proximity of rivers and streams in line with the provisions of the Uttarakhand Flood Plain Zoning Act, 2012 had been adopted by the Government, the impact of the disaster would have been far less.

### **3.2 Enforcement of town planning and building by-laws**

The National Policy on Disaster Management (NPDM) stipulates that for prevention of disasters, it is essential to formulate municipal regulations and suitable regulations for rural areas containing development control regulations, building by-laws and structural safety measures, along with ensuring their enforcement by the Government departments, institutions and people at large, so as to avoid an unacceptable, uncontrollable situation in a disaster prone area.

Audit scrutiny showed that the prescribed authorities for regulated areas limited to specific places in the test-checked districts had been authorised to look into the town planning and building by-laws aspect. However, these authorities were almost non-functional as adequate technical man power was not available with them. The inadequacy of man power had given rise to unplanned habitations not covered under building by-laws within the regulated areas and the authorities were not in a position to stop this menace, as was pointed out by these authorities to the audit.

In the test-checked districts, audit found that 175 houses or commercial establishments built on Government land were damaged. The owners of these houses and commercial establishments were not prevented from constructing their premises on Government land again. Further, in a particular case in Tehsil Tharali of district Chamoli, it was noticed that Government had provided ₹ 7.50 lakh as ex-gratia relief to the owners of shops whose establishments were built upon the Government land and had got damaged in the June 2013 disaster. These shop owners were once again found building their shops at the same site. This simply calls into question, the process of verifying the antecedents of affected people while paying out relief and compensation. The credibility of the institutions responsible for enforcing planning and land use by-laws was also adversely affected.

### **3.3 Conclusion**

The SDMA did not initiate the remedial measures as suggested by the Expert Committee on Glaciers and the DMMC prior to the June 2013 disaster taking into account the climatic changes and incidents of landslides that were occurring time and again in Uttarakhand. Regulations for Slope Stabilisation, Disposal of Debris and River side aggradation were not in place to take care of the environmental issues as envisaged in the MoEF guidelines. The State Government also failed to enforce building by-laws to regulate constructions along the river banks.

### 3.4 Recommendations

- 1. The SDMA is required to take corrective measures as warranted by climatic changes and put in place a system for constant review and monitoring.*
- 2. The policies regarding the slope stabilisation, debris disposal and riverside aggradation need to be put in place.*
- 3. System should be put in place for enforcement of building by-laws and town planning.*





*Chapter* **4**

**PREPAREDNESS**

# CHAPTER- 4 : PREPAREDNESS

Disaster preparedness includes risk assessment, identification and mitigation. It involves putting in place a comprehensive organizational framework to oversee overall disaster preparedness and ensuring that the requisite systems, procedures and resources are available in order to combat a national disaster. It also involves analysis of disaster response as it provides a useful testing of the state of preparedness.

The Act lays down institutional, legal, financial and coordination mechanisms at the National, State, District and local levels. These institutions are not parallel structures and shall work in close harmony.

As per the Act, an institutional framework for Disaster Management has been created at the National, State and District levels. These institutions will work for Disaster Management through mutual coordination. The institutional mechanism and administrative arrangement of the GoU alongwith respective findings are given in following paragraphs:-

## 4.1 Institutionalisation of Disaster Mitigation and Management

| Authority | Mandate/Activities  | Audit findings   | Conclusion  |
|-----------|---|--|---|
| SDMA      | To lay down policies and plans for disaster management in the State. Laid down guidelines to be followed by the departments of the State for the purpose of integration of measures for prevention of disaster and mitigation in their development plan and projects and guidelines for providing standards of relief to persons affected by disaster. Recommend provision of funds for mitigation and preparedness measures and review the developmental plans of the different departments. | The State Disaster Management Plan (SDMP) was not in existence at the time of June 2013 disaster. However, the same was in the pipeline and was formally approved only in July 2014. No policies and guidelines were formulated in the State. The SDMA met only once before (May 2013) and twice after the June 2013 disaster (25 <sup>th</sup> June 2013 & 18 <sup>th</sup> December 2013). The SDMA did not meet at regular intervals to take stock of the situation, both prior to the June 2013 disaster and in its aftermath. | The SDMA was virtually non-functional since its inception forfeiting the very objectives of its creation. Further, in the absence of an updated SDMP the role of the line departments could not be determined. As a result, little or no coordination was noticed amongst the various line departments during the June 2013 disaster. |

|  |   |   |   |
|--|---|---|---|
| <p>State Executive Committee (SEC)</p>     | <p>Responsible for implementing the National/State Plan and act as the co-ordinating and monitoring body for management of disaster.</p>  | <p>The SEC never convened any meeting exclusively for disaster related issues. Even the line departments were not directed to provide for disaster mitigation funds in their annual budget.</p>                               | <p>The inactivity of SEC resulted in non-assessment / requirement of funds both at the State and at the District levels. The State was not able to factor in the mitigation measures in the regular State budget and mainstream disaster management in its developmental process.</p>   |
| <p>State Advisory Committee (SAC)</p>      | <p>The SAC to be constituted consisting of experts in the field of disaster management to make recommendations on various aspects.</p>  | <p>Though the SAC was constituted (February 2008), it met only once (March 2008). On the date of June 2013 disaster, the SAC was not in existence.</p>  | <p>The SDMA could not take any measures that would have been forthcoming if the SAC had been in existence.</p>  |
| <p>Emergency Operations Centres (EOCs)</p> | <p>Establishing EOCs at the State/ District level and according top priority to equipping them with contemporary technologies and communication facilities, and to their periodic up-gradation.</p> | <p>The EOCs were running without adequate manpower. The Centres were being manned on the basis of outsourcing. These centres also did not have adequate equipment and essential communication networks at their disposal.</p> | <p>The EOCs, both at the State/District levels, were not in a position to gear themselves for the June 2013 disaster. Even preliminary records like call registers were also not being maintained in the prescribed form at the respective centres. There was no follow-up Standard Operating Procedure (SOP) in place to respond to distress calls. Lack of equipment handicapped initial response of EOCs to unfolding disaster, as has been brought out in the report elsewhere.</p> |

|  |   |  |   |
|--|---|--|---|
| District Disaster Management Authority (DDMA)  | To prepare the District Disaster Management plan and monitor the implementation of the National/State Policy, the National/State Plan, and the individual District Plan. DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures laid down by the NDMA and the SDMA are followed by all Departments of the State Government at the District level and by the local authorities in the districts. | Except district Rudraprayag, each test- checked DDMA had prepared the DDMP. However, these plans had not yet been approved and did not contain the remedial measures against the focussed risk areas. The disaster plan was not even disseminated to all concerned units of the Government, and public. Further, no meeting was convened by the respective DDMA's barring district Chamoli for taking stock of the situation that arose after the June 2013 disaster in these districts. | The DDMA's could not activate the envisaged command system, which would have taken care of search, rescue and relief operations in the aftermath of the disaster.   |
| Village Disaster Management Committees (VDMCs) | To prepare the village disaster management plan highlighting the SOPs for disaster management committees and teams in various phases of disaster.   | VDMCs were not in existence in any of the 5,921 villages <sup>1</sup> in the test-checked districts.   | There was no organized response at the village level. Even the information pertaining to the June 2013 disaster was voluntarily provided by the respective villagers through their own mobile phones to the respective DEOCs. |
| State/District Disaster Mitigation Fund        | State Government shall immediately after notification issued for constituting the SDMA and DDMA, establish the State/ District Disaster Mitigation Funds.   | Mitigation funds have been constituted at both State and District levels. However, these were not operational on account of non- availability of funds.  | Mitigation measures were not being prioritised either by the DDMA's or by the line departments.   |
| Preparedness of line departments               | Government shall lay down guidelines to be followed by all the departments for prevention of disasters, mitigation of their effects, preparedness and response measures.  | All the line departments were required to draw up their plans and develop SOPs. However, none of the departments had drawn the respective plans and SOPs.  | The line departments had not developed mitigation plans and SOPs for effective response mechanism.  |

In the absence of well defined plans, response to disaster was without any focus. Moreover, due to absence of a proactive response structure and allocation of responsibilities, the State could not take any action in the first three days of the disaster and consequently the rescue operations could

<sup>1</sup> Chamoli: 1,258, Pithoragarh: 1,557, Rudraprayag: 652, Tehri: 1,774 and Uttarkashi: 680.

be started only by 18<sup>th</sup> June 2013. A formal planning for managing disasters is therefore necessary to ensure reduction in hardships to the affected population. The lack of planning in handling the disaster of June 2013 was substantiated during the course of joint physical verification of 36 affected villages. This was despite the fact that audit had made specific recommendations in the Audit Report for the year ending March 2010 which, if followed up, could have helped to a great extent in enhancing Government's preparedness for dealing with similar disasters. Status *vis-à-vis* these recommendations made prior to the disaster is tabulated below:-

| <b>Recommendations</b>  | <b>Follow-up action</b> |
|---|-------------------------|
| The department should take immediate steps to formulate the policy guidelines, rules and norms.   | X                       |
| The State Government should ensure effective functioning of the SDMA by convening regular meetings and reviewing follow-up action of its recommendation.    | X                       |
| The State Government should ensure that disaster management plan is developed so that disaster management measures are included in the development process. | X                       |
| The State Government should codify building by-laws to ensure safe construction practices in the State.   | √                       |
| Hazard Safety Cell should be empowered suitably to carry out its functions effectively.   | X                       |
| Department should take immediate steps to form Village Disaster Management Committees.  | X                       |

As can be seen from above, the Government had not taken adequate steps in either getting the audit recommendations implemented or initiating corrective measures wherever necessary.

In the exit conference and subsequent replies, the Government stated that the SDMP was prepared in 2010 itself and was in place at the time of disaster. The same was, however, not approved by the SDMA. The reply of the Government is not acceptable. The SDMP had been approved only in July 2014 and only thereafter the plan was made public. The non-approval of the SDMP has been pointed out in the Union Audit Report No. 5 of 2013. Regarding issuing of directions by the Department to other line departments for the preparations of SOPs and to undertake mitigation measures, audit found no evidence to the effect. The line departments had not prepared the SOPs. In course of audit, the line departments held that in the absence of any budgetary support, it was not possible for them to initiate any mitigation measures on their own. Further, the Government stated that the DDMPs of all the districts have been prepared and that the DDMA's organized regular meetings. The reply of the Government is not acceptable. The District Administration, Rudraprayag in its reply to audit query, has clearly stated that the DDMP had not been prepared

after 2008 due to shortage of staff and the position in respect of meetings held by the DDMA's could not be substantiated with the information provided by the respective district administrations.

## **4.2 Mainstreaming Disaster Management into developmental plans**

National Policy on Disaster Management (NPDM) advocates that in order to bring about a paradigm shift from the relief centric approach to one covering prevention, preparedness and mitigation, efforts would be made towards mainstreaming prevention and mitigation measures into the developmental plans and programmes by enlisting cooperation from all the stakeholders.

Audit scrutiny of records in the test-checked districts showed that (i) the line departments had not made any budgetary provision for mainstreaming disaster mitigation process into their respective development plans; and (ii) the departments had also not made any effort in encouraging convergence of different departmental schemes with both the Central and the State schemes and programmes with a view to promote ecologically sustainable development. On being pointed out, the Department replied that the aspect of building of disaster mitigation in the development process has not found place in the central plans as well as in the plans of other States. The reply of the Department is not reasonable as the State of Uttarakhand is more prone to disasters as compared to other States. Therefore, efforts to factor in different aspects of disaster mitigation in the developmental process by way of providing adequate provisions and taking up different schemes under the ambit of convergence, should have been accorded priority.

## **4.3 Hazard Safety Cell**

The NPDM lays down the provision for safe construction practices in order to minimise the impact of hazards that is caused by inadequately designed and badly constructed buildings during disasters like earthquakes and landslides. The State Government had established a Hazard Safety Cell (May 2005) to ensure compliance of building by-laws and safe construction practices and provide technical support to the State Government in carrying out retrofitting of lifeline buildings and systems.

Besides, planned intervention for disaster risk reduction was to be also given attention. Audit scrutiny showed that in the absence of any budget provisions, the Hazard Safety Cell was no longer in existence. There was no formal process for regularly reviewing and deciding which hazards the State should prepare for facing as warranted by the Act. It could also not be established whether any assessment had been made regarding the level of preparedness of the State. Thus, the State was unprepared to meet exigencies posed by dangerous or dangerously located structures in the event of a large-scale emergency, particularly like the one witnessed in June 2013. Further, in the

absence of hazard safety units in the test-checked districts, the threats posed by structures which were hazardous to public or could aggravate potentially the effects of a disaster, had not been demolished till date. On being pointed out, the DDMA assured that necessary action would be taken.

In the exit conference and subsequent replies, the Government stated that after the enactment of the Act, the functions of the HSC are being taken care of by the SDMA and the DDMA. The reply of the Government is not acceptable as the same could not be substantiated with the information provided by the Department.

#### **4.4 Standard Operating Procedures (SOPs)**

The NPDM prescribes that all the State Governments, District Authorities and other stakeholders (line departments) shall prepare SOPs in consonance with the National and State Plans.

The SOPs for determining the levels of disasters and for issuing alerts about disasters through electronic messaging systems to various agencies have been formulated by the Ministry of Home Affairs. The SOPs relate to activities such as (i) search and rescue; (ii) evacuation; (iii) medical assistance and casualty management; (iv) restoration of essential services; (v) communication at disaster sites; and (vi) other important activities such as provisioning of food, drinking water, sanitation, clothing and management of relief camps.

Audit scrutiny showed that the line departments responsible for carrying out rescue and relief operations during June 2013 disaster in the five test-checked districts lacked the above mentioned SOPs for the conduct of smooth operations, in the absence of which, chaotic conditions were witnessed in the affected areas. Impact of absence of SOPs has been discussed at appropriate places in the report.

In the exit conference and subsequent replies, the Government stated that directions were issued from time to time by the Department to all concerned for the preparation of SOPs. The reply of the Government is not acceptable as the line departments have not developed their respective SOPs.

#### **4.5 Provision of Intermediate Shelters**

The NPDM stipulates that in the case of devastating disasters, where extreme weather conditions can be life-threatening or when the period of stay in temporary shelters is likely to be long and uncertain, the construction of intermediate shelters with suitable sanitary facilities needs to be undertaken to ensure a reasonable quality of life for the affected people. The design of such

shelters should be eco-friendly and in consonance with the local culture. It would be desirable for the SDMA/DDMAs to plan during the periods of normalcy, the layout of intermediate shelters which is both cost effective and as per local needs with multi-use potential.

Audit scrutiny of data/ information provided by the Department showed that approved DDMPs of the test-checked districts did not provide for construction of intermediate shelters. This assumes significance as the State of Uttarakhand is historically prone to earthquakes, flash floods and landslides. In June 2013 disaster, affected people had to be housed in inadequate facilities, or hastily arranged premises due to lack of such shelters in pre-identified safe locations. Instances are mentioned at appropriate places in the report.

#### **4.6 Non-identification of sites for safe relief camps**

As per the Act, the district authorities were required to identify buildings and places which could, in the event of any threatening disaster or disaster, be used as relief centers or camps. Audit scrutiny showed that the places where the affected people had been camped after the disaster were not safe locations as detailed below:-

(i) In Uttarkashi, the DDMA used the Government Primary School and the Upper Primary School at Didsari as relief camps in June 2013 disaster, as these had been identified for the purpose in the DDMP. However, this village had been declared as unsafe in 2002 and was recommended for relocation. Therefore, the DDMA put the lives of 115 affected persons housed in these premises at risk. This fact was substantiated during joint physical verification conducted by the Audit team and the representative of the DDMA.

(ii) In Rudraprayag, 29 families of village Chandrapuri of Tehsil Ukhimath had lost their houses and had to be put in relief camps. The camps provided to these families happened to be at a place which was not previously identified and was not a safe location, making the lives of these families vulnerable to future miseries. This fact had come to light when the District Magistrate visited these families on 27<sup>th</sup> July 2013.

(iii) During the course of physical verification, the joint team interacted with 439 villagers of 36 affected villages, out of which 267 villagers (61 *per cent*) of 20 affected villages took shelter in the nearby Government buildings or, other private buildings on their own without any support from the Government.

In the exit conference and subsequent replies, the Government stated that the temporary shelters are identified and listed in all the DDMPs including that of Rudraprayag. The reply of the Government



is not acceptable as there was no DDMP in place in district Rudraprayag as was stated by the DDMA, Rudraprayag during the course of audit.

#### 4.7 Preparation and maintenance of Database

- (i) The State Government did not have any mechanism in place to register the Char-Dham pilgrims either at the entry points for the pilgrimage or at the base camps. As a result, the Government did not have the exact number of pilgrims and tourists, the most vulnerable people in the disaster who were out of their homes. There was no immediate information on how many had got trapped or had gone missing at various places en route the Char-Dham. This led to wide variance in figures of stranded persons, dead and missing persons on a day to day basis. Existence of a comprehensive database of pilgrims would have helped the State Government in determining the exact number of pilgrims who had got stranded or were missing. This would also have beefed up the level of preparedness of the administration and ensured a more directed and effective evacuation strategy.

Audit also observed that registration of Char-Dham pilgrims is now being undertaken at identified access points which is a welcome measure.

- (ii) A database of demographic details at village/ panchayat level should also have been prepared and updated periodically as a measure of improving response and relief distribution. This would also have facilitated proper and fair distribution of relief materials and ex-gratia payments to the affected people. Such a system, in turn, would have left little scope for discrepancies. In the absence of any data bank in respect of houses, land records and livestock, the relief/ ex-gratia payments in lieu of damaged infrastructure/ loss of human lives and loss of live stock were being made on the basis of reports prepared by the Revenue Sub-Inspector (RSI) without any reference to any revenue/ other Government records in their reports. Thus, no cross verification of RSI's reports was made before making payments.

However, the Government has now set up a Committee to review the existing codes and manuals for relief distribution.

#### 4.8 Preparedness for maintenance of supplies

The Act prescribes for essential stockpiling of relief and rescue materials or ensure preparedness for making such materials available at a short notice. Audit scrutiny showed that the concerned District Supply Officers (DSOs) had not developed their respective Standard Operating Procedures for making the relief materials available in the shortest possible time to the affected people. Audit

observed shortage of essential commodities in almost all the test-checked districts. Uttarakhand, being a hilly State and the disruption of normal traffic during the monsoon period being a regular feature, the Government had decided to create buffer stocks of essential commodities for at least three months of monsoon period in order to meet the requirements during this period. However, it was noticed that the test-checked districts did not have adequate storage capacity for the purpose.

In the exit conference and subsequent replies, the Government accepted the fact and stated that limited storage capacity in the field does not permit for three months' storage. However, one month's rations are maintained.

#### 4.9 Medical preparedness

The NPDM advocates that in the case of a disaster, the medical response has to be quick and effective. The execution of medical response plans and deployment of medical resources warrants special attention at the State and District levels in most of the situations. Mobile medical hospitals and other resources available with the Centre are also to be provided to the States/UTs in a proactive manner. Post-disaster management of health, sanitation and hygiene services is crucial to prevent outbreak of epidemics.

Audit scrutiny of data/information of the five test-checked districts showed following shortcomings:-

- Disaster Management Plans of the respective district medical authorities were either not in place at all or had not been prepared with emphasis on response to be initiated at the time of a disaster.
- Quick Response Teams had not been formed in the test-checked districts. The course of responsive action to be devised as per the situation also did not exist. No mention of advance planning was found to have been made in the policy statement. Further, the block level Disaster Rapid Response teams were formed without any doctors. Only ANMs<sup>2</sup> and ASHAs<sup>3</sup> were entrusted the duties.
- The medical authorities in the two worst hit districts<sup>4</sup> had not maintained the prescribed minimum stock of essential drugs prior to the June 2013 disaster. The purchases or requisition for the same was found to have been made after the June 2013 disaster.

---

<sup>2</sup> Auxiliary Nurse Midwife.

<sup>3</sup> Accredited Social Health Activist.

<sup>4</sup> Pithoragarh & Rudraprayag.

- The medical authorities had also not made adequate provisions in their departmental budget for the storing of essential drugs in districts and blocks.
- The epidemic control activities such as vaccination in the affected areas had also not been undertaken by the district medical authorities in the aftermath of June 2013 disaster.

The medical authorities in the State were thus under prepared to respond to the June 2013 calamity.

In the exit conference and subsequent replies, the Government stated that there was no outbreak of disease or epidemic in the region despite unusually high number of deaths. The reply of the Government is not acceptable as the remedial measures were centralised and the medical teams were requisitioned from other States to control the outbreak of the epidemics.

#### 4.10 Safety of livestock

As per NPDM, animals, both domestic as well as wild, are exposed to the effects of disasters. It is necessary to devise appropriate measures to protect animals and find means to shelter and feed them during disasters and their aftermath, through a community effort, to the extent possible. It is pertinent to note that many communities have shown compassion to animals during disasters, and these efforts need to be formalized in the preparedness plans.

Audit scrutiny showed that the concerned Veterinary Offices had not developed the Standard Operating Procedures which would have enabled these offices to handle the emergencies in a better way. Wherever Disaster plans had been made, provision for responsive action had not been incorporated. The concept of Quick Response Teams had also not been visualised in these plans. Further, assessment and analysis of plans of concerned District Veterinary Offices showed that:-

- all the district offices were not well equipped to handle the large emergencies;
- there was inadequate availability of medicines which were procured after the June 2013 disaster;
- there was shortage of fodder; and
- there was a shortage of veterinary doctors.

#### 4.11 Conclusion

The SDMA was virtually non-functional since its inception. The inactivity of SEC resulted in non-assessment/ requirement of funds both at the State and the District levels for mitigation. The EOCs, both at the State/District levels, had not geared themselves for the June 2013 disaster. The DDMA did not activate the envisaged command system, which would have taken care of

search, rescue and relief operations in the aftermath of the disaster. In the absence of village disaster management committees, there was no organized response at the village level. The line departments had not mainstreamed disaster mitigation plans into the developmental process in the absence of any budgetary support. The requisite SOPs for effective mechanism were not put in place by the line departments.

The Hazard Safety Cell was no longer in existence at the time of disaster. The State Government did not have any mechanism in place to register the Char-Dham pilgrims either at the entry points or at the base camps. The shortage of essential commodities was observed in almost all the test-checked districts. The districts did not have adequate storage capacity to maintain the buffer stocks for three months' consumption.

The respective district medical authorities had not prepared the Disaster Management Plans and had not made adequate provision for storing of essential drugs. Veterinary Offices had not developed the SOPs which would have enabled these offices to handle the emergencies in a better way.

#### **4.12 Recommendations**

- 1. The Department should take immediate steps to formulate the State Disaster Management policy guidelines and also provide necessary teeth to the enforcement agencies.*
- 2. The State Government should ensure effective functioning of the SDMA by convening regular meetings and reviewing follow-up action of its recommendations.*
- 3. The State Government should ensure that the departments prepare their annual disaster plans and also ensure mainstreaming disaster management into the developmental process.*
- 4. Efforts should be made to operationalise the Hazard Safety Cell.*
- 5. Storage capacity for essential commodities should be accorded priority.*
- 6. Medical and Veterinary Departments need to prepare their Standard Operating Procedures to meet with any contingency.*



*Chapter* **5**

**FINANCIAL ARRANGEMENTS**

# CHAPTER- 5 : FINANCIAL ARRANGEMENTS

Quick and easy access to funds is key to mounting a relief and rescue operation when faced with a natural calamity. The schemes of the State Disaster Response Fund (SDRF) and the National Disaster Response Fund (NDRF) are based on the recommendations of the 13<sup>th</sup> Finance Commission, operative from 1<sup>st</sup> April 2010 to 31<sup>st</sup> March 2015. The SDRF is to be used only for meeting expenditure for providing immediate relief, at specified rates, to disaster victims and for repair/ restoration of damaged infrastructure of essential nature. Further, as per the SDRF Manual, the SDRF shall not be used for expenditure on disaster preparedness, restoration, reconstruction and mitigation. Such expenditure is needed to be built into the State Plan funds. The present audit scope was limited to scrutinising of records pertaining to the response, rescue and relief efforts, and restoration of essential infrastructure on account of losses and damages which had occurred due to the disaster that had unfolded from 15<sup>th</sup> to 17<sup>th</sup> June 2013.

## 5.1 Availability vis-à-vis application of funds

In order to meet the requirement of funds, the Government of Uttarakhand (GoU) had initially submitted (July 2013) to the Government of India (GoI), a memorandum of losses to the tune of ₹ 13,844.34 crore. This request of the GoU was not considered (August 2013) by the GoI which asked the GoU to separate reconstruction of infrastructure and other long term plans from immediate losses on account of the Disaster. The GoU again submitted a proposal of losses in September 2013, the details of which were not made available to audit despite requests. The request of the GoU was considered by the GoI which committed a package of ₹ 7,981.04 crore to be made available to the GoU over the period 2013-14 to 2015-16 from various sources under the ambit of GoI (January 2014) as detailed below:-

**Table: 5.1**

| Uttarakhand Reconstruction Package by source of Funding (₹ in crore) |                 |                 |                 |                 |
|--|-----------------|-----------------|-----------------|-----------------|
| Source   | 2013-14         | 2014-15         | 2015-16         | Total           |
| CSS (Reconstruction) Central Share                                   | 516.39          | 689.30          | 680.11          | 1,885.80        |
| Central Plan   | 7.50            | 22.50           | 20.00           | 50.00           |
| Special Plan Assistance  | 165.00          | 495.00          | 440.00          | 1,100.00        |
| Externally Aided Project (Reconstruction & Existing)                 | 556.06          | 1,645.90        | 1,535.38        | 3,737.34        |
| <b>Total Plan</b>  | <b>1,244.95</b> | <b>2,852.70</b> | <b>2,675.49</b> | <b>6,773.14</b> |
| NDRF (Non-plan)  | 1,207.90        | 00              | 00              | 1,207.90        |
| <b>Grand total</b>   | <b>2,452.85</b> | <b>2,852.70</b> | <b>2,675.49</b> | <b>7,981.04</b> |

Source: Provided by Department of Disaster Management.

The details of funds received by the Department for relief and restoration activities and expenditure incurred against them have been detailed in the table below:-

**Table: 5.2** (₹ in crore)

| Particulars           | Category |        |        | Total    |
|-----------------------|----------|--------|--------|----------|
|                       | SDRF     | CMRF   | PMRF   |          |
| Availability of funds | 474.50   | 436.87 | 118.18 | 1,029.55 |
| Utilisation of funds  | 381.75   | 240.98 | 110.80 | 733.53   |

Source: Provided by the Department of Disaster Management & CM's Office.

## 5.2 Fund availability and expenditure under CMRF

The rules governing the operation of the Chief Minister's Relief Fund (CMRF) were notified in December, 2013, after the disaster took place and the State Government started receiving voluntary contributions for rescue, relief and other activities. Its rules were further revised in July 2014. The accounts of the CMRF are to be annually audited by a Chartered Accountant appointed for the purpose. As per the existing provisions, the disbursements from the fund are at the discretion of the Hon'ble Chief Minister of the State. One of the major categories where disbursements are made from the CMRF is on account of the losses that occur in natural calamities. Data/ information provided by the Chief Minister's office showed that ₹ 436.87 crore had been received in the fund (March 2014). An amount of ₹ 240.98 crore had been spent out of this fund.

Information/data provided by the Department/CMO further showed that the test-checked districts were provided with ₹ 168.86 crore out of the CMRF during July 2013 to March 2014. The purposes, for which funds were released from the CMRF to the severely affected districts, are tabulated below:-

**Table: 5.3** (₹ in crore)

| Name of the district | Allotment    |               |               | Expenditure   |
|----------------------|--------------|---------------|---------------|---------------|
|                      | Relief       | Restoration   | Total         |               |
| Chamoli              | 2.23         | 27.85         | 30.08         | 30.08         |
| Pithoragarh          | 2.20         | 12.02         | 14.22         | 14.22         |
| Rudraprayag          | 39.86        | 65.54         | 105.40        | 105.40        |
| Tehri                | 0.15         | 1.25          | 1.40          | 1.40          |
| Uttarkashi           | 1.50         | 16.26         | 17.76         | 17.76         |
| <b>Total:</b>        | <b>45.94</b> | <b>122.92</b> | <b>168.86</b> | <b>168.86</b> |

Source: Information provided by the CM's Office.

It may be seen from above that only 27 per cent of the funds were provided for relief purposes. The balance 73 per cent was provided for restoration works. The annual audit of the accounts had not yet been conducted.

### 5.3 Expenditure incurred in the test-checked districts

The expenditure incurred by the test-checked districts from various sources for undertaking relief and restoration works on account of losses that had occurred between 15<sup>th</sup> to 17<sup>th</sup> June, 2013 was as tabulated below:-

**Table: 5.4**

(₹ in crore)

| Name of district | Relief       |              |              |              | Restoration  | Total         |
|------------------|--------------|--------------|--------------|--------------|--------------|---------------|
|                  | SDRF         | State Budget | CMRF         | PMRF         | SDRF         |               |
| Chamoli          | 5.12         | 2.74         | 2.71         | 3.83         | 19.72        | 34.12         |
| Pithoragarh      | 4.28         | 4.41         | 1.74         | 4.82         | 18.15        | 33.40         |
| Rudraprayag      | 16.03        | 14.11        | 24.55        | 27.31        | 29.96        | 111.96        |
| Tehri            | 1.82         | 4.04         | 1.68         | 2.49         | 14.28        | 24.31         |
| Uttarkashi       | 5.04         | 2.60         | 3.12         | 2.26         | 15.40        | 28.42         |
| <b>Total:</b>    | <b>32.29</b> | <b>27.90</b> | <b>33.80</b> | <b>40.71</b> | <b>97.51</b> | <b>232.21</b> |

Source: Information pertaining to 15<sup>th</sup> to 17<sup>th</sup> June, 2013 provided by the Tehsildars of the respective test-checked districts.

The details of expenditure showed that in test-checked districts an expenditure of ₹ 232.21 crore was incurred towards the following:-

- distribution of relief in 33,488 cases; and
- restoration of 1,820 works of essential nature.

The amount of relief paid out to the affected people beyond the SDRF norms was to be supplemented through the State Budget. However, as per the information provided by the Tehsildars of the respective test-checked districts, an amount of ₹ 27.90 crore disbursed on account of relief under various categories of losses beyond SDRF norms was paid out of the CMRF instead of the State Budget. On being pointed out, the Department stated that the expenditure incurred by these districts under various sources was yet to be adjusted at the Department's level. However, the final adjustment would be made as per the SDRF norms and the Government orders. The fact remains that these adjustments are yet to be carried out.

### 5.4 Other Audit findings

- The Government of Uttarakhand had directed (August 2013) the respective DDMA's regarding the accounting and maintaining of separate records in respect of the transactions that were to be made from the SDRF, the State Budget and the CMRF. Audit scrutiny of test-checked districts showed that no separate accounts had been maintained by these DDMA's under the said categories. Separate cash books were also not maintained for the funds received from different sources at both the DDMA and the subordinate offices. In the absence of segregation



of sources from which funds were being received at the district level, audit could not ascertain the source wise utilisation of such funds by the district authorities.

- (ii) Besides, the concerned district authorities were also authorised to draw moneys under TR-24<sup>1</sup>. Funds to the tune of ₹ 25.24 crore drawn from TR-24 by the test-checked districts had remained unadjusted in these districts. This amount should have been adjusted in the FY 2013-14 itself. However, as this amount was not adjusted, it implied that the said amount had been spent without any administrative sanction.
- (iii) An amount of ₹ 59.33 lakh had been spent in excess from the SDRF to meet expenditure on relief/compensation in 1,122 cases as discussed in *Chapter-6*.
- (iv) In the five test-checked districts, an expenditure of ₹ 24.11 crore on 159 works had been found spent from the SDRF on works which were not covered under the SDRF norms as discussed in *Chapter-7*.
- (v) The Department of Disaster Management had not been able to make final adjustments of accounts as of February 2015 even after a lapse of 20 months. Therefore, the actual utilisation of funds under various fund sources could not be ascertained despite repeated requests to the Department for records pertaining to final adjustment of expenditure. Lack of final adjustment could be attributed to the non-reconciliation of accounts at various levels.

## 5.5 Conclusion

The quantum of relief paid out to the affected people beyond the SDRF norms was to be supplemented through the State Budget. Instead, the amount in excess of SDRF norms was paid out of the CMRF. Separate accounts for each source of funding had not been maintained by the DDMA's. The Department of Disaster Management had not been able to make the final adjustments of accounts.

## 5.6 Recommendations

1. *The Department should ensure that proper accounting system is put in place for disaster accounting and the same is followed by the respective DDMA's.*
2. *The Department should ensure prompt adjustment of funds expended from various sources of funding.*
3. *Expenditure from the CMRF should be audited annually as per the rules governing the fund.*
4. *Receipt and Payment details in respect of the funds received from the various sources should be maintained separately by the respective districts.*

<sup>1</sup> TR-24 is operated by the DDOs when there are no funds available with the DDO under the relevant head of account.



*Chapter* **6**

**GOVERNMENT RESPONSE TO  
DISASTER, RESCUE AND RELIEF**

# CHAPTER- 6 : GOVERNMENT RESPONSE TO DISASTER, RESCUE AND RELIEF

The incessant rains between 15<sup>th</sup> and 17<sup>th</sup> June 2013 were the main cause of disaster in the State, particularly in the districts of Bageshwar, Chamoli, Pithoragarh, Rudraprayag and Uttarkashi, with the district of Rudraprayag being the worst hit, followed by Pithoragarh. A prompt and effective response was required to minimise loss of life and property. This was possible only through concerted efforts of the whole Government machinery.

## 6.1 Government response to disaster

The disaster of June 2013 not only caused enormous devastation to human life, property, flora and fauna, but also exposed lack of preparedness on part of the Government machinery for tackling such a calamity. The Government remained virtually clueless about the state of affairs in the affected areas in the initial aftermath of the disaster. To its credit, it responded with whatever means it had at its disposal, as soon as the heavy rains started receding. This effort was, however, grossly inadequate given the scale of destruction brought by the disaster. Instances of inadequate response have been highlighted in this chapter.

### 6.1.1 Early warnings

The India Meteorological Department (IMD) is the nodal agency in India to issue weather forecasts. The warnings issued by IMD include intensity and distribution of heavy rainfall/ snowfall. The

|                      |   |                     |
|----------------------|---|---------------------|
| Heavy Rain           | : | 64.5mm – 124.4 mm   |
| Very Heavy Rain      | : | 124.5 mm – 244.4 mm |
| Extremely Heavy Rain | : | >244.5 mm           |

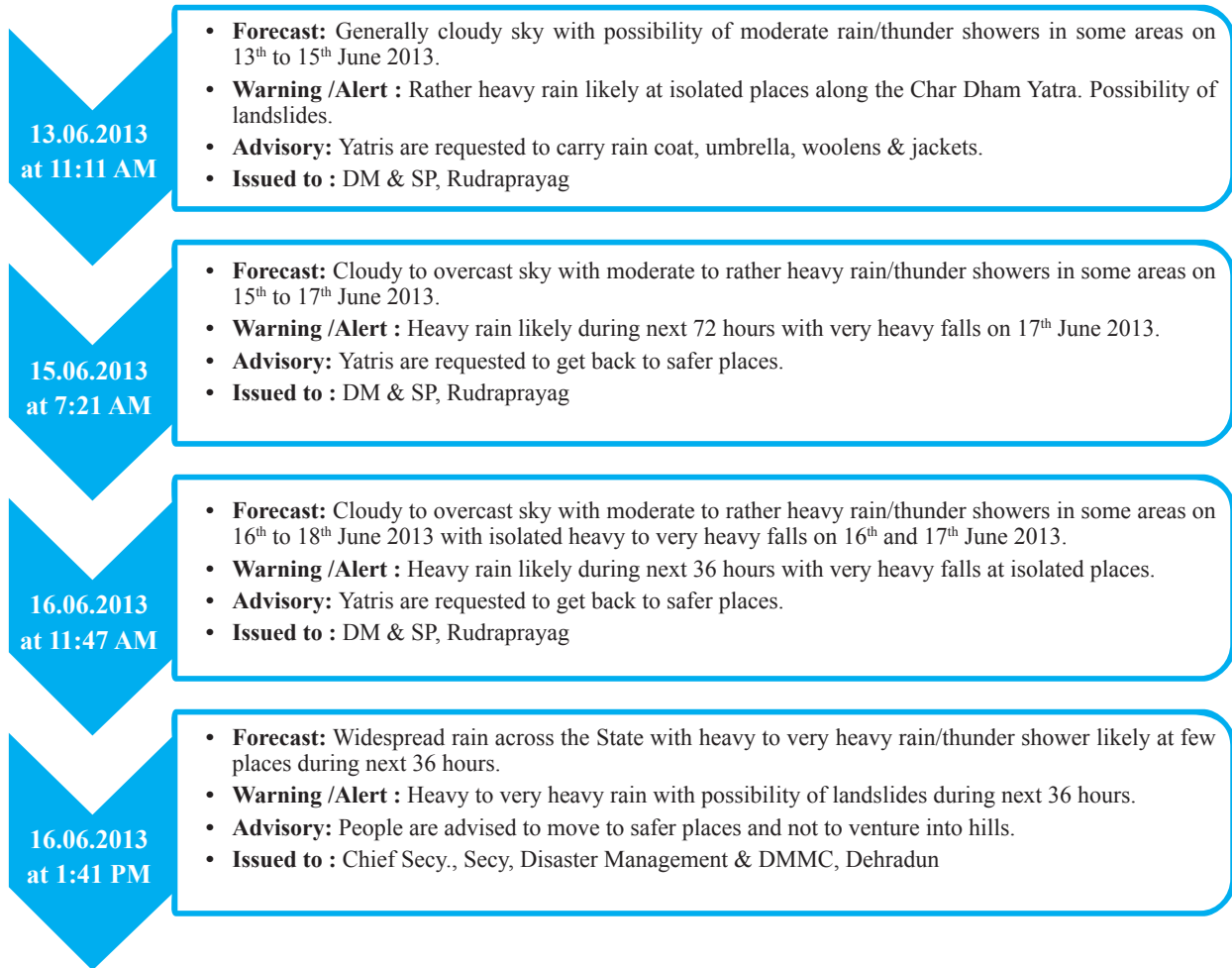
Exceptionally Heavy Rain: When the amount is a value near about the highest recorded rainfall at or near the station for the month or the season. However, this term will be used only when the actual rainfall amount exceeds 120 mm. The State level agency then forwards the same to the concerned district administration to which the specific warning pertains, as a follow up of this warning.

description of terms used for forecasts and warnings as described in the SOP, are depicted alongside.

Information provided by the GoU and the IMD showed that the IMD had issued an Early Warning on 15<sup>th</sup> June 2013. After receiving the warning from the IMD on 15<sup>th</sup> June 2013, the DMMC did disseminate the same to the respective district

administrative offices. The warning received from the IMD did not mention the exact location of rainfall. It simply conveyed that heavy to very heavy rainfall was expected over isolated places in Uttarakhand from 15<sup>th</sup> to 17<sup>th</sup> June 2013. However, the advisory and the warning issued to DM, Rudraprayag by IMD on 13<sup>th</sup> June did mention that there was every possibility of heavy to very

heavy rainfall over the higher reaches of Shri Kedarnath, Badrinath and surrounding areas. The follow up action initiated by the district administration in this regard was not found on record. The forecasts issued for upper reaches of the Kedarnath, Badrinath and surrounding areas between 13<sup>th</sup> June 2013 and 16<sup>th</sup> June 2013 are depicted in the flow chart below:-



After receiving the early warning from the State Headquarters, the concerned districts (except Pithoragarh and Tehri) disseminated the same up to the Tehsil levels. However, no documentary evidence was produced to audit either at the DEOC level or at the Tehsil level in support of any follow up action being taken thereafter. Further follow up and dissemination of the weather warning up to the general public could have saved, to some extent, valuable human lives.

### 6.1.2 Immediate response of State machinery

Information/ data provided by the Department showed that the Government had no clue, in the period from 15<sup>th</sup> to 17<sup>th</sup> June, 2013 of the situation that was arising out of incessant rains in the

region. It responded only on 18<sup>th</sup> June 2013 when a team comprising Commissioner Garhwal, DIG Police and Under Secretary, Department of Disaster Management reached the site of disaster via helicopter and took stock of the situation. However, no report in respect of any measures or any follow-up thereof suggested by this team was made.

When the inability of the State Government to initiate any immediate responsive actions in the period from 15<sup>th</sup> to 18<sup>th</sup> June was pointed out, the Department replied (March 2015) that the situation in and around Kedar Valley during this period was not conducive for carrying out any rescue operation. It was only when the weather improved to some extent that the rescue operations were initiated and carried out. Further, the communication network in the region had been completely paralysed. A lack of coordination between various agencies in the initial stages of the disaster was also observed, mostly on account of lack of preparedness as well as due to the unprecedented scale of the disaster. Audit observed that the line departments in the affected districts had no records in support of any instructions that were supposed to have been received by them from their Controlling Officers as had been claimed by the Department of Disaster Management in its reply to an audit query in this regard. During joint physical verification of 36 villages, 24 (67 *per cent*) villages reported that the Government representative arrived timely as soon as the disaster struck. Nine (25 *per cent*) villages reported that Government representatives arrived in the villages after three days to 10 days of the disaster. Two (5 *per cent*) villages reported that Government representatives arrived in the villages after 23 days to one month. One (3 *per cent*) village reported that no Government agency had visited the location.

### **6.1.3 Response of the District Level Administrative machinery**

Poor response of the district machinery in initiating immediate action in the test-checked districts in the aftermath of the disaster was noticed as under:-

- (i) In two worst hit districts (Pithoragarh & Rudraprayag), the communication systems at the DEOCs, tehsils, blocks and village levels had been crippled due to the landslides, water logging and road blockades. Whatever information was being received at the DEOCs was from the local callers. The administration was not in a position to take cognizance of these calls and make necessary arrangements for an effective response as was evident from the call registers of the respective DDMAAs.
- (ii) In Pithoragarh, the district administration had to seek immediate help from the ITBP. In Uttarkashi, due to shortage of staff and non-availability of necessary rescue equipment at the district and block levels, the district administration requested the ITBP for providing

immediate help. In Rudraprayag, the district administration was not aware of the events in the district. It did not have adequate rescue equipment at its disposal. The much needed Public Address system was also not available with the DEOC.

- (iii) In the three districts of Chamoli, Rudraprayag and Uttarkashi, buffer stocks of essential commodities had not been created by the respective District Supply Officers (DSOs) for ensuring immediate distribution of these items to the affected locals and to the relief camps.
- (iv) In four most affected districts in terms of severity (Chamoli, Pithoragarh, Rudraprayag & Uttarkashi), Evacuation Plan and Site Operation Plan were also not in place at the time of the disaster. In the absence of these plans, the respective district administrations could not decide which area and from where the evacuation shall start. They were also not in position to assess the exact number of people stranded at various locations. As a result, the rescue operations in these districts had to be extended up to the month of July 2013.
- (v) Lack of coordination amongst the various line departments was also noticed in the districts of Pithoragarh as was evident from the fact that (a) the NDRF team which had arrived in the district of Pithoragarh on 10<sup>th</sup> July 2013 was first asked to reach Dharchula from where it was asked to move to Munsyari; (b) the Rescue Team reached Sobla, the most affected area of Tehsil Dharchula, without any medicines which were urgently needed there.
- (vi) In two districts (Rudraprayag & Uttarkashi), medical facilities were inadequate. In Rudraprayag, the Quick Response Teams had not been formed for providing immediate medical relief to the affected people. In Uttarkashi, the medical facilities at various places were also lacking as per the reports received in this connection at the DEOC from 20.06.2013 to 22.06.2013.
- (vii) In Rudraprayag, flooding at Kedarnath had first occurred on 16.06.2013 at 18:45 IST and again on 17.06.2013 at 06:50 IST as per the records of the DDMA. Timely action by the district administration, as warranted by the situation, in getting the people evacuated from Kedarnath could not be ascertained by audit. No records were found in the district headquarters that would have suggested whether any responsive action was taken. Similarly, incessant rains at Rambara had occurred at 20:15 IST on 15.06.2013 and caused landslides in the area. Rambara got washed away on 16.06.2013 at 19:30 IST. However, no evidence of any action in respect of taking people to safer places was found to have been initiated in the intervening period.

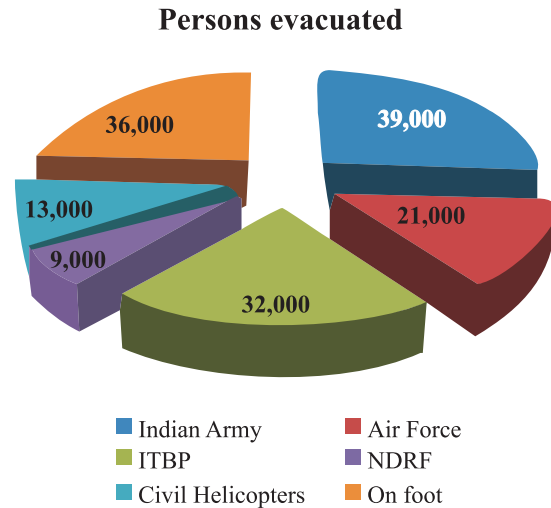
It may be seen from the above that immediate response of the Government and district administration of the affected districts was not adequate.

## 6.2 Rescue operations

Rescue or relocation of marooned people in any threatening disaster or disaster involves following aspects:-

- Search and rescue with adequate and skilled man power;
- Providing of shelter, essential supplies, drinking water and medical help; and
- Making available proper communication network.

In the aftermath of the June 2013 disaster, a total of 1.14 lakh stranded pilgrims/ locals were evacuated from the affected areas to safer places. In addition to this, nearly 0.36 lakh people were rescued either by transporting them on mules or on foot. Scrutiny of records showed the following deficiencies in conducting the rescue efforts:-



### 6.2.1 Initiation of rescue operations

Scrutiny of records of the Disaster Management Department as well as the District Disaster Management Authorities of the test-checked districts showed that the Government of Uttarakhand requisitioned (16<sup>th</sup> June 2013) the services of the Army, the Air Force and the Central Para-Military forces (ITBP & NDRF) for assistance in carrying out rescue and relief operations. However, the operations could be started only from 18<sup>th</sup> June 2013. A more prompt action could have saved a lot of human lives. The Department stated (March 2015) that there were certain constraints and limitations in carrying out the rescue operations. The required helipads were not available for the smooth operation of helicopters, which resulted in prolonged and delayed operations. The reply again illustrates lack of preparedness on part of the State Government.

The three districts-Chamoli, Pithoragarh and Uttarkashi, had made requests to the State Government for providing helicopters for carrying out the search and rescue operations on 16<sup>th</sup> June 2013. District Rudraprayag had not made any formal request in this regard. The helicopters were provided on 19<sup>th</sup> June 2013 to all the districts barring Chamoli. The rescue operation in this district had been started by Deccan Chargers, a private company, whose helicopter happened to be available at the Govindghat Helipad. It made sorties between Ghangaria and Joshimath for

air lifting the passengers and the local population of Pulna (Bhyundar) village, which had got completely washed away.

In carrying out the rescue operations, following were also noticed:-

- (i) In Uttarkashi, it was noticed that the stranded pilgrims had been camped in various hotels enroute Gangotri at Maneri and Dunda. A payment of ₹ 5.04 lakh was made to these hotels by the DDMA without verification of relevant records. Audit could not ascertain whether affected people were actually put up in these hotels or not, since the DDMA records as well as the bills raised by the hotels and their register did not mention the names of persons who had stayed there. It is pertinent to mention that the Government Inter Colleges (GIC) at Maneri and Dunda were also being used as relief camps. On this being pointed out, the DDMA stated that the matter will be investigated into before final replies are put up to Audit. The final replies were still awaited.
- (ii) The State Government had formed a six member team for each district to take care of the rescue operations in the event of exigencies that may occur during the monsoon season 2011 onwards and which were to be kept in a state of readiness. In Rudraprayag, audit observed that no rescue team was available at the sub-divisional office in Tehsil Ukhimath at the time of June 2013 disaster. As a result, no action could be initiated at the Tehsil level in response to the unfolding disaster. In addition to this, no search and rescue equipment were available with the sub-divisional office. In Tehsil Rudraprayag, a rescue team comprising five members was available with the sub-divisional office. However, no equipment was available with the office. In Pithoragarh, rescue team of six members had been posted at the Tehsil Dharchula. However, the team was not adequately trained to handle large emergencies as was stated by the sub-divisional offices. This indicates lack of preparedness at district and Tehsil levels as even minimum requirements such as availability of rescue teams and rescue equipment had not been ensured even seven years after the Act had come into force. This fact is also highlighted in subsequent paragraphs.

### ***6.2.2 Ineffectiveness of rescue operations on account of insufficient logistical support***

For effective handling of any threatening disaster or disaster, the DEOC needs to be equipped adequately. District specific observations below shows inadequate availability of necessary Search and Rescue equipment viz. emergency lights, inflatable lights, solar lights, gas cutter, wood cutter etc. required during the course of rescue operations:-

- (i) The State Government had provided ₹ 30 lakh to district Rudraprayag in August, 2012 for the purchase of essential equipment required for rescue and relief operations. The DEOC



could not make any purchases until June 2013 disaster and faced difficulties on account of lack of necessary equipment. Consequently, they had to request other agencies for help.

- (ii) In Tehri, the DEOC had made purchases of search and rescue equipment worth ₹ 18.29 lakh in March-April 2013. However, this equipment was not provided until June 2013 to the respective Tehsils and Police Stations for which these had been procured. On being pointed out, the district administration replied (February 2015) that due to long tendering process and late delivery by the supplier, the procurement process was delayed. The reply of the district office is not acceptable as the equipment had been received by the DEOC well before the June 2013 disaster.
- (iii) In Pithoragarh and Chamoli, the DEOCs did not have the required search and rescue equipment at their disposal at the time of June 2013 disaster.
- (iv) In Uttarkashi, the DEOC had requisitioned (July 2008 and August 2012) from the State Agency, various items such as Telescopes, Portable Generator Sets, Gas Cutters, Flood Lights, Search Lights, Inflatable Tower Lights and Emergency Lights for carrying out search and rescue operations. However, audit observed that these items had not yet been supplied by the Government.

The insufficient logistical support available with the DDMAAs restricted them from initiating effective search and rescue operations on their own. The matter had been brought to the notice of Department. It was assured that strengthening of DEOCs would be given priority.

### **6.2.3 Non-availability of trained manpower in rescue and evacuation activities**

The National Policy on Disaster Management advocates that a strategic approach to capacity development can be addressed effectively only with the active and enthusiastic participation of stakeholders. This process comprises awareness generation, education, training and Research and Development. It further addresses putting in place appropriate institutional frame work, management systems and allocation of resources for efficient prevention and handling of disasters.

In Uttarakhand, the DMMC, which serves as the centre of excellence on behalf of the SDMA, is responsible for developing training calendars and modules for imparting training on various aspects of disaster management to the various stakeholders and spreading mass awareness among the community, and in particularly, the villagers who happen to be the first responders to any disaster. The information provided by the DMMC showed that 2,174 persons belonging to specific departments viz. the Police, the Home Guard, the Fire Services and the Provincial Armed Constabulary were provided training in disaster management over the period 2007-08 to May 2013. In addition to this, volunteers from different Nyaya Panchayats numbering 5,675 were also

given training in search and rescue over the period 2007-08 to May 2013. However, the services of these trained personnel were not taken in carrying out the search and rescue operations in the aftermath of June 2013 disaster, as stated by the Department.

The test-checked DDMAAs had not developed training modules for imparting training on regular basis to various stakeholders covering various aspects of disaster management. It was also observed that in the test-checked districts, mock drills were also not being conducted to test the preparedness of authorities in meeting any eventuality. Search and rescue trainings were not conducted in all the 36 villages physically inspected by the joint team of audit and administration.

#### ***6.2.4 Hampering of rescue operations due to failure of Communication Network and lack of Early Warning Infrastructure***

The NPDM stipulates that the basic communications and IT support requirements for disaster management should correspond to (i) real time dissemination of advance warnings and information to the authorities concerned at various levels and the threatened community; and (ii) last minute connectivity at the disaster site for control and conduct of rescue operations.

To achieve desired results in carrying out the search and rescue operations, a secure communication network was required to be put in place. However, due to the incessant rains during the period from 15<sup>th</sup> to 17<sup>th</sup> June 2013, the whole communication network had got crippled. This, in turn, had handicapped the Department from getting the exact information from the disaster sites. Ultimately, the Department had to take aerial support for getting the first hand information from various sites of operations. The failure of communication network thus stopped the flow of information and hampered rescue operations.

It was also seen that installation of Doppler radars<sup>1</sup> had been mooted in September, 2008 at two places (Mussoorie and Nainital) in the State. However, the same had not been installed as yet. The IMD, Dehradun pointed out that these radars could not be installed as the Government of Uttarakhand did not provide necessary land at the proposed sites. The Department replied that the State Government has identified the land subject to the selection by the IMD. This issue had been raised in Audit Report ending 31<sup>st</sup> March 2010 as well. Lack of action on this issue has had severe repercussions for the State as timely warning regarding weather could have helped mitigate impact of this disaster.

The Department further stated that in order to give a boost to the communication network in the State, a formal request (October, 2014) has been made to the GoI for acquiring 14 satellite phones.

<sup>1</sup> Is installed for providing weather forecasts in a minimum time of three hours.

In addition to this, steps were being taken to further strengthen the communication network in the State.

### **6.3 Relief activities**

The relief needs to be prompt, adequate and of approved standards. Immediate relief in cash or kind is provided to the disaster victims, by the Government and donors, on the basis of losses suffered by them. A systemic and transparent arrangement must be in place for the purpose. The State Disaster Management Authority/ State Government should provide relief to the victims, as per the prevailing norms, after the assessment of losses to the life and property. Audit scrutiny of records in respect of relief works in test-checked districts showed the following:-

#### **6.3.1 Review of standards of relief**

The National Policy for Disaster Management (NPDM) advocates that the State shall review the existing standards of relief code and manuals to address the contemporary needs of communities affected by disasters.

Audit scrutiny showed that no review of norms and codes had been carried out by the State Government prior to the disaster. The relief/ ex-gratia payments were granted/ distributed on norms and procedures which were prevalent in the erstwhile State of Uttar Pradesh<sup>2</sup>. Suitable databases could also have been developed which would have facilitated hassle free distribution of relief and left little scope for complaints. For this purpose, a Committee was set up in March 2015 for developing State specific standards.

#### **6.3.2 Assessment of relief**

The Disaster Management Department, through district administrations and concerned departments, has to organise a quick survey in respect of crop damages, damage to houses and human & animal losses due to a disaster so that immediate relief could be provided to the victims. The District Magistrate needs to have in place a systemic arrangement for assessment of human and property losses so that there is no delay in the hour of need. Scrutiny of records of test-checked districts showed that primary assessment of ex-gratia relief and compensation in lieu of loss of life and livestock had not been made by the concerned district authorities. On being pointed out, the respective DDMA's replied that no such exercise was carried out before the distribution of relief among the affected families.

A joint physical verification of 36 villages covering a population of 3,260 persons was conducted by audit along with the representatives of district administration during the course of performance

---

<sup>2</sup> Floods and other Natural Calamities Manual-Uttar Pradesh.

audit. The outcome of physical verification and interaction with 439 villagers is enumerated below:-

- Government did not provide any immediate aid material in 21 villages.
- Villagers of 22 villages were not satisfied with the distribution of relief assistance.
- Three villages complained that the Government did not provide rations in the affected villages. Eight villages reported that Government provided the rations one week to two months after the disaster took place.

### 6.3.3 Immediate relief to the disaster victims

The Act envisaged that assistance to affected persons should be provided within a maximum period of 15 days from the date of occurrence of the disaster. Audit tried to assess the promptness of the district administration in sanctioning and disbursing immediate relief, as discussed below:-

#### 6.3.3.1 Delay in disbursement of assistance

Audit scrutiny showed that there was substantial delay in disbursement of relief in 30,928 cases (92 per cent) out of 33,488 cases comprising human loss and livestock as detailed in the table below:-

**Table: 6.1**

| Name of district | Total cases   | Within prescribed period (per cent) | Period of delay       |                                |                                |                                 |
|------------------|---------------|-------------------------------------|-----------------------|--------------------------------|--------------------------------|---------------------------------|
|                  |               |                                     | 15-30 days (per cent) | One to three months (per cent) | Three to six months (per cent) | More than six months (per cent) |
| Uttarkashi       | 9,137         | 974 (11)                            | 2,052 (22)            | 3,480 (38)                     | 1,998 (22)                     | 633 (7)                         |
| Pithoragarh      | 4,599         | 371 (8)                             | 586 (13)              | 269 (6)                        | 1,907 (41)                     | 1,466 (32)                      |
| Chamoli          | 4,851         | 266 (5)                             | 20 (1)                | 3,100 (64)                     | 591 (12)                       | 874 (18)                        |
| Rudraprayag      | 7,065         | 531 (8)                             | 2,504 (35)            | 2,563 (36)                     | 1,115 (16)                     | 352 (5)                         |
| Tehri            | 7,836         | 18 (5)                              | 1,118 (14)            | 1,407 (18)                     | 60 (1)                         | 4,833 (62)                      |
| <b>Total</b>     | <b>33,488</b> | <b>2,560 (8)</b>                    | <b>6,280 (19)</b>     | <b>10,819 (32)</b>             | <b>5,671 (17)</b>              | <b>8,158 (24)</b>               |

Source: Data extracted from the records of respective districts.

Timely assistance was provided in only 2,560 cases (8 per cent) within the prescribed timeframe. Most cases of delay were noticed in district Tehri followed by district Pithoragarh where 62 per cent and 32 per cent cases respectively were paid after six months. On being pointed out, the concerned sub-divisional offices attributed the causes of delay (October 2014 to February 2015) to non-availability of funds, time taking process in investigation due to difficult geographical terrain

of the State, shortage of staff and the scale of disaster. The reply was not acceptable as disbursement of assistance to affected persons within the prescribed timeframe is essential for mitigating the sufferings of affected people.

### **6.3.3.2 Flaws in documentation of the Preliminary Report**

Revenue sub-inspector (RSI) on receiving information pertaining to losses from a disaster from the local people where the incident happens, takes suo motu action regarding investigation of the severity of the case(s) including the assessment of the losses inflicted by the natural calamity. After assessing the loss(es), the RSI then prepares a preliminary investigation report in the Form of P-20. In the case of damage to houses, a technical opinion is sought from the technical departments for the valuation and authentication of loss. In the case of loss of livestock, opinion of Veterinary Officer (VO) regarding the value and the authentication of animal being actually dead is sought through post-mortem report. The Revenue Inspector (RI) also endorses the loss by physically verifying the incident spot and makes his recommendations. RI further forwards the P-20 to the Tehsildar and the Tehsildar, in turn, also confirms the fact either by physically visiting the spot or relies upon the reports submitted by the RI. In some cases where it is felt necessary, the sub-divisional officer also visits the incident on spot and makes his confirmatory statement in the P-20.

The deficiencies and deviations noticed during audit in the documentation of P-20 reports are highlighted in the following paragraphs:-

- P-20 reports made by the RSI were not investigated physically by the officers above the rank of RSI. This indicates that all the ex-gratia relief and compensation paid out in lieu of loss of life and livestock, were paid out on the basis of reports submitted by the RSI alone.
- P-20 in respect of damaged houses in the test-checked districts did not contain the relevant house number(s) and the particular Khasra number(s) on which the particular houses were built. P-20 for washed away agriculture land also did not mention the Khasra number of that particular land holding in support of the claim of the title holder.

During joint physical verification, 20 villages complained that category-wise assessments were not done properly especially in respect of the damaged houses. Most of the villages complained that assessment was not done by the technical officer. Further, 332 villagers of 15 villages complained that they had not been given any compensation against the loss of property. Five villages requested that the assessment should be reinvestigated by the appropriate authority.

### **6.3.3.3 Violation of assessment and authentication norms**

GoU issued (August 2013) directions to respective District Administrations to assign the duty to technical officer of an executive rank (Executive Engineer) to assess and authenticate the loss of houses. However, audit scrutiny showed that in 2,131 cases of damaged houses in the test-checked districts, the assessment/ authentication was not done by a technical officer of the executive rank. This task was instead undertaken by the sub-ordinate level officers (Assistant Engineer/ Junior Engineer). Further, the technical officers had not mentioned the percentage of damages in their respective reports. This was required more in the cases of partially damaged houses. In the case of fully and severely damaged houses, the Government had not given any direction as to what percentage of damage would be categorised as full or severe. On being pointed out, the sub-divisional offices replied that the matter had been noted for future compliance.

### **6.3.3.4 Finalisation of payments without technical reports**

Audit scrutiny of records pertaining to technical reports and P-20s showed that in Tehsil Munsyari of district Pithoragarh, out of 58 cases of severely damaged houses, the certificates/reports of the technical officer were not found recorded or attached in 23 cases. As a result, payment of ₹ 23 lakh was made without certificates/ reports of the technical officer. On being pointed out, the concerned sub-divisional office replied (January 2015) that these cases would be investigated and necessary corrections would be made. The reply of the sub-divisional office was not acceptable as the payments in these cases should have been made as per the provisions of the standing instructions of the Government.

### **6.3.3.5 Excess payment of assistance from SDRF**

- a) In respect of damaged houses, audit scrutiny showed that an excess payment of ₹ 5.36 lakh was made from SDRF in 41 cases on account of (i) ex-gratia payment (₹ 1.80 lakh for 34 cases) in Tehsil Pithoragarh of district Pithoragarh, (ii) loss of houses built on Government land (₹ 2.80 lakh for four cases) in Tehsil Joshimath of district Chamoli and (iii) damaged houses (₹ 0.76 lakh for three cases) in Tehsil Ukhimath of district Rudraprayag. On being pointed out, the concerned sub-divisional offices accepted the fact and stated that necessary rectification would be carried out after the necessary adjustments were made.
- b) In case of loss of livestock, audit scrutiny showed that an excess payment of ₹ 12.76 lakh was made from SDRF in 85 cases in Tehsils Munsyari, Dharchula and Dhanaulti of districts Pithoragarh and Tehri. On being pointed out, the concerned sub-divisional offices assured

(January 2015) that the necessary recovery would be made to recoup excess payments from the SDRF.

- c) In case of loss of agriculture land, audit noticed that in Tehsil Munsyari of district Pithoragarh, agriculture input subsidy amounting to ₹ 51.51 lakh in respect of 996 cases for 41.208 hectare of washed away agriculture land was paid from the SDRF at the rate of ₹ 1.25 lakh per hectare against the prescribed norm of ₹ 0.25 lakh per hectare. Therefore, an excess amount of ₹ 41.21 lakh was paid out from the SDRF.

#### **6.3.3.6 Short payment of assistance from SDRF**

- a) In respect of damaged houses, audit scrutiny of records pertaining to the compensation paid under fully damaged category of houses showed that full compensation was not made from SDRF in 402 cases (Pithoragarh: 394 cases & Rudraprayag: 08 cases). As against the prescribed rate of ₹ 70,000 as compensation for each fully damaged house, only ₹ 35,000 were paid from the SDRF. Therefore, there was a short payment of ₹ 1.41 crore in these cases. On being pointed out, the sub-divisional offices replied that the matter had been noted for future compliance. The reply was not acceptable as the payment from SDRF should have been made as per the prescribed norms.
- b) In respect of loss of livestock, in Tehsils Munsyari and Jakholi of districts Pithoragarh and Rudraprayag, a total compensation to be paid out in respect of 81 cases of 454 animals worked out to ₹ 56.53 lakh against which only ₹ 23.50 lakh were paid. Balance amount of ₹ 33.03 lakh was yet to be paid to the affected persons. In addition to above, in two cases assistance was not provided to victims as per norms in two districts of Pithoragarh and Rudraprayag. On being pointed out, the sub-divisional offices accepted the facts and replied that due to non-availability of funds, the remaining payments are yet to be paid and in the case of non-payment, the matter would be investigated into.

#### **6.3.3.7 Non-uniformity in relief distribution**

As per the SDRF norms in respect of loss of livestock, compensation has to be provided for loss of either one big milch animal or four small milch animals. However, the GoU decided (June 2013) that any animal loss, irrespective of the category and numbers, would be compensated in full. Scrutiny of records of test-checked districts showed that compensation in respect of small animals had been restricted to loss of four animals only except in district Pithoragarh, where the small animal losses as reported and authenticated were paid without limiting the numbers to a certain stage. The details are tabulated below:-

**Table: 6.2**

| Name of district | Name of tehsil | Reported No. | Paid No.     | Category of animals  |
|------------------|----------------|--------------|--------------|----------------------|
| Rudraprayag      | Ukhimath       | 6,905        | 1,258        | Goats/Sheep          |
|                  |                | 180          | 82           | Cows/Buffalos/ Bulls |
| Tehri            | Ghansali       | 215          | 82           | Goats/Sheep          |
| <b>Total :</b>   |                | <b>7,300</b> | <b>1,422</b> |                      |

Source: Extracted from the records of respective Tehsils.

In the districts of Rudraprayag and Tehri, the loss of animals reported by the claimants had not been compensated in full as per the GO by the respective sub-divisional offices. Thus, no uniformity was maintained in the distribution of relief in the test-checked districts.

#### **6.3.3.8 Non-adherence to the prescribed format by the Veterinary Officer**

The Government of Uttarakhand had prescribed a standard format for the issuing of post-mortem certificates by the VOs in respect of loss of livestock. Audit scrutiny of records of the test-checked districts showed that the certificates issued by the VOs in support of the loss of livestock varied both in text and format. For example, (i) in districts Pithoragarh and Rudraprayag, VOs authenticated the loss in the case of washed away animals as proposed by village Panchas in Panchnama itself, whereas in Tehsil Jakholi of district Rudraprayag, the VOs issued the certificates on plain papers; (ii) in Tehsil Joshimath of district Chamoli, no separate certificates in respect of individual cases were issued. Instead, letters had been sent to the district administration confirming the death of animals and (iii) in districts Uttarkashi and Tehri, the VOs also issued the certificates on plain papers.

#### **6.3.3.9 Doubtful assistance**

In Tehsil Joshimath of district Chamoli, audit noticed that out of 1,212 animals pertaining to 153 cases reported dead by Panchas, VO and RSI authenticated the death of only 520 animals which included 111 animals for which no post-mortem or Panchnama was carried out. Therefore, the payment of ₹ 5.15 lakh made in respect of 111 animals out of SDRF was rendered doubtful. On being pointed out, the sub-divisional office replied (October 2014) that the matter would be investigated into under intimation to audit. The same is still awaited (February 2015).

#### **6.3.4 Conclusion**

The immediate response of the Government and district administration of the affected districts was not adequate. The insufficient logistical support available with the DDMA's restricted



them from initiating effective search and rescue operations on their own. Doppler radars for the early warning system were not installed.

The State Government had not reviewed the norms and codes. Suitable databases for hassle free distribution of relief were not developed. The primary assessment of ex-gratia relief and compensation in lieu of loss of life and livestock had not been made by the district administrations. Substantial delay in disbursement of relief was noticed in 92 *per cent* cases. Flaws in the documentation of the preliminary reports were also observed.

The damage of houses was not being authenticated by the technical officer of executive rank in violation of Government Orders. In some cases, the valuation of technical officers was not being recorded. Non-uniformity in settlement of cases was also noticed. Standard format for issuing of postmortem/ death reports was not adhered to by the veterinary officers in cases of livestock and non-uniformity in authentication of losses by veterinary officers was also noticed.

### **6.3.5 Recommendations**

- 1. Emphasis should be given to simulation and early warning, and the communication protocols and strategies shall also be revisited periodically.***
- 2. Codes and manuals should be reviewed so as to make the relief distribution more realistic and avoid the frequent revisions of relief scales.***
- 3. Administrative bottlenecks in the distribution of relief amongst the affected people should be minimized so as to make relief distribution timely and more transparent. This would require extensive documentation of population, properties and infrastructure.***



*Chapter* **7**

**RESTORATION OF ESSENTIAL  
PUBLIC INFRASTRUCTURE**

# CHAPTER- 7 : RESTORATION OF ESSENTIAL PUBLIC INFRASTRUCTURE

## 7.1 Restoration of essential public infrastructure

The National Policy on Disaster Management (NPDM) for Reconstruction and Recovery read with the SDRF guidelines of the GoU on disaster management suggests that speedy reconstruction of essential public infrastructure viz. electricity, water, roads, bridges, etc. should be the first priority of the Government. It should be repaired/ restored within 60 days from the date of occurrence of the disaster. For reconstruction of more permanent nature, ideally, the work including that of the houses must be completed within two to three years. Audit had analysed the procedure of assessing and sanctioning of restoration works, and time taken by the various stake holders responsible for the restoration, in fulfilling their mandate and important findings are given in the following paragraphs:-

### 7.1.1 Restoration of essential services

- (i) To restore the power supply in the affected areas, the Department/ agency should have a clearly defined disaster response plan and disaster response procedures in order to avoid confusion and to improve efficiency in cost and time. Audit scrutiny of records of test-checked districts showed that electric supply in 1,876 villages was affected due to June 2013 disaster. The electricity supply to the affected villages was however, restored temporarily in July/September 2013. To restore the power supply on permanent basis in these villages, 182 electric restoration work proposals were submitted by the Uttarakhand Power Corporation Limited (UPCL) to the DDMA's. Out of these, 145 works (80 per cent) were sanctioned by the DDMA's, against which 126 works had been completed as on January 2015 after incurring an expenditure of ₹ 4.53 crore. Thus, electric supply was not restored in the remaining locations even after a lapse of 20 months from the date of occurrence of the disaster.



**Unrestored electricity transmission line at Khet (Pithoragarh) 03.01.2015**

During joint physical verification of 36 villages, it was observed that electricity had not been restored in two villages (six *per cent*) (New Sobla & Khet, Pithoragarh) as of January 2015. Electricity was restored in 14 (39 *per cent*) villages with a delay ranging between 15 days to seven months.

- (ii) In the absence of any SOPs or plans prepared by the Department for restoring water supply in the disaster affected areas, audit could not ascertain how water supply was proposed to be restored. Audit scrutiny showed that no contingency plan was in place at the time of the disaster and the water supply in the affected areas had been restored on ad-hoc basis. Proposals for restoration of damaged 651 damaged water supply schemes had been submitted (July-September 2013) by the executing agencies to the respective DDMA's. However, funds for restoration of only 393 schemes (60 *per cent*) had been provided by the DDMA's as of February 2015. Out of 393 water schemes sanctioned, 40 works (10 *per cent*) had been completed within the prescribed time frame of 60 days at a total expenditure of ₹ 65.74 lakh. 194 works (49 *per cent*) were completed within six months after incurring an expenditure of ₹ 4.96 crore and remaining 154 works (39 *per cent*) were completed beyond six months' period at an expenditure of ₹ 4.49 crore. Five works (one *per cent*) were still under progress (February 2015). Failure to complete these essential works reflects poorly on the DDMA's and the executing agency.

Joint physical verification showed that essential services, such as drinking water supply were not restored in two villages (New Sobla, Pithoragarh and Phalati, Rudraprayag) as on January 2015.

- (iii) The Public Works Department (a key line department) is responsible for the construction/maintenance of the road network in the State. It comprises National Highways, State Highways, major District roads, other District roads, Village roads and Border tracks. Audit scrutiny showed that the line department had neither prepared SOPs nor had any contingency plan in place to counter the situation that arose in the period of 15-17 June 2013. Out of 733 works amounting to ₹ 64.94 crore sanctioned in the five test-checked districts, 705 works were completed (February 2015) after incurring an expenditure of ₹ 46.38 crore and remaining 28 works were in progress.

### 7.1.2 Assessment, Sanction and Completion of restoration works

As per the Act, district level committees are required to make assessment of losses that may occur due to a threatening disaster or a disaster.

Consequent upon June 2013 disaster, the DDMA's of test-checked districts submitted (June/ August 2013) their respective lists of damaged infrastructure to the Government amounting to ₹ 557.72 crore<sup>1</sup>. Against this projection, the Government sanctioned only ₹ 127.04 crore. It was observed that the District Level Screening Committees (DLSCs) could recommend for sanction only eight *per cent* works within one month from the date of occurrence. A majority of works were recommended for sanction by DLSCs after a period of six months. This shows that the DLSCs were not prompt in recommending the execution of works. Similarly, the DDMA's were also not prompt in according sanctions against the works recommended by the DLSCs, as they could sanction only 46 *per cent* works in the first three months from the date of occurrence. Therefore, the very purpose of constitution of such committees was defeated. As a result, a number of restoration works could not be started in time.

On being pointed out, the respective district administrations replied (October 2014-February 2015) that due to shortage of funds, the sanctions to the executing agencies got delayed. The reply was not acceptable as delayed issue of sanction in these works defeated the very purpose and objective of funding such restoration through the SDRF. Further, as the district administrative offices had been allowed to draw moneys under TR-24, the question of scarcity of fund as stated above does not arise.

Restoration of damaged infrastructure carried out by various executing agencies is detailed below:-

Table: 7.1

(₹ in crore)

| Name of district | Works sanctioned |               | Works under 15-17 June 2013 |               | Works completed |              | Works in progress |             | Works not started |             |
|------------------|------------------|---------------|-----------------------------|---------------|-----------------|--------------|-------------------|-------------|-------------------|-------------|
|                  | Total works      | Amount        | Total works                 | Amount        | No.             | Expenditure  | No.               | Expenditure | No.               | Cost        |
| Chamoli          | 307              | 25.59         | 261                         | 23.42         | 236             | 18.37        | 24                | 1.35        | 01                | 0.01        |
| Pithoragarh      | 489              | 21.12         | 489                         | 21.12         | 471             | 13.85        | 14                | 4.30        | 04                | 0.09        |
| Rudraprayag      | 475              | 40.67         | 475                         | 40.67         | 453             | 29.07        | 15                | 0.89        | 07                | 0.67        |
| Tehri            | 393              | 21.61         | 356                         | 20.62         | 253*            | 13.90        | 07                | 0.38        | 00                | 00          |
| Uttarkashi       | 349              | 21.21         | 349                         | 21.21         | 333             | 14.88        | 14                | 0.52        | 02                | 0.05        |
| <b>Total</b>     | <b>2,013</b>     | <b>130.20</b> | <b>1,930</b>                | <b>127.04</b> | <b>1,746</b>    | <b>90.07</b> | <b>74</b>         | <b>7.44</b> | <b>14</b>         | <b>0.82</b> |

Source: Information extracted from the records provided by the DDMA.

\* Status of 96 works was not available with the DDMA.

Audit scrutiny showed that out of 1,930 works pertaining to June 2013 disaster, 1,746 works (90 *per cent*) had been completed with a delay ranging between two months to more than 12

<sup>1</sup> Chamoli: ₹ 72.57 crore, Pithoragarh: ₹ 60.02 crore, Rudraprayag: ₹ 141.89 crore and Uttarkashi: ₹ 283.24 crore.

months after incurring an expenditure of ₹ 90.07 crore, 74 works amounting to ₹ 7.44 crore were in progress and 14 works valued ₹ 0.82 crore had not yet been started as of February 2015.

In one particular case an amount of ₹ 71.15 lakh was sanctioned by the Government in February, 2014 for the construction of approach road and laying of wooden log bridge at Narkalla Khedaghati, in Tehsil Purola (Uttarkashi). Later on, the district administration decided against the construction on the plea that the concerned road was already under construction under the PMGSY scheme. Including such a work in damage assessment indicated lack of diligence while identifying works of essential nature.

On being pointed out, the respective DDMA's replied (October 2014-February 2015) that the works could not be completed within prescribed timeframe due to shortage of funds and non-receipt of estimates in time. However, clarification in this regard would be obtained from executing agencies. The reply was not acceptable as sufficient funds were available with the DDMA's as GoU had allowed the DDMA to withdraw funds from the Treasury under Treasury Rule 24 (TR-24) which empowered the DDO to withdraw funds in advance for meeting the expenditure on works of emergent nature. As regards delay in receipt of estimates, audit noticed that all the estimates were received in the DDMA within three months from the date of occurrence of the disaster.

During joint physical verification of 36 villages, 26 (72 per cent) villages reported that damaged infrastructure such as Primary schools, Hospitals, Hostels, Panchayat building, road, bridges, culvert, water schemes, electricity, bridle path etc. had not been repaired or re-constructed as on date.

### **7.1.3 Partial release of funds**

As per the Act, all the affected works under the disaster should be executed immediately.

Scrutiny of records showed that out of five test-checked districts, three districts (Chamoli, Pithoragarh & Tehri) released the entire sanctioned amounts to the executing agencies with the directions that some amounts shall be withheld and released after the third party inspection reports are obtained. Two other districts Rudraprayag and Uttarkashi released the amounts partially (75 per cent and 70 per cent respectively). Thus, there was no uniformity in release of funds for the restoration works in the disaster affected districts.

### **7.1.4 Execution of works in violation of norms**

The assistance for repair/ restoration of damaged infrastructure under SDRF 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 following 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 SDRF. As per Para 9.13 of Twelfth Finance Commission, the repair/ restoration of damaged infrastructure, where detailed analysis/ estimation was required, was to be met from the plan funds. The State Government, however, used the SDRF funds almost like a discretionary fund and ignored the prescribed norms under the scheme. 159 works at an estimated cost of ₹ 24.11 crore, which were not falling under the category of immediate restoration were sanctioned. The important findings are as under:-

- (i) In Tehri, 16 works amounting to ₹ 1.15 crore were sanctioned and executed on the pretext of June 2013 disaster whereas these 16 works had got damaged in the year 2012. Audit noticed that these works had earlier (03.06.2013) been returned to the concerned executing agencies by the district administration as funds had not been sanctioned by the Government. The district administrative office had directed that these works should be carried out through the departmental budget. The present sanction of previous year's works again in June 2013 was not only against the SDRF guidelines but also made it doubtful that the works being carried out were strictly for immediate restoration purposes. On this being pointed out, the district administration replied (February 2015) that these works had been sanctioned on the request of public representatives and local people. The reply was not acceptable as the assistance for repair/ restoration of damaged infrastructure under SDRF is permissible only for repairs of immediate nature. Since these works related to the year 2012, these should have been undertaken through the normal departmental budget.

- (ii) In Chamoli, the DDMA sanctioned (March 2014) ₹ 3.33 crore for construction of 110 meter bailey bridge over the river Alaknanda at Govindghat-Gurudwara approach road despite the fact that permissible work of providing temporary connectivity between the two ends of the Alaknanda at Govindghat was sanctioned in June 2013 itself (trolley) and a wooden log bridge was constructed in October 2013



**Fresh bailey bridge at Govindghat (Chamoli) of  
16.10.2014**

by incurring an expenditure of ₹ 10.37 lakh. Therefore, sanction of a fresh suspension bailey bridge was clearly in violation of the SDRF guidelines. On being pointed out, the DDMA replied that the sanction for the construction of bailey bridge was accorded on account of fulfilling the local aspirations and keeping in view the Yatra requirements.

- (iii) In district Chamoli, a suspension bridge over Pinder River at village Harmany of Tehsil Tharali had got damaged in June 2013 disaster. The DDMA sanctioned (March 2014) ₹ 52 lakh for the construction of abutment of the suspension bridge, which was started (July 2014) and was in progress as on the date of audit, on the pretext that the work was vital for moving population in public interest at the time of sanction. This was against the SDRF norms as temporary restoration works had already been undertaken for providing immediate connectivity in the area after incurring an expenditure of ₹ 16.62 lakh. On being pointed out, the DDMA replied (October 2014) that the work was sanctioned and being executed under the SDRF on the request of villagers, and after taking into account the local requirements so that a permanent facility may be provided to the general public. The reply of the DDMA was not in line with the prescribed norms, which allows only execution of repairs/restoration works.

- (iv) In Pithoragarh, the DDMA sanctioned (March 2014) ₹ 5 crore for construction of 122 metre steel deck suspension bailey bridge in Tawaghat, Narayan Ashram at Kanchoti, despite the fact that the temporary connectivity between the two ends at Kanchoti to Narayan Ashram, had been restored (June 2014) by the DDMA after incurring an expenditure of ₹ 26.49 lakh. To ascertain the status of the work a joint physical verification was



**Fresh steel deck suspension bailey bridge at Kanchoti (Pithoragarh) of 03.01.2015**

conducted along with the representatives of DDMA (January 2015). It was found that the left side abutment had been constructed and the right side abutment was yet to be constructed on account of non-availability of land. Further, material worth ₹ 3.68 crore had been procured (April 2014) and was lying idle at the construction site as can be seen from the photograph. Thus, the work was incomplete even after incurring an expenditure



of ₹ 4.06 crore. On being pointed out, the DDMA replied (January 2015) that the work was sanctioned by GoU under SDRF. The DDMA had only issued the sanction order in this regard. The reply of the DDMA was not in line with the prescribed SDRF norms, which allows only execution of repairs/ restoration of works barring permission for fresh work.



**Material lying idle at construction site of Kanchoti (Pithoragarh) of 03.01.2015**

- (v) 117 works<sup>2</sup> at a cost of ₹ 12.06 crore pertained to protection works. Of these, 43 works were for flood protection, 36 works were protection of abutments of bridges and 38 works were cement concrete structures, *etc.* The protection works do not fall under the category of immediate nature. Audit is of the view that the Government should have initiated the flood protection works as part of their normal disaster mitigation process. The respective executing agencies responsible for the management of flood control in the State should have been directed accordingly for providing necessary budgetary provision in their annual budgets. As regards protection works for the abutment of bridges, the same should have already been ensured by the primary executing agency responsible for the maintenance of bridges and ensuring smooth road connectivity in the State. Thus, sanctioning an amount of ₹ 12.06 crore on these inadmissible 117 works was irregular.
- (vi) The SDRF provides for immediate connectivity between the two ends of a river on which the bridge gets damaged in the wake of flash floods. This temporary connectivity had to be provided within a short span of time of 60 days. Audit scrutiny of selected five districts showed that at least 11 trolleys were sanctioned at an estimated cost of ₹ 1.19 crore between October 2013 and March 2014. These trolleys happened to be placed on identified locations with a considerable delay ranging from six to eleven months, thereby, forcing the local people to take longer routes to reach their destinations by walking additional four to five kms which further compounded their problems.
- (vii) Four water schemes valued at ₹ 0.40 crore were sanctioned against already ongoing works (Rudila, Tinsoli Nagjagai, Tilwara & Tailla Silgar).

<sup>2</sup> Chamoli : 13 works (₹ 1.13 crore), Pithoragarh : 38 works (₹ 3.31 crore), Rudraprayag : 14 works (₹ 2.08 crore), Tehri : 14 works (₹ 1.36 crore), Uttarkashi : 38 works (₹ 4.18 crore).

- (viii) Two works (GIC, Jayanti Kothiyara & Kyunja) worth ₹ 14.13 lakh were sanctioned (March 2014) for the construction of new class rooms. Although the works were described to have been sanctioned as being of immediate nature, the works were still in progress as of January 2015.
- (ix) Six works valued ₹ 31.56 lakh were sanctioned for the repair of internal roads in New Tehri Town. These works fall under the administrative control of Local Bodies and should have been maintained/ repaired by the same Body. Instead, these works were executed under the SDRF in clear violation of the SDRF guidelines.

## 7.2 Rehabilitation of affected population

A total of 341 villages were identified for rehabilitation in the State. Out of 341 villages, 245 villages pertained to the test-checked districts. Scrutiny of records of test-checked districts showed that out of 245 villages identified for rehabilitation, 145 villages were identified prior to June 2013 disaster and 100 more villages were identified which needed relocation on account of June 2013 disaster.

In the June 2013 disaster, 31 pre-identified villages having a population of 1,709 were affected and total losses met out by these villages had already been worked out as ₹ 3.40 crore. Out of these 31 villages, survey for 16 villages had already been conducted in 2012. Therefore, at least these 16 villages should have been relocated and the property of these villagers could have been saved from being washed away.

No measures were taken by the GoU for rehabilitation of these villages except one village of Chattigaon of district Rudraprayag which was stated to have been rehabilitated by the Government.

On being pointed out, the respective district administrative offices replied that matter has to be decided at the State level. The Department showed its inability in providing funds for the relocation of these affected villages. The department further replied (March 2015) that the SDRF does not provide funds for mitigation of disasters. Therefore, Central Government had been requested (September 2010) for assistance for the same. However, whatever resources the State had, were being spent on the preliminary investigation for the identification of such villages.

## 7.3 Conclusion

Line departments had neither prepared SOPs nor had any contingency plan in place at the time of the disaster. A majority of works were recommended for sanction by the DLSCs and DDMAAs after six months from the occurrence of the disaster. Delay in execution of works of

immediate nature and restoration of essential services was also noticed. A majority of works had been completed with a delay ranging between two months to more than 12 months. No uniformity in release of funds for restoration works in disaster affected districts was observed by the DDMAAs. Works in violation of SDRF norms were also sanctioned by the DDMAAs. No measures were taken by the GoU for rehabilitation of the villages identified prior to disaster.

#### **7.4 Recommendations**

- 1. The State Government should put in place a proper mechanism to ensure that the line departments prepare their SOPs and action plans to meet with any contingency.*
- 2. DDMAAs should ensure the uniformity in release of funds for restoration works under SDRF.*
- 3. Suitable system to be put in place to ensure works should be completed within the prescribed timeframe.*
- 4. The priority should be accorded to speed up the identification of safe locations for villages which need to be relocated.*



*Chapter* **8**

**INTERNAL CONTROL FRAME WORK**

# CHAPTER- 8 : INTERNAL CONTROL FRAME WORK

## 8.1 Introduction

Internal controls are safeguards that are put in place by the management of an organisation to provide assurance that its operations are proceeding as planned. These are also designed to provide reasonable assurance that the entity's general objectives are being achieved. Existence of or putting in place effective Internal Control Structure to ensure that all activities are proceeding as planned, assumes importance in dealing with the immediate aftermath of a disaster. Reasonable assurance provided by such internal controls strengthens accountability of public authorities.

As per the Act, the responsibility for carrying out all activities related to disaster management and their monitoring was vested with the SDMA at the State level and with the respective DDMA at the district level. Putting in place an effective internal control mechanism to oversee the response, relief and restoration activities is the responsibility of the Disaster Management Department.

There are five components of Internal Control frame work:-

- (i) Control Environment
- (ii) Risk assessment
- (iii) Control Activities
- (iv) Information and Communication
- (v) Monitoring

The response of the State Government was found lacking in respect of all the five components.

### 8.1.1 Control Environment and Risk Assessment

Control environment means the overall attitude, awareness and actions of management regarding the internal control system and its importance in the entity. It is the foundation for the entire internal control system.

In Uttarakhand, the SDMA is empowered to make plans for the disaster prevention, mitigation and management at the State Level. In doing so, it has to identify the underlying risks and prepare

strategies and plans to address such risks effectively. This, the SDMA has to achieve through the State Executive Committee. Further, a pre-condition to risk assessment is the establishment of objectives, linked at different levels and internally consistent. Risk assessment is the identification and analysis of relevant risks to achievement of the objectives, forming a basis for determining how the risks should be managed. Following instances highlight the non-existence of a responsive control environment and corresponding risk assessment exercise aimed at addressing disaster management related concerns:-

- (i) The State Disaster Management Plan, as prescribed under Section 18 of Act, was not in existence at the time of June 2013 disaster;
- (ii) The related policies and guidelines for implementing the SDMP were not formulated in the State;
- (iii) SOPs had also not been developed by the line departments;
- (iv) The Act came into effect in 2005. Since then, there were sufficient inputs with the State Government regarding underlying risk analysis for developing the SDMP, for example the report of DMMC, the report on glaciers and the previous audit recommendations. However, the State Government had not initiated development of a holistic plan to address the risks till June 2013 by providing adequate budgetary provisions for mitigating the disaster impacts.
- (v) Shortage of essential commodities in almost all the test-checked districts was noticed and buffer stock of essential commodities for three months had not been maintained. These districts did not have adequate storage capacity also.

### **8.1.2 Control Activities**

Control activities are the policies and procedures that help ensure management directives are carried out and necessary actions are taken to address risks for achievement of the entity's objectives. Control activities occur throughout the organization, at all levels and in all functions. They include a range of activities as diverse as approvals, authorizations, verifications, reconciliations, reviews of operating performance, security of assets and segregation of duties. Audit however observed the following:-

- (i) No review of norms and codes had been carried out by the State Government. The relief/ex-gratia payments were granted/ distributed on pre-bifurcation norms.
- (ii) Inadequate control of higher officers over the preparation of preliminary reports and lack of cross verification of losses with available relevant records indicated weak internal controls in the entire exercise of providing relief and restoring essential infrastructure.
- (iii) The State Government did not have any mechanism in place to register the Char-Dham pilgrims either at the entry points for the pilgrimage or at the base camps.
- (iv) The funds that had been released to the severely affected as well as other districts of the State from different sources of funds like the SDRF, PMRF and CMRF were yet to be finally adjusted to correct heads of accounts even after a lapse of more than a year of the disaster.
- (v) In the test-checked districts, against the 1,930 sanctioned restoration works, third party inspection had not been carried out in 1,262 works (65 per cent) despite lapse of considerable time. This resulted in the substantial delays in the execution and releasing of final instalments to the executing agencies.

### **8.1.3 Information and Communication**

Information and communication are essential to the realisation of the all internal control objectives. One of the objectives of internal control in a government organisation is fulfilling public accountability obligations. This can be achieved by developing and maintaining reliable and relevant financial and non-financial information and communicating this information by means of a fair disclosure in timely reports. Information and communication relating to the organisation's performance will create the possibility to evaluate the orderliness, ethicality, economy, efficiency and effectiveness of operations. Audit scrutiny showed that the public accountability and transparency was lacking on account of the following:-

- (i) No separate grievance redressal cell had been established either at the district level or at the Tehsil level for speedy disposal of complaints made by the affected people in respect of distribution of ex-gratia relief/under estimated compensation granted under the different categories of losses suffered by the affected people. As of February 2015, 3,464 complaints were received in the four districts (Chamoli, Pithoragarh, Rudraprayag and Uttarkashi) of

test-checked districts<sup>1</sup>, out of which only 1,392 (40 *per cent*) complaints were attended to. For the remaining 2,072 complaints, no pursuance for speedy investigation/disposal was being initiated at the district level.

- (ii) No specific fraud deterrent mechanism was found to be in place either at the district level or at the Tehsil level to safeguard against the fraudulent claims/ ghost beneficiaries.
- (iii) The Department did not have a sound communication network in place at the time of disaster which stopped the flow of information and hampered rescue operations.

#### 8.1.4 Monitoring

Monitoring internal control ensures that controls are operating as intended and that they are modified appropriately for changes in conditions. This is accomplished through ongoing monitoring activities, separate evaluations or a combination of both, in order to ensure that internal control continues to be applied at all levels and across the entity and that internal control achieves the desired results. There was poor monitoring of the disaster related activities as borne out by the following:-

- (i) For effective monitoring, the Department of Disaster Management had prescribed a procedure for obtaining monthly reports (physical and financial) from all concerned district administrations. However, this was not implemented by the district administrations.
- (ii) Though a State level monitoring committee had been constituted for monitoring the relief distribution and settling of disputes, no records in support of the meetings that were held by this committee were produced to audit.
- (iii) The district administration had also not prescribed any returns and reports for watching the progress of restoration work. Therefore, the district offices were not in position to watch the physical and financial progress of works being executed.

## 8.2 Conclusion

The State Government did not carry out necessary risk assessment exercise and formulate a State level disaster management plan. No controls were exercised in most of the functions. No separate grievance redressal cell had been established either at the district level or at the Tehsil

<sup>1</sup> Tehri had not maintained any records regarding complaints.

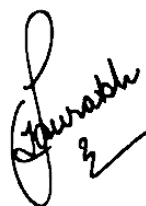


level for speedy disposal of complaints made by the affected people in respect of distribution of ex-gratia relief. Further, no specific fraud deterrent mechanism was found to be in place either at the district level or at the Tehsil level to safe guard against the fraudulent claims/ ghost beneficiaries.

### 8.3 Recommendations

1. *The Government should, under the aegis of SDMA, develop a strong online monitoring and review system for real-time monitoring of disaster management related activities.*
2. *Grievance redressal cells at the State, District and Local levels should be strengthened in order to dispose off the complaints quickly.*


Dehradun  
The 30 August 2015



(SAURABH NARAIN)

Accountant General (Audit), Uttarakhand

Countersigned



New Delhi  
The 31 August 2015

(SHASHI KANT SHARMA)

Comptroller and Auditor General of India



**GLOSSARY OF ABBREVIATIONS**



## GLOSSARY OF ABBREVIATIONS

| Abbreviation | Expanded form                             |
|--------------|---|
| ANM          | Auxiliary Nurse Midwife                   |
| ASHA         | Accredited Social Health Activist         |
| CAG          | Comptroller and Auditor General           |
| CM           | Chief Minister                            |
| CMO          | Chief Minister Office                     |
| CMRF         | Chief Minister's Relief Fund              |
| CSS          | Centrally Sponsored Scheme                |
| DDM          | Department of Disaster Management         |
| DDMA         | District Disaster Management Authority    |
| DDMP         | District Disaster Management Plan         |
| DDO          | Drawing and Disbursing Officer            |
| DEOC         | District Emergency Operations Centre      |
| DIG          | Deputy Inspector General                  |
| DLSC         | District Level Screening Committee        |
| DM           | Disaster Management                       |
| DM           | District Magistrate                       |
| DMMC         | Disaster Mitigation and Management Centre |
| DSO          | District Supply Officer                   |
| EOCs         | Emergency Operations Centres              |
| FY           | Financial Year                            |
| GIC          | Government Inter College                  |
| GO           | Government Order                          |
| GoI          | Government of India                       |
| GoU          | Government of Uttarakhand                 |
| Ha           | Hectare                                   |
| HSC          | Hazard Safety Cell                        |
| IMD          | India Meteorological Department           |
| IST          | Indian Standard Time                      |
| IT           | Information Technology                    |
| ITBP         | Indo-Tibetan Border Police                |
| JCB          | Joseph Cyril Bamford                      |

|       |  |
|-------|--|
| mm    | Millimetre                             |
| MoEF  | Ministry of Environment and Forests    |
| NDMA  | National Disaster Management Authority |
| NDRF  | National Disaster Response Fund        |
| NDRF  | National Disaster Response Force       |
| NPDM  | National Policy on Disaster Management |
| P-20  | Preliminary Report                     |
| PMGSY | PradhanMantri Gram SadakYojana         |
| PMRF  | Prime Minister's Relief Fund           |
| PWD   | Public Works Department                |
| RI    | Revenue Inspector                      |
| RSI   | Revenue Sub-Inspector                  |
| SAC   | State Advisory Committee               |
| SDM   | Sub Divisional Magistrate              |
| SDMA  | State Disaster Management Authority    |
| SDMP  | State Disaster Management Plan         |
| SDRF  | State Disaster Response Fund           |
| SEC   | State Executive Committee              |
| SEOC  | State Emergency Operations Centre      |
| SOP   | Standard Operating Procedure           |
| SP    | Superintendent of Police               |
| TR-24 | Treasury Rule-24                       |
| UPCL  | Uttarakhand Power Corporation Limited  |
| UTs   | Union Territories                      |
| VDMC  | Village Disaster Management Committee  |
| VOs   | Veterinary Officers                    |

**© COMPTROLLER AND  
AUDITOR GENERAL OF INDIA  
[www.cag.gov.in](http://www.cag.gov.in)**

**<http://agua.cag.gov.in>**