



सत्यमेव जयते

Government of India-UNDP Disaster Risk Reduction Programme (2009-2012)



DMMC



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उत्तराखण्ड शासन

Implemented by
Uttarakhand Disaster Management Authority
&
Disaster Mitigation and Management Centre
Department of Disaster Management Government of Uttarakhand
2009-2012

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Foreword

Continued subduction of the Indian Plate beneath the Eurasian Plate consumed the intervening oceanic plate and led to the collision of the alien landmasses. This caused deformation, upliftment, metamorphism and shearing of the sediments deposited in the hitherto intervening ocean basin (Tethys) along with the rock mass of the two Plates involved in orogeny. Since the Plate collision around 55 Ma the Indian Plate is continuously drifting north – northeastward at an average rate of 45 – 50 mm/year (Besse and Courtillot, 1988, Dewey *et al.*, 1989). Global Positioning System (GPS) measurements conclusively indicate that the Indian Plate is moving northeast at a rate of 55 mm/year of which 18 – 22 mm/year is accommodated within the Himalaya (Bilham *et al.*, 1997) and the remaining is taken care of further north in Tibet and Asia (Avouac and Tapponier, 1993, Peltzer and Saucier, 1996). This ongoing convergence is responsible for both neotectonism and seismicity in Himalaya, Tibet and the adjoining areas.

The Himalaya has been seismically active and has witnessed four great earthquakes ($M_w \geq 8.0$) in the previous 113 years; 1897 Western Assam, 1905 Kangara, 1934 Bihar – Nepal and 1950 Eastern Assam (Arunachal) earthquakes. Arya (1990) indicates possibility of around 80,000 persons being killed if the 1905 event repeats during daytime. Validated by the toll of the 2005 Kashmir Earthquake this assertion highlights the issue of rising seismic vulnerability in the region due to rapid growth of population and infrastructure.

Entire Indian Himalaya falls in Zone IV and Zone V of Earthquake Zoning Map of India (IS 1893:2002, Part 1) and in the recent past (1991 and 1999) the State of Uttarakhand has witnessed two moderate magnitude earthquakes with their epicenters at Uttarkashi and Chamoli respectively. The State however falls in the seismic gap of 1935 and 1905 great earthquakes and has not witnessed a major earthquake for more than previous 200 years. This enhances seismic risk in the region.

Apart from earthquake Uttarakhand is prone to landslides and other disasters that include floods, flash floods, avalanche, drought, forest fire, hailstorms and others. During the monsoon season most hilly regions face major problems due to landslides. The cumulative losses incurred by landslides and flash floods far surpass losses caused together by all other disasters. Transport and supply of essential items are severely affected by landslides and livelihoods are disrupted.

Multi – hazard prone nature of the state of Uttarakhand highlights the importance of addressing various disaster risk reduction related issues on a continuous manner so as to reduce loss of property and lives. The State Government therefore resorted to establishment

of separate Department of Disaster Management soon after creation of the separate state. An autonomous institute, Disaster Mitigation and Management Centre (DMMC), was at the same time established to assist the Department on various technical and policy related issues and to undertake various human resource development and mass awareness related activities. In the period 2002 – 09 GoI - UNDP supported Disaster Risk Management Programme was implemented in the State. Building upon the lessons learnt during the implementation of the DRM Programme and as a follow up of the same Disaster Risk Reduction Programme was formulated and it aimed at strengthening disaster management related institutional mechanisms in the State.

Pithoragarh, Chamoli and Uttarkashi districts were taken up for the implementation of Output I of the Programme that focused on Institutional strengthening and capacity building. Nainital, Dehradun and Haridwar cities were taken up under Output II of the Programme that focused on urban risk reduction.

The Programme helped the Government of Uttarakhand in strengthening the capacity of SDMA and DDMA. Besides other things a number of HRVA studies were carried out under the Programme. Apart from this a study was also initiated for assessing the impact of climate change on the life support strategy of the masses and to document various traditional coping mechanisms.

Like all good things DRR Programme has come to an end but the various DRR initiatives would go on continuously. Efforts put in by one and all who were associated with the Programme in different capacities are acknowledged. But for the support and guidance provided by National Disaster Management Authority, Government of India, Ministry of Home affairs, Government of India and United Nations Development Programme, India this Programme would not have been a success.

This report presents the summary of the main activities carried out under the Programme and is the outcome of the efforts put in by the DRR Project team; Aneeta Salaria in particular who has been the around even after the project was over.

28th March, 2013
Disaster Mitigation and Management Centre
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(Piyoosh Rautela)
Executive Director

CHAPTER I

1. Introduction

1.1 Uttarakhand Geographic and vulnerability profile

Uttarakhand was carved out of Himalayan and adjoining districts of Uttar Pradesh on 9 November 2000 becoming the 27th state of the Republic of India. Uttarakhand borders Tibet to the north, Nepal to the east, and the states of Himachal Pradesh and Uttar Pradesh in the west and south respectively. It has a total area of 51,125 km², according to 2011 Census of India, Uttarakhand population has reached approximately 1.01 crore with an increase of 19.17 percent from the past decade. The State has two divisions and 13 districts, further sub-divided into 49 tehsils and 95 Blocks. As per census report of Uttarakhand, the total population of the state is 10,116,752 persons. The population of the districts in Uttarakhand varies considerably. Four of the 13 districts, namely Dehradun, Haridwar, Udham Singh Nagar and Nainital account for 61.5 % of the state's total population. On adding Tehri Garhwal, Pauri Garhwal and Almora, this accounts for nearly 81%.

The state of Uttarakhand is prone to multi hazards like earthquakes and landslides, flash floods, cloudburst which strike the state time to time.

Table 1: Major recent disasters in Uttarakhand

S.No.	Disaster	Area	Year of occurrence
1	Earthquake	Uttarkashi	1991
2	Earthquake	Chamoli	1999
3	Landslide/cloudburst	Malpa	1998
4	Landslide/cloudburst	Okimath	1998
5	Landslide/cloudburst	Fata	2001
6	Landslide/cloudburst	Khet Gaon, Budhakedar, Bhatwari	2002
7	Landslide/cloudburst	Uttarkashi	2003
8	Landslide/cloudburst	Amparav	2004
9	Landslide/cloudburst	Govindghat, Agastyamuni, Ramolsari	2005
10	Landslide/cloudburst	Lajhakela	2009
11	Landslide/cloudburst	Asi Ganga , Okimath	2012

The state is almost every year being affected by landslides and cloudbursts in monsoon season.

The entire area of the state falls under high seismic zone IV and V however the region has not experienced a major earthquake ($M_w \geq 8.0$) for more than previous 200 years and therefore the continuously accumulating strain is a cause of concern. Therefore with respect to state's disaster scenario there are number of interventions which need to be made in order to achieve disaster reliance in the state.

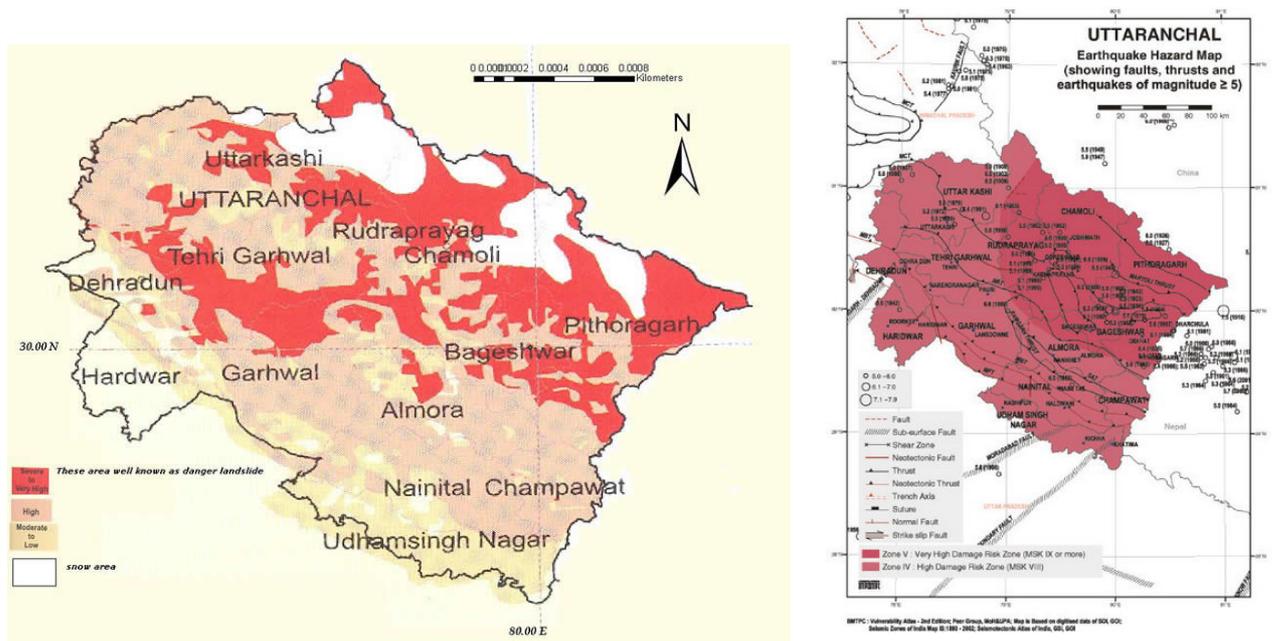


Fig 1 and 2 : Landslide and earthquake hazard maps of Uttarakhand

1.2 Disaster Management Approach

The GoI-UNDP DRM Programme (2002-2009) was implemented with the aim of reducing the vulnerabilities of communities at risk to natural disasters in 176 multi-hazard prone districts across 17 States of India. Costing an estimated USD \$41 million, it came to be recognized as largest community-based DRM programme in the world. The main objectives of the programme were: National capacity-building to institutionalize the DRM programme in (MHA); Environment building, education, awareness raising and strengthening capacities at all levels in DRM; multi-hazard preparedness, response and mitigation plans prepared at State, District, block, village and ward level; and Knowledge networking on effective approaches, methods and tools for DRM and developing and promoting policy frameworks at the State and National levels.

The State Government of Uttarakhand is firmly committed to the cause of disaster management and had initiated a number of measures for reducing the vulnerability of the masses to disasters even before the DRM Programme. Disaster Mitigation and Management Centre was designated State Nodal Agency (SNA) for GoI-UNDP DRM Programme. The facilities available at the SNA, along with the services of all its personnel were thus utilized for DRM program initiatives. The DRM programme showed excellent results in training and awareness generation basically building capacity of community at a large scale.

1.3 Disaster Risk Reduction Programme

After evaluation of the results of the DRM programme, a new programme was formulated through extensive consultations among the stakeholders with an objective to support Central and State government programmes and aimed to proactively reduce disaster risk and implement timely sustainable and locally relevant recovery activities in post disaster scenarios. The following pillars shaped the programme.

- DRM actions stipulated in the DM Act, 2005 to be undertaken by DM related institutions at various levels
- DRR priorities identified in the Eleventh Five Year Plan
- Actions highlighted in the Hyogo Framework of Action (HFA)
- Lessons learnt from the implementation of GoI-UNDP Disaster Risk Management Programme.

Within the above parameters the programme was designed to strengthen the institutional structures to undertake various disaster risk reduction related activities at various levels, to address the issue of enhanced risk due to climate change and to develop preparedness for recovery.

The programme specific outcomes were underlined as follows:

- Strengthen capacities of SDMAs and DDMA's to undertake activities outlined in DM act 2005
- Development of methodologies and modalities for ensuring risk reduction through development programmes at national, state and community levels.
- Urban risk reduction undertaken by addressing planning and development issues through suitable legislative and regulatory mechanisms.
- Setting up of a recovery framework through which the people affected by disasters are able to access resources for rebuilding their lives and to revive their livelihoods.
- Establishment of platform for knowledge sharing

1.3.1 Scope and strategy for the DRR Programme

The DRR programme was to support the development of policies and frameworks through which DRR systems and capabilities would be strengthened. The programme aimed at developing strong linkages with all the important government programmes. The mainstreaming of disaster risk reduction in these programs was intended to be facilitated at the level of policy and implementation. Establishment of partnerships with NGOs, academic and research institutions,

and civil society organizations falls under the scope of the programme. The programme aimed at emphasizing on interventions, technical as well as developmental, aimed at reducing risk and vulnerability at the household and community levels. The strategy covers the dissemination of knowledge and technical skills among the communities and expansion of their access to financial services and mechanisms for DRR. Promotion of equity, social inclusion and women empowerment was envisaged within the programme. The programme aimed at strengthening the legal aspects of regulation and compliance which is necessary for promoting a culture of risk reduction. It emphasized towards the legal duties and obligations of different planning and regulatory agencies for enforcing land-use planning, codes and other regulations necessary for safe settlements. Knowledge sharing was also included under the scope of the Disaster Risk Reduction programme.

1.3.2 Major DRR Components

The programme has two major components one is Output I in which focus is on Institutional strengthening and capacity building implemented by NDMA and another is Output II in which the focus is on urban risk reduction implemented by Ministry of Home Affairs. The brief description is provided below

Out Put I: Institutional Strengthening & Capacity Building

Institutional strengthening and capacity building aimed at strengthening capacities of existing SDMAs and selected DDMA's across the country to perform various functions as mandated under DM Act 2005. It aimed to build the capacity of the local partners to sustain development progress beyond the period of NDMA and UNDP support. The key areas of intervention under this output are given below

- Capacity building of SDMA/ DDMA by providing HR support
- Training Need Assessment and State level TOTs on DM
- Hazard, Risk & Vulnerability Assessment of one district
- Advocacy workshop on mainstreaming
- Training on Post Disaster Damage and Need Assessment
- Awareness generation programmes and development of IEC materials
- Training and Capacity building programmes for NGOs & CBOs and Inter-Agency Coordination
- Formulation/ updating of District Plans (03 districts)
- School Safety Programmes

- Capacity building of DM Nodal Officers and preparation of Departmental DM Plans

Districts covered: Pithoragarh, Chamoli and Uttarkashi

Output II: Urban Risk Reduction

The project aimed to strengthen capacities of institutions and other stakeholders such as municipal officers, planners, NGOs, etc. The urban risk reduction involves assistance to cities in managing and mitigating the urban disaster risks. This subcomponent was implemented by Ministry of Home affairs. The project was implemented in selected multi hazard cities across the country. It emphasized on conducting urban risk and vulnerability assessment, facilitating integration of risk reduction in to urban development programmes. The project focused on strengthening of enforcement of building controls byelaws and development control regulations. The coverage of the project included developing training modules for capacity building of engineers on safe construction practices. Under the project the efforts need to be made to improve the inter departmental coordination mechanism while responding towards urban disaster. The key areas of intervention under the project are as given below

- Hazard, Risk & Vulnerability Assessment of 03 Cities
- Assessment of existing compliance and enforcement mechanism
- Consultation workshop for policy makers/ decision makers on Techno-legal regime & amendments to existing bye laws
- Workshop for Engineers/ Town Planners/ Municipal Corporations on Urban Risk Reduction
- Establishment of City EOCs
- Preparation of City/ Ward level DM Plans
- Advocacy workshops on mainstreaming/ integrating URR in development plans
- Awareness for Community on safer construction practices and disaster preparedness

City covered: Dehradun, Haridwar and Nainital

CHAPTER II

2. Supporting Government Initiatives

The DRR Programme helped in supporting the government of Uttarakhand with both financial as well as human resource support, allocated within programme period. The support was provided to strengthen the working mechanism at State Disaster Management Authority level, district level and city level. The needs were identified regarding the type of support required at different levels in consultation with the state nodal agency and accordingly the posts were created under the programme for better facilitation of work in the field of disaster risk reduction.

2.1 Human Resource Support

Uttarakhand was provided with Human Resource at different levels in order to carry out the work more efficiently with the help of National Disaster Management Authority and United Nation Development programme.

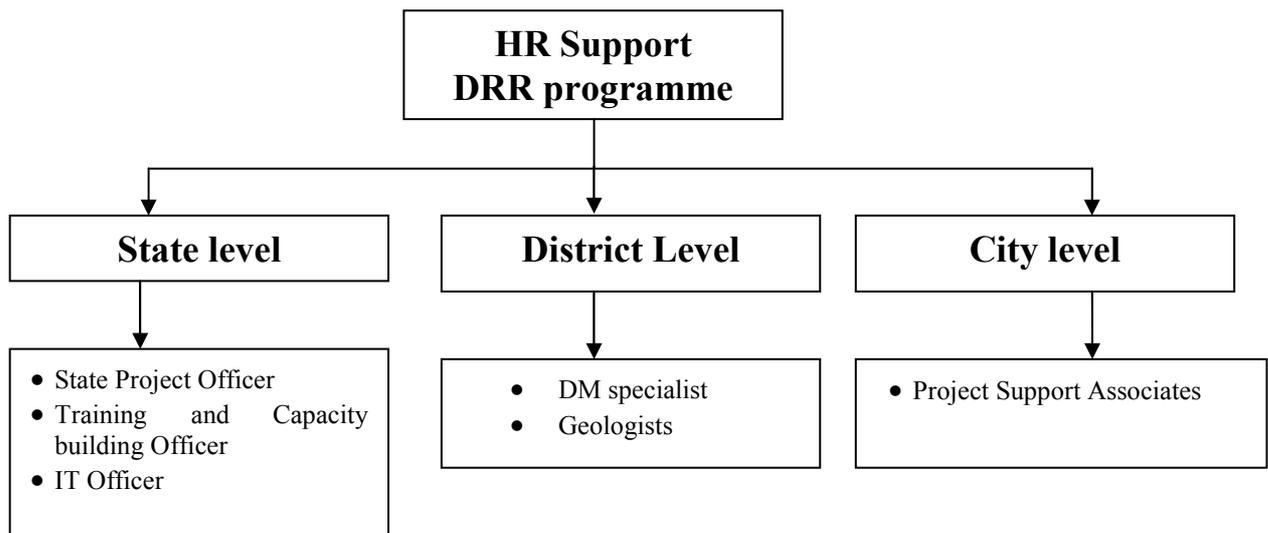


Fig 3 : HR support provided under DRR programme at different levels

The state steering committee was constituted under the programme for the implementation, monitoring and reviewing work under the Chairmanship of the Principal Secretary, Department of the Disaster Management, Government of Uttarakhand. The regular meetings of the committee helped in streamlining the work under the programme as well as for smooth functioning of the programme in the selected districts and cities.



Fig. 4 and 5: Orientation of project staff under DRR programme at DMMC, Dehradun.

The HR provided was properly oriented at DMMC Dehradun on all related aspects of the state DM scenario and the type of work need to be carried out in the field of disaster risk reduction.

The objective of providing HR support to strengthen the government's capacity was achieved to a considerable extent as the HR support helped the state governments in carrying out works efficiently at different levels. In addition to working towards effective preparedness and planning, the different geological studies carried out with the help of Geologists recruited under the programme in respective districts helped the district administration in dealing with landslides with the help of mitigation measures suggested in different reports prepared on land slide risk management under the programme. Also the Human resource recruited in majority is now absorbed by the state government in form of District Disaster Management officers in different districts.

Thus the DRR Programme helped in ensuring and providing sustainability to disaster related work in the concerned district level authorities

2.2 Creating platform for urban stakeholders to work in field of risk reduction

Two day Regional Consultation Workshop on "Urban Risk Reduction" was organized at Nainital by State Nodal Agency on July 8th - 9th 2010. The main objectives of this two days consultation workshop was to discuss roles and responsibilities of various stakeholders under URR Project, mainstreaming disaster risk reduction elements in the ongoing urban development programmes / schemes and to address the issues and challenges in urban areas and the implementation strategy for this programme.



Fig. 6 and 7: Glimpses of regional workshop organized in Nainital under URR Project.

The participants of this consultation workshop comprised of academicians from key resource institutions, officials from Municipal Corporations, Development Authorities, district administration, Department of Urban Development, Housing, JNNURM Project and Town Planning. The workshop provided a platform to government and non-government organizations to share their issues and concerns related to three cities selected for this programme. This facilitated drawing up of an implementation framework for achieving the goal of sustainable risk reduction in three cities.

2.2.1 Recommendations / Outcome: Important decisions taken during the consultation workshop for the implementation of the URR Project are as follows:

- **Project implementation and monitoring mechanism**

It was decided in the workshop that the overall project execution and monitoring was to be done by the DMMC. In addition to this it was also recommended that in the cities of Dehradun, Nainital and Haridwar the project would be implemented through District Disaster Management Authorities (DDMA). The Municipal Corporation and Nagar Palikas were identified as nodal agencies for Community level planning exercises in respective urban areas. The DDMA's were made responsible for preparation of disaster response plans and training and capacity building activities to be carried out under the project while for the strengthening of enforcement of building byelaws and codes, the district hazard safety units, the development authorities and DDMA's were made responsible. Setting up of a technical review committee to monitor the activities was recommended in the workshop.

▪ **Hazard Risk Vulnerability Assessment**

It was recommended in the workshop that the detailed Hazard Risk and Vulnerability Assessment (including physical, social, economic and environmental vulnerability) will be carried out for all the three cities. DMMC as a state nodal agency will work with the support of respective ULBs, Development Authorities, academic & training institutions and district administrations.

▪ **Mainstreaming DRR in urban development planning**

It was decided that DMMC would facilitate the integration of disaster risk reduction into urban development plans for all the three cities. It was also recommended that the DRR component need integration in the JNNRUM projects running in the three cities.

▪ **Ensuring structural safety**

It was recommended that before sanctioning any infrastructure project in any of these three cities- structural safety audit must be conducted at the state and district level. The suggestions also included formation of a mechanism for monitoring during construction phase. It was also decided that the training programme to be conducted for JNNURM project officials. Also the enforcement of building codes, byelaws and development control regulations to be strengthened. It was also recommended that the training and capacity building programme for engineers, masons, contractors and local builders on hazard resistant technology, safer construction practices and urban planning to be conducted with support of DMMC. Also the status of District Hazard safety Units to be reviewed and these be revived. In addition to this in all the three cities technology construction demo units to be constructed. It was decided that in Nainital city the sensitization/ hotel evacuation plans and mock drills to be conducted by DDMA/ DMMC. Also the disaster safety audit of 3 selected hospitals in three cities to be conducted by DMMC.

▪ **City Disaster Management action plans and control rooms**

It was recommended that a city disaster management action plan for all the three cities to be prepared by DDMA with the involvement of Municipal and Development authorities. The DMMC was identified as a state nodal agency in order to provide guidelines and training for the preparation of CDMAP. Also the strengthening of DEOC of Nainital and Haridwar in terms of procurement of equipments was recommended. These are also to function as city level control rooms. In Dehradun the city control room within the Dehradun Municipal Corporation to be strengthened. Besides this it was decided that the guidelines on operation of emergency control rooms and tentative list of equipments to be procured was to be provided by DMMC. An urban

emergency response teams to be constituted in all the three cities and arrangement to be made for the training of these teams and other officials.

- **Community based disaster management planning**

It was recommended in the workshop that Community based risk assessment and community/ ward level based disaster risk reduction plans to be prepared and the responsibility of awareness/ sensitization of community/ elected representatives for all the three cities lies with the respective Municipal Corporation/ municipalities.

- **School safety**

The school safety programme including school DM plans, training of teachers, mock drills etc to be carried out in all the three cities. It was suggested that the development of manuals and module for school safety to be provided by the DMMC. In the workshop setting up of one model school in each city demonstrating non-structural safety measures was recommended.

The workshop helped in formulation of a list of measures to be adopted for successful implementation of programme at urban level.

CHAPTER III

Hazard Risk and Vulnerability Assessments

CHAPTER III

3. Hazard Risk Vulnerability Assessment

Earthquake is a harsh reality for all the tectonically active areas of the world, of which Himalaya is an integral part. The region has been rocked repeatedly by the earthquakes and the present levels of scientific and technological advancement do not allow precise earthquake prediction. The nature of losses inflicted by seismic events across the globe clearly show that investments made on seismic safety related features pay rich dividends and magnitude of the losses are clearly relatable to the nature and quality of building stock and other structures in the area exposed to seismic ground shaking. Most of the buildings in the Himalayan region are non-engineered and lack of awareness and knowledge amongst the masses regarding earthquake resistant construction techniques results in high seismic vulnerability. Inadequate building bye laws and lenient regulatory regime only adds the problems. There is need to assess the vulnerability of building stocks in such seismically active area. Assessment of the seismic performance of the existing building stock thus gives a preliminary idea of the nature of vulnerability together with the likely losses that might be caused.

The State Nodal Agency (DMMC) is therefore carrying out the detailed HRV analysis of the eleven cities and three districts of the state.

3.1 Risk and vulnerability analysis of Mussoorie and Nainital city

One day workshop on “Risk and vulnerability analysis of Mussoorie city” was organized at Mussoorie by DMMC on 13th July 2010.



Fig. 8: Inauguration of book published on risk vulnerability analysis of Mussoorie city.

Results and the studies carried out earlier by DMMC on the state of infrastructure in Mussoorie

were discussed in the workshop. The results of the study were discussed with policy makers, public representatives, district administration, community and other stakeholders with an aim to develop a strategy for the mitigation of the earthquake threat.

Detailed risk and vulnerability analysis of Nainital city was also carried out by State Nodal agency. A total of 3,000 buildings spread over 13 residential Wards of Nainital were surveyed under this study. Attempt was made to collect data pertaining to the physical condition, time of construction and engineering aspects of the surveyed structures together with the related details on peaks and lean occupancy as also the socio-economic profile of the residents. The database was consequently created under GIS environment for analysis and correlation.

Similarly a one day workshop on “Risk and vulnerability analysis of Nainital city” was organized at Nainital by DMMC on 26th October 2010. The members of the Nagar Palika Parishad, Nainital, and officers from district administration and other departments, representatives of universities; NGO’s and residents of Nainital were present on this occasion. The workshop was a step forward in achieving goal of disaster resilient cities.

Such studies helped the policy planners in formulating new development policies and guidelines taking in to consideration the character of the particular area.

3.2 Hazard vulnerability assessment in the districts

A number of geological studies were carried out in the 3 districts and reports were prepared on landslide affected villages. The same were submitted to the respective district administrations. The details of the studies carried out in the Chamoli district are summarized below:

1. Geological report of proposed rehabilitation lands for past landslide affected 17 villages in Tehsil Joshimath, district Chamoli, Uttarakhand.
2. Geological report of landslide affected 15 villages in tehsils Chamoli, Gairsain, Karanprayag, Joshimath, district Chamoli, Uttarakhand.
3. Geological note on subsidence /slope failure area at Thalli band, Pokhri Rudraparayag road and village Nautha, Khanna, Tehsil Pokhri, district Chamoli, Uttarakhand.
4. Slope stability problem at Kendriya Navodya Vidhyalaya Pipalkoti and Gadora Tehsil, district Chamoli, Uttarakhand.
5. Landslide hazard assessment of NH- 58 from Hanumanchatti to Nagrasu along road section of district Chamoli.

Besides above, slope failure area at Gram Panchyat Baula (Chidda tok, Barnidhar tok and Sukodi tok), Tehsil Chamoli and some other landslide affected villages that include Tapovan, Lata,

Karchoun, Regadi and Chamoli were also investigated. The recommendations were given in terms of mitigation measures. The recommendations provided in each study helped the district administrations in preparedness planning as well as carrying out the mitigation measures in the concerned area ,to avoid disastrous situation.

3.3 A Study on people’s perception of the impact of climate induced changes in their surroundings

The study was initiated in four remote valleys in the state of Uttarakhand namely Dhauliganga valley also called as Niti Valley in Chamoli, Bhagirathi valley in Uttarkashi, Byas and Johar valleys in Pithoragarh. The primary data collection was done between 7th April 2012 to 11th July 2012.

Main objectives of the study were to:

- a) Assess the impact of climate change on the physical environment that includes changes in land use, temperature, precipitation and the like.
- b) Identify certain traditional coping mechanisms and practices for conservation of natural resources including sustainable agri-practices that could be suitably improvised to suit the present ground realities.
- c) Documentation of available traditional knowledge and to make recommendations for suitable adaptation strategies

A semi-structured questionnaire was utilized for recording the response of the masses. This comprised of a wide range of questions on weather, agriculture, water, extreme weather events, forest, wild animals and also the changes that are taking place in the area and the hardships being faced by the masses. It also included questions on traditional knowledge and coping mechanisms of the people. These were intended to record various issues related in some way to climate change.

The villages covered and total responses recorded from the study areas are as follows:

Table2: Villages covered with responses recorded

S.No.	Study area	No. of villages	No. of respondents
1	Bhagirathi valley, Uttarkashi	25	312
2	Niti valley, Chamoli	16	195
3	Johar valley, Pithoragarh	22	201
4	Byas valley, Pithoragarh	7	151

Most respondents agreed that the climate is changing and this they inferred from changing duration and timing of the seasons as also in the form of increasing temperature, unseasonal rain, droughts, changes in soil conditions i.e. loss of nutrients and no / less snowfall.



Fig. 9: Bhatwari Area, Uttarkashi, Incident of landslides near the habitation.

The threat to livelihood coupled with the increasing incidences of disasters has made the life of people miserable and difficult. Some traditional methods were observed to be still used in the area to combat the harshness of climate and for the management of natural resources.

The study is envisaged to give an account of local understanding and responses about climate change and its impacts.

Traditional knowledge regarding the coping mechanism, adaptation strategy and conservation of natural resources once identified and documented would promote further research in these fields that might lead to sustainable and viable solutions of the emerging problems. Local knowledge on adaptation and vulnerability reduction can be integrated developmental planning.



Fig. 10: Village Jimiya in Munsiyari, Pithoragarh: Incident of cloud burst occurred here in year 2010.



Fig. 11: Traditional House Byas valley, Pithoragarh

3.4 Slope instability and geo -environmental issues of the area around Nainital

The study was largely based upon the observations made during the fieldwork undertaken in the area around Nainital in March, 2011. Satellite imageries of the area have also been studied and analysed and the same have been used for depicting changes in the land use / land cover characteristics in the area. The report helps in better understanding of various geo – environmental issues of Nainital. The key findings and suggestions of this report helps in introduction of appropriate techno-legal regime for risk reduction. With availability of this report to all concerned departments it helped in providing the development agencies a base on which future development work can be planned and proposed.

3.5 Nonstructural seismic vulnerability assessment of Hospitals in Dehradun

For this assessment Mahant Indresh a 700 bedded hospital of Dehradun city was selected. The assessment clearly revealed that the hospital would not be able to maintain its functional and operational continuity even during a moderate intensity earthquake. Most areas of the hospital were observed to fall under high risk and the hospital would suffer major losses both in terms of life as well as equipments.

The report provided clear idea about the critical areas of the hospital where mitigation work was required to be carried out on priority basis. The hospital administration was therefore advised to discuss the findings of the report and accordingly amend the priorities as per their requirement or other feasibility parameters. This work helped the administration in looking up at the loopholes and accordingly implements the recommendations.



Figs. 12 and 13: View of Operation theatre and oxygen cylinder storage at Mehant Indires h hospital.

Another study was taken up with respect o assessment of Community health centres in Dehradun. The CHCs taken up for the non - structural vulnerability assessment were located at Doiwala, Raipur, Sahaspur, Vikasnagar and Mussoorie.



Fig. 14: Selected CHCs in Dehradun for non structural seismic vulnerability assessment.

Both medical equipments and the basic installation present in every health centre were provided risk rating from low to very high. All the CHCs were observed to fall under high to very high risk class even in case of moderate earthquake. In their present state these would not be in a position to

deliver health services on the aftermath of a major disaster. So beside the mitigation measures it was suggested that the CHCs be strengthened in terms of both medical and para – medical staff as also medicines and drugs.

The purpose of the report was to help the health department in effectively responding to major emergencies. The report emphasized on the fact that the building designs of the CHCs must be reviewed to assess the structural safety of the same. In case some shortfalls were to be observed retrofitting should be resorted to. The reports were shared with all concerned stakeholders and the authority responsible and it helped the agencies in planning mitigation work in respective centres.

3.6 Nonstructural seismic vulnerability assessment of schools , Dehradun

A total of 8 Government Inter colleges (12th standard) were identified for the non-structural seismic vulnerability assessment of the schools. For the same a detailed survey format was prepared in which the considered aspects range from infrastructure to that of school DM plan. The survey of eight schools was carried out in the month of August 2012 .These include Government Girls Inter College Rajpur Road,Lakhibagh,Ajabpur Kallan and Kargi and Government Inter College Patel Nagar,Miyanwala,Nalapani and Mehuwala.



Fig. 15: High tension wire observed to be passing through govt. school during survey.

The survey included the visit of each and every section of the school premises including laboratories and kitchen area. Interaction was also organized with the school principals and concerned faculty. The problems faced by the schools particularly with respect to structures were

shared by the faculty members. The School Disaster Management Action Plan and its status was also discussed and the suggestions for improving the same were also put forth.

The data collected from the different schools as per the survey done was analyzed and the draft report was prepared. The report is yet to be shared with the education department, it will help the department in analyzing the existing condition and accordingly take decisions in this regard which will help towards working in school safety in a more focused way.

The purpose of all the Hazard Risk Vulnerability Assessments carried out under the programme was to help the agencies working in the field of planning and development to provide with a comprehensive technological base, on which the future strategies can be worked out. Such studies will help in introduction of an appropriate techno legal regime for risk reduction.

CHAPTER IV

4. Building capacity at State level

The purpose of these training programmes was to create a platform for the participants to interact with each other as also to build their capacities for attainment of a much focused work. State level programmes under DRR provided a wider platform in terms of interaction and cooperation on disaster related issues. Capacity building activities at state level under the DRR programme helped in establishment of a more interactive partnership between the different stakeholders involved in development and disaster mitigation related activities of concerned area.

4.1 Volunteers and Community based disaster management

It is well understood that community based disaster management planning approach is valuable and cost effective. Volunteers play a key role for achievement of local level disaster risk reduction by helping in community based disaster management planning. The volunteers help the administration in dealing with all phases of disaster management. Identifying their importance in field and their level of interaction with the community a state level training of trainers programme for volunteers was designed and organized at Disaster Mitigation and Management centre, Dehradun. The main objective of the training of trainers programme was to train the volunteers on different aspects of community based disaster preparedness. A total of thirty one volunteers of NGOs and NYKS from six districts viz; Chamoli, Uttarkashi, Pithoragarh, Dehradun, Hardwar and Nainital participated in the programme.



Fig. 16 and 17: Sensitising volunteers under TOT Programme at DMMC, Dehradun



Fig. 18: Presentation of group work by participants.



Figs. 19 and 20: Practical demonstration sessions during training of trainers programme.

The criterion for selecting the volunteers was their past role in the field of disaster management and their ability to deal efficiently with the community at different levels. To strengthen the community based disaster management planning approach at grass root level, the community must be trained in all aspects of ward /village planning .Taking this in to context the village and ward level plan formats developed under the programme were shared with the volunteers and they were trained on procedures to prepare the plans with the help of community. In this field the

Participatory Rural Appraisal (PRA) technique and tools are of immense importance and accordingly volunteers were made conversant with this aspect.

The programme helped in creating a human resource that with regular refresher courses will be available to work on community based disaster plans. The participants of the training programme helped the respective district administrations both in community based disaster management planning as well as in response and relief works.

4.2 Building capacity of Engineers on safe construction practice

Most casualties during earthquakes are caused by the collapse of structures, both engineered and non-engineered. For successful earthquake mitigation, it has to be ensured that all new constructions in the seismic zone are compliant with the BIS Codes and for this purpose a techno legal regime has to be put in place. The concerned authorities are not being able to implement the standards because of lack of capability existing at technical as well as decision making level.

It was decided under the programme to first develop the competency of the work force involved in the engineering section in the state of Uttarakhand in order to work forward towards building a techno legal regime.

With this view point a State level two day training programme for practicing engineers was organised in Dehradun under the programme. Engineers from all 13 districts were invited to participate in the programme. The purpose of the training programme was to impart knowledge and skill about earthquake safe construction practice to engineers. Various issues covered in the workshop included seismic hazard and risk estimation, structural and non structural effects of earthquake, earthquake resistant design concept, earthquake safe construction of new buildings, seismic vulnerability evaluation and retrofitting techniques, codal provisions and issues and related to the techno legal regime.

Majority of the engineers were exposed to such specific training programme for the very first time and therefore the programme provided them an opportunity to enhance their technical skills in dealing with disasters at their respective areas. The training programme helped in developing the competency of engineers in the field of disaster risk reduction. The training was imparted with an objective that the construction taken up by the government agencies in future must take in to account seismic resistant criteria.



Figs. 21 and 22: Inaugural and technical session during engineers training at OFIL, Dehradun.

4.3 Post Disaster Need Assessment

A Post Disaster need assessment is a government led exercise and in order to build the capacity of officials and executives of government department a three day training programme was organized by Disaster Mitigation and Management centre in cooperation with the National Institute of Disaster Management (NIDM), New Delhi at Dehradun. The programme emphasized on the importance of coordination in carrying out such exercise. The primary purpose of the PDNA programme was to provide the concerned staff in local authorities with a multi-sectoral, technical overview of the damage and loss patterns and the principal recovery needs and priorities to be addressed to help with reconstruction, sustainable development and post-disaster risk reduction.

Objectives of the training programme

- ❖ To explain the various process of damage and assessment in the country.
- ❖ To describe the framework of the damage and loss assessment methodology (DALA) and make comparative analysis with conventional and new methodology.
- ❖ To apply and work as a core group of specialists to undertake the assessment of damage, losses and needs after disasters.
- ❖ To apply new methods and modify the existing method of damage and loss assessment and prioritizing investment for disaster recovery.

The workshop helped in bringing forth clarity amongst the participants on various damage assessment related issues and the same is envisaged to help them in better assessment of damage on the aftermath of any disaster. The DRR Programme helped in creating a common understanding between the different departments on the need of comprehensive post disaster need assessment

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methodology. The officers also assured that the knowledge gained will be used by them in the next damage assessment exercise in their respective district. The training enhanced the capacity of concerned staff in conducting PDNA .It intended to help coordinate recovery efforts across different sectors with a risk reduction approach.

CHAPTER V

Output I: Institutional Strengthening & Capacity Building (Uttarkashi, Chamoli and Pithoragarh)

CHAPTER V

5. Institutional strengthening and capacity building

The Output I of the DRR programme was Institutional strengthening and capacity building implemented by NDMA. It aimed at strengthening capacities of existing SDMAs and selected DDMA across the country to perform various functions as mandated under DM Act 2005. The Programme was effectively implemented in the three districts of the Uttarakhand and a brief description regarding the major outcomes from the programme are discussed below.

5.1 Strengthening of DDMA

In Disaster risk reduction partnership with the local government is a necessity to reduce vulnerability by improving the capacity of the communities and the local government units to prevent, mitigate and prepare for disasters. One of the main objectives of the programme was to strengthen the existing DM structures within the district. With respect to this regular meetings of DDMA were organized in the districts of Pithoragarh, Chamoli and Uttarkashi. The agenda of discussion in these meetings varied from the district disaster management action plan, its regular updating, activities to be carried in DRR, review of DRR activities to the preparatory measures that need to be in place before the monsoon period.



Figs. 23 and 24: DDMA meetings in Pithoragarh and Chamoli district.

With the help of HR support provided under DRR programme, DDMA meetings were organised more regularly and all concerned stakeholders came to realize the importance of dovetailing disaster risk reduction in development planning. Regular DDMA meetings helped in assessing progress of various activities of the programme and helped in strengthening DM related institutions. The DRR programme helped the concerned authorities in

such a positive way that the human resource support provided under the programme in majority was absorbed within the authorities as District Disaster Management officers thus providing continuity to the work in order to achieve the sustainability of DRR Programme.

5.2 Incorporation of DRR concerns in development plans/programmes

To incorporate DRR in various development plans and projects was one of the most important aspects of the programme. In terms of developing partnership with local level agencies towards working in the field, DIET was one of the main institutions to get connected with the Disaster Management Department and with the help of the DIET regular training programmes focusing on school safety and teachers training were organized within the districts. However in terms of advocacy through workshops, one day workshop was organized in the Chamoli district only.



Fig. 25: View of advocacy workshop organized in Chamoli district.

Such workshops under the programme helped in creating platform for different stakeholders to discuss issues regarding disaster risk reduction and to achieve some key decisions in the meetings. The Programme helped in developing partnership with the local level departments.

5.3 Building partnership with local NGOs

NGOs are one of the key stakeholders in any area, especially in the rural areas where they have strong presence and ties with the local community. For taking DRR initiatives to grass root levels in DRR districts efforts were made to ensure cooperation of the NGOs. Several meetings with this group were organized for developing an understanding on the concepts of disaster risk reduction. The meetings with NGOs helped the district disaster management specialists recruited under the programme to work at community level with a more interactive approach. This helped in penetration of disaster risk reduction concerns to the grass root levels.



Figs. 26 and 27: Interaction with NGOs in the districts.

5.4 Training and capacity building

Before carrying out the programmes assessment work was done regarding the requirements of specific sector and with respect to that the different training modules were designed. The DRR project efforts were made to organise training programmes for both community and government officials so as to enhance their capabilities for better countering any disaster.

5.4.1 Orientation programmes with major stakeholders

The major stakeholders were identified within districts and specific orientation programmes were designed addressing to the needs of the particular sector specific group.



Figs. 28 and 29: Orientation programmes for stakeholders in Pithoragarh and Chamoli districts.

The groups covered included self help groups, Panchayati Raj Institutions, education sector officials, engineers, revenue officials. For capacity development of officials working at urban local bodies, orientation programmes focusing on seismic resistant construction technology were organized. With the help of feedback from these programmes , new programmes and training modules were modified so that maximum possible benefit to different sections of society could be achieved.

To support and strengthen the disaster mitigation and management related interventions at the block level, a pilot project was conceived in association with Department of Rural Development Authority (DRDA) and Disaster Mitigation and Management Centre (DMMC). The Joshimath block of district Chamoli was selected and in the first phase an orientation cum sensitization workshop of PRIs, gram pradhans, block level officers, councilors, NGOs, principals, teachers and SHGs was conducted from 20th to 24th September 2011 at block headquarter of Joshimath. A total of 191 participants were oriented in the 4 day workshop.

In the second phase of the programme one IAY house was constructed using earthquake resistant construction technology along with masons training in gram pankhi block of Joshimath block. Therefore a training module incorporating essentials of earthquake safe construction was therefore evolved by the Disaster Mitigation and Management Centre (DMMC) for training the masons. One IAY house and 20 masons of the same village were trained in earthquake safe construction technique. The duration of the training was 6 days i.e. from 9th to 14th November 2011.



Figs. 30 and 31: Four day orientation programme in phase I and masons training in phase II at block Joshimath Chamoli by DRDA and DMMC.

Therefore the DRR Programme helped in sensitizing community of a particular area ranging from block to village level which was followed by dovetailing DRR concerns in construction of IAY house in the same respective region

However the district of Uttarkashi in addition to these also addressed the issue of forest fire to a considerable level. Keeping forest fire in focus two orientation programmes were organized specifically for Van Panchayat members .The DRR Programme helped in identifying and targeting the key departments with local area perspective and building capacity by imparting skills to ground level workers in dealing with disasters.



Figs. 32 and 33: Sensitization programme for Vanpanchayat members in the district of Uttarkashi.

5.4.2 Media workshops

The media as an agency always plays an important role in the field of DRR. One workshop specifically targeting media was organized in all the 3 DRR districts of Uttarakhand.



Figs. 34 and 35: Sensitizing media on DRR issues through workshops in Chamoli and Uttarkashi district.

These workshops helped in sensitizing media on importance of placement of disaster management in public domain. The meeting focused on roles and responsibilities of media and ways through which media can be used for establishment of an effective disaster management system in the district.

.With help of such workshops the local media regularly covered the disaster related events and also helped the authorities towards attaining a better awareness generation status.

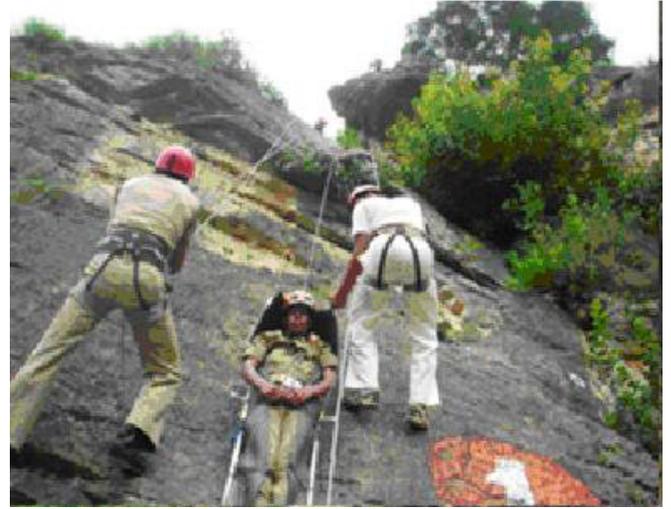
5.4.3 Training programmes for police and other security personnel

A separate arrangement was made under the programme for training of police and other security personnel on disaster management. Specific training modules were designed with discussion from the concerend organisations keeping in focus the need and requirement of the particular group. Accordingly series of such programes were carried out in batches in all the three districts.



Fig. 36: Trained Search and rescue trainers group, Pithoragarh.

The specific training programmes for the police and security personnel in the DRR Programme was an effort to build capacity of a particular group which is responsible in majority for the relief and rescue work associated in any kind of disaster. The programmes equipped the security personnel with knowledge of handling different disaster management equipments, the scenario based mockdrills helped in building capacity of the said forces in dealing with a specific disaster situation.



Figs. 37 and 38: search and rescue training for police personnel in Uttarkashi district.



Figs. 39 and 40: Glimpses of training of police personnel on search and rescue and equipment handling in Uttarkashi district.

With the help of DRR Programme the coordination mechanism was strengthened with different departments including Police, Homeguard, Prantiya Rakshak Dal in a way so that regular training programmes in future will also be organized and the departments ensured full cooperation also after the project completion in order to achieve continuity in the training programmes

5.4.4 Training programme on mainstreaming DRR in Power projects

The need for effective management in dealing with various crisis & disaster situations with specific reference to power sector/electricity grid/transmission system is of vital importance. The

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Disaster Management Act enacted in Dec.2005 has assigned the role/responsibilities to various Ministries/Departments for co-ordinated approach with other organizations. Accordingly a specific three day training programme on mainstreaming disaster risk reduction in power projects was organized with cooperation from NHPC at NHPC, tapowan, Dharchula in Pithoragrh district



Figs. 41 and 42: Training programme for NHPC staff at Tapovan, Dharchula.

The programme helped in generating awareness and inculcating a sense of responsibility among staff members to develop strategies for mainstreaming DRR concerns in new development projects and to develop a disaster management action plan of their department.

The DRR programme identified different sectors where intervention was necessary to orient the related staff on importance of dovetailing DRD concerns. Such programmes helped the authorities not only in enhancing the knowledge but also to develop a cooperative linkage with the district administrations so that future programmes in this direction could also be organized.

5.4.5 First aid training programmes

Under the programme it was planned to organize regular first aid training programmes. The first aid courses in disaster differ from the regular first aid training programmes. The injuries and conditions are expected to occur in large numbers in a severe medical emergency such as major earthquake, massive explosion, or structure collapse. Therefore the first aid courses organized in districts focused on the critical first-actions necessary to save lives and prevent the worsening of injury in the first minutes and hours, the time when the most lives are either saved or lost.

The training module was finalized with the help of Red Cross officials and different programmes were organized across all the three districts. These programmes helped in building capacity especially at community level.



Fig. 43: First aid training programme for women in Chamoli district.

The programme helped in identifying the key departments i.e Redcross and Civil Defence to work in the field of training community as well as administration on first aid issues related to disaster.

5.4.6 Training programmes for Revenue staff

The Revenue department shoulders the responsibility of providing immediate relief to the people affected by natural calamities such as floods, droughts, hailstorms, earthquakes, fire accidents, etc. It also takes initiatives for rehabilitation and restoration work. So it was identified under the project to assess the training requirement of this specific group and accordingly programmes were designed specifically to build the capacity of revenue staff.



Figs, 44 and 45: Training programme for revenue staff in Uttarkashi district.

A one day training programme related to disaster management was organised in all 6 tehsils of the Uttarkashi district in which a total of 170 participants which

included patwaris, tehsil officers and village panchayat officers participated. With the help of DRR Programme the importance of revenue staff officials was identified and it helped in providing a comprehensive knowledge regarding disaster risk reduction to the ground staff and also helped in addressing their issues and concerns in dealing with disasters.

5.4.7 Training on fire safety

Fire safety was included in all training programmes organised at district level. The basic principles of fire safety were shared with the participants in all programmes. However some specific training programme related to fire safety were organized in the district of Uttarkashi. Fire department in each of the district worked closely with the district administrations at all three levels including administration, community and school safety. Through different programmes better coordination was established between the two.

5.5 District Disaster Management action plans

All the three districts of the DRR programme Chamoli, Uttarkashi and Pithoragarh prepared their draft disaster management action plans. These plans are regularly being updated with the help of concerned line departments. The Plans were updated in programme period with help of regular meetings and training programmes organized for stakeholders on process of updating the plans. Now the process of regular updating of the plans was done with the help of state governments HR support provided at district level in the form of District Disaster Management Officers.

All the thirteen districts in the state have emergency control room which works 24x7 in the respective areas. The district control room operates on seven desk system which includes operation, service, infrastructure, health, logistics, and communication and resource desks. The control room functioning is mentioned in the district disaster management action plans and are equipped with facilities like satellite phones, photocopier machines, computer, maps wireless phones fax etc. The departmental action plans were included in the District plans however the block and village level planning is still in initial phase. Efforts were made and meetings were organized with block level officials to carry out work on the block and village level plans with an emphasis on community based disaster risk reduction approach.

5.6 Awareness generation

Awareness generation activities help communities to learn from their experience and to prepare for future disasters. Dissemination of information through rallies, drawing painting competitions, brochures/leaflets and drama is part of the strategy for awareness generation. Awareness generation is a continuous process and a well aware society will only add to our capacity in facing

and responding to natural disasters .A number of awareness generation activities were organised in the three districts under DRR and a brief is provided below.

5.6.1 Disability and DRR

In order to address the needs of persons with disabilities, a programme on non structural safety was organized at Raphael Centre Dehradun. Such activities under DRR programme helped in creating a new platform where issues of disability can be addressed which was not of so much importance in field of disaster risk reduction.



Fig. 46: Addressing Disability issues in DRR through sensitization workshop at Raphael Centre Dehradun.

5.6.2 Drawing Painting competitions

In all the three districts for awareness generation among school children different competitions were organized. Posters and other IEC material related to landslide and other disasters was distributed and displayed on this occasion.



Figs. 47 and 48: Drawing and painting competitions under DRR programme.

Through these competitions thousands of students were sensitized and provided with the basic knowledge of disaster management. The international day for disaster risk reduction was also celebrated annually in the districts with organization of essay/painting/slogan/debate competitions in all districts.

5.6.3 Rallies

Rallies are basically a collective effort of the community to generate awareness regarding any specific factor affecting the community. Rallies played an important part in generating awareness in community regarding disaster risk reduction. The participants in these rallies varied from students and school children to local community dwellers including women.



Figs. 49 and 50: Generating awareness on DRR issues through rallies.

5.6.4 Exhibitions on Disaster Management

Exhibitions are necessary to generate interest among the public in knowing about disaster management. The stalls related to disaster management were displayed in exhibitions as well as local fairs and festivals in the three districts. The information was shared with the public through various posters, pamphlets, newsletters, drawings, chart papers, display frames. Models on landslide as well as on earthquake resistant houses were displayed in the exhibition. Heavy duty equipments, rescue kit, first-aid kit, rescue rope, carabiners, jumars, pully, halmets, rippling rope, search light were placed in exhibition.



Fig. 51: Exhibitions a way of making community aware of Disaster and related issues.

5.6.5 Signboards

The signboards objective is to provide information to the public in a most comprehensive manner and in a way that it will be remembered by the people. Signboards near roads attract the attention of public and therefore can be used as one of the important medium of awareness generation.



Figs. 52 and 53: Signboards along Yamunotri and Gangotri highway.

Keeping this in consideration in the district of Uttarkashi and Pithoragarh the sign boards were displayed on highways (Yamunotri and Gangotri) and government offices respectively.

5.6.6 Sensitization programmes targeting NCC and NSS students.

NCC and NSS form a special group where students enroll themselves in order to inculcate the discipline and sense of responsibility in their behavior. Different programmes were organized in the districts targeting this group. Thousands of students were sensitized in these programmes by imparting not only knowledge about disaster risk reduction but also the basic life saving skills. The training programmes for NCC and NSS students focused on providing them with the practical knowledge which they can employ at time of any emergency situation.



Fig. 54: Orienting NCC cadets, Chamoli district.

Practical demonstration of the first aid techniques and the method of preparation of stretchers explained to the students. The students actively participated in the training programme and gathered knowledge regarding different aspects of disaster management.



Figs. 55 and 56: Orientation and training programme for NSS students, Uttarkashi district.

The described events above are glimpses of the type of awareness generation activities organized in the DRR districts. Awareness generation activities under the project helped in sensitizing the officials as well as community to work in a participatory manner in the field of disaster risk reduction.

Different sectors were identified in order to implement the project and accordingly the needs were first of all identified, assessed and prioritized. The work carried out in the districts in the field of disaster risk reduction under the programme was captured in brief and comprehensive manner. The details of each activity organized can be assessed in the annexure.

CHAPTER VI

Output II: Urban Risk Reduction (Dehradun, Nainital and Haridwar)

CHAPTER VI

6. Urban Risk Reduction

With the increase in population and level of urbanization more and more areas are attaining urban status. The influx of huge population in urban centres leads to haphazard development of cities and an increase in urban risks. There is need to address the issues of urban risk in order to have a proper planned development of urban areas. Under the DRR programme urban risk reduction project was identified as a subcomponent implemented by Ministry of home affairs to affectively address the disaster related issues in the urban area through project intervention strategies at different level. It involved assistance to cities in managing and mitigating the urban disaster risks. The Project and its major accomplishments are described below in brief.

6.1 Strengthening urban institutional mechanism

In the project the city disaster management committees could not be constituted and therefore the work in the respective urban areas was carried out with the help of district administrations and state nodal agency. The DDMA meetings were organized in both Haridwar and Nainital and the same was attended by all major stakeholders of the urban local area. The agenda of the meetings ranged from work plan discussion to the type of activities to be organized with an urban centric approach.



Figs. 57 and 58: DDMA meetings in Haridwar and Nainital city.

All major components of the projects like institutional strengthening, awareness generation programmes, school safety programme, capacity building initiative, hazard risk vulnerability assessment and its tenure and implementation strategy were briefly discussed in the meetings.

Also the meetings both at DDMA level and state level quarterly reviewed the progress of project and accordingly suggestions were made for future work plans.

The DRR Programme with human resource support in the city areas helped the authorities to look beyond districts and to specifically and separately work for the urban areas. This provided administrations in identifying urgent need of working in urban areas in the field of risk reduction.

Meetings and workshops with ward councilors

Meetings with ward councilors were organized in Nainital in project period. The meetings emphasized on importance of urban local bodies in the decision making process. In addition to this workshops were organised for the ward members, officers of urban local bodies and NGOs on preparation of ward disaster management plans in Nainital city .The workshop covered the awareness strategy and importance of addressing the ward level problems in disaster management Planning. The community participation strategy in ward level planning and preparation of city disaster management action plan was also discussed during the workshops.



Fig. 59: Ward councilors meeting, Nainital city.

The Urban risk reduction programme helped the authorities to look in to the disaster concerns of urban areas in a specific manner and it helped in building capacity of the concerned stakeholders towards the same.

6.2 Mainstreaming urban risk reduction in development plans and projects

With regard to mainstreaming urban risk reduction in development planning advocacy workshops were organised in the specific cities. The aim of such workshops was to provide a platform for all

the stakeholders to create or build up a strategy through which the disaster related concerns can be dovetailed in to their specific departmental plans and programmes.

Within Dehradun city two workshops were organized. The first workshop focused on all the line department officials like MDDA, Municipal Corporation, Town and Country Planning, Urban Development Department, Housing Board, Health Department, PWD, and members of Architects and Engineers associations.

The purpose of the workshop was to create a platform for all main stakeholders of the city to discuss and suggest ways of dovetailing DRR in development plans. The participants were briefed on the importance of disaster risk reduction in urban areas and the importance of dovetailing the same at the implementation stage of any plan / project.

Information on the ongoing hazard risk vulnerability assessment of the building stock of Dehradun was also shared in the workshop. The need of amending building byelaws for comprehensive city planning was discussed in detail. The session was followed by intensive and interactive discussion with possible suggestions on ways to work in coordination with each other.



Figs. 60 and 61: Advocacy workshop for all urban line departments of Dehradun city.

Another advocacy workshop on mainstreaming disaster risk reduction in housing sector in Dehradun city was organised on 18th of November 2011 in the conference hall of DMMC. Officials of all the concerning departments attended the workshop. The Institution of Engineers ensured full and active participation of its members in the workshop. The advocacy workshop helped in finding out ways and solutions to reduce risk through incorporation of risk reduction measures in housing sector.



Figs. 62 and 63: Advocacy workshop targeting housing sector organized at DMMC.

An advocacy workshop on mainstreaming urban risk reduction in development programmes was organised in Nainital the major stakeholders were department of Urban Development, Water Supply, Health, JNNURM, Education, Lake Development Authority, Power Corporation and PWD attended the workshop. The discussions in the workshop suggested ways and means through which the DRR components need to be integrated in different plans and projects of Nainital city.

The DRR Programme through these advocacy workshops helped in creating a platform for urban stakeholders to collectively look in to the issues in the field of risk reduction and the suggestions to incorporate the concerns in urban planning. The workshops came out with very good suggestions and recommendations. Through these workshops the officials working in urban field were encouraged to inculcate the urban risk reduction concerns in their development planning process.

6.3 Training and Capacity building

6.3.1 Dealing with school safety in urban areas

In order to achieve school safety in urban areas a better coordination system was developed with the education department. Numbers of programmes were organized in all the three cities for orienting the education sector stakeholders. Hundreds of principals and school teachers were oriented through series of such programmes. They were sensitized on basics of disaster risk reduction and school disaster management action plan. The aim of these programs was to sensitize the school principals on various school safety related issues and highlight the need for preparing school plans. This helped in going further towards the training of school teachers for preparation of school disaster management action plans.



Figs. 64 and 65: Orienting principals on aspects of school safety at DMMC, Dehradun.

6.3.2 Building capacities of teachers

Preparation of school disaster management plan is necessary in order to get prepared for the disasters. The plans can only be formulated with the help of teachers and therefore different teachers training programmes were designed and organized in all the cities. These programs were aimed at capacity building of the school teachers on various issues related to school safety. The participants were also exposed to basics of First Aid with practical demonstration of important life saving techniques. The importance of having school DM plan was discussed at length and the participants were trained in preparing the same. They were also provided simple formats for preparing the school DM plan and finalizing the evacuation route map.



Figs. 66 and 67: Group exercises on risk vulnerability assessment of schools.

The need and importance of organizing mock drill was also explained to the teachers.



Figs. 68 and 69: Training teachers on school safety in Haridwar city.

Under Urban risk reduction project school safety was provided a new dimension with more detailed programmes and practical approach. With the help of education department regular capacity building of teachers was done, which helped in maintaining a regular compliance with the school authorities towards achieving school safety in respective schools.

6.3.3 School level disaster management teams

Since the programmes were already organized for building capacity of teachers towards preparation and importance of school disaster management action plans. With a result the schools submitted their plans to the Stat nodal agency in a specific time limit. The plans were reviewed and modified also. The next step was to train the school disaster management teams formed in the plans by respective schools. These aimed at capacity building of the team members for delivering first aid as well as carrying out search and rescue operations.



Figs. 70 and 71: Training of school level Disaster Management teams in Dehradun city.



Figs. 72 and 73: Search and rescue session in school level training programme in Dehradun.

In Dehradun under these trainings a total of 225 students were trained .The trained school disaster management team members not only will be able to help the school authorities in case of any disaster but also by sharing knowledge in their communities ,they will help in working in the field of disaster risk reduction. Through these programs members of the school level disaster management teams were imparted hands on training on first aid and search and rescue. Around 350 students benefitted from different kind of orientation programmes.



Figs. 74 and 75: Practical demonstration of first aid techniques among school children.

With the help of urban risk reduction project interventions were made at school level in order to promote culture of disaster preparedness. With help of these programmes the schools particularly the students were better trained on dealing with disaster situations collectively in a well organized

manner. It helped in bringing forth the issues which the schools face in dealing with structural and nonstructural elements within schools premises.

6.3.4 Health and urban disasters

Hospitals serve as community's lifeline and play very important role on the aftermath of any disaster. By ensuring that hospitals are functional and safe during and after an emergency, the goal of creating resilient communities can be addressed. Orientation workshops were organized under the project for health related workers also for institutes involved in health sector like nursing school and colleges. Under the programme the health sector was sensitized and oriented to work in coordination with disaster mitigation and management centre in the field of disaster risk reduction.

6.3.5 First aiders as first responders in urban area

Disaster situation demands first aiders especially if a disaster struck in urban area accordingly more volunteers need training specifically related to dealing with disaster as a first aider. Regular programmes were organized in urban areas for different sections of society ranging from teachers to volunteers.



Fig. 76: Training teachers on first aid techniques at DMMC, Dehradun.

With the help of the programmes better linkages were set up with different institutions and the specific resource persons.

6.3.6 Ward level orientation programmes for community

The ward level orientation programmes were able to be organized only in the city of Nainital. The main objective of these was to generate community awareness on the importance and need of community based disaster risk reduction and importance of ward level committees and teams. The

programmes were organized in three wards with active participation of the local community. In these orientation programmes a total of 800 people were sensitized that included 400 women.

6.4 City disaster management actions plans

The draft city disaster management action plan of Dehradun was prepared and modifications were done as per the available data. Separate city plans for the Haridwar and Nainital were not prepared but the risk reduction concerns were incorporated in the district disaster management action plans. More focused work with regard to urban issues could not be done as disaster management committees were not organized in the cities. In Dehradun city ward level plan format was updated and discussed in meetings with Nagar Nigam officials but further work on this could not be done. Ward level planning the work was also initiated in Nainital and ward meetings were organized for the same.

As all the three URR cities have district level control rooms no separate city level control room was therefore set up during programme period. District control room routinely takes care of the disaster related issues of urban areas as well.

6.5 Awareness generation

6.5.1 Drawing Painting Competitions

Drawing and painting competitions were organized in the cities on different disaster related themes so as to create awareness among students regarding this important issue. The students with help of their creativity managed to exhibit their talent and thoughts on the different issues related to disasters taking in to consideration the local context. Such events helped students in better understanding of disasters.



Figs. 77 and 78: Drawing /Painting competitions for generating awareness among school students.

6.5.2 Promotion of safe construction practices in technical institutions

In order to create awareness regarding safe construction practices the technical institutions in Dehradun city were targeted.



Fig. 79: Movie screening on safe construction practices at Dehradun Institute of Technology.

Addressing needs of students of technical institutions specific sensitization programmes were organized in Dehradun for University of Petroleum and Energy Studies (UPES) and for Dehradun Institute of Technology (DIT). The students were sensitized on disaster management related concepts and local hazards together with the elements of safe construction. These programmes helped the students in better understanding of disasters. Also meetings were held with these technical institutions towards exploring ways of inculcating the Disaster concerns in their academic profile.



Figs. 80 and 81: Sensitization programmes for students at UPES and DIT Dehradun.

In Haridwar different rallies were organized in the city for mass awareness. Key government departments, Non Government Organizations, students and teachers from different schools, NCC

cadets, NSS volunteers and public participated in these rallies. Nukkad Nataks were organized for mass awareness on different occasions. A number of competitions that include debate, drawing – painting and quiz were also organised particularly for the students in order to generate their interest on various disaster management related issues.



Fig. 82: Rallies a medium used for creating awareness generation among public, Haridwar city.

Awareness generation programmes carried out under the urban risk reduction project focused on particular vulnerabilities of the city concerned and it helped in initiating dialogue on the same amongst different stake holders. The details of various events can be assessed in the annexure.

7. Achievements

The GoI UNDP DRR Programme in the state of Uttarakhand was implemented for the time period 2009 to 2013. Under the programme different activities were organized and these focused on various sectors in the project districts of Uttarkashi, Chamoli and Pithoragarh. Overall the programme achieved a set of targets but there are still certain sectors where work need to be continued in the field of disaster risk reduction.

7.1 Disaster Risk reduction (Chamoli, Uttarkashi, Pithoragarh)

DRR Programme (2009 to 2013)	Capacity building of SDMA/ DDMA by providing HR support	State level TOTs on DM	Hazard, Risk & Vulnerability Assessment of one district	Advocacy workshop on mainstreaming	Training on Post Disaster Damage and Need Assessment	Awareness generation programmes	Formulation/ updating of District Plans/preparation of block/village plans	Training and Capacity building programmes	School Safety Programmes
Achievement	HR support provided to state govt. till 2011.The DDMOs have been recruited in the districts from 2012 to carry forward work of DRR	One TOT organized under DRR	Detailed HRV carried out in Chamoli as per direction from DDMA. However assessment work was not completed for whole of district	One advocacy workshop organized in Chamoli	One 3 day training programme organized at state level by NIDM in cooperation with DMMC under DRR	Organised in all districts and thousands of people were sensitized	The DDMAP have been drafted in the DRR districts and regularly updated. Also the workshops with different depts. responsible for updating plans have been done	Series of such training programmes were organized in the DRR districts both at community level as well as at administration level.	School safety programs were carried out in all districts. With preparation of SDMAP and training of teachers and students. Few mock drills were also organized.

Implemented by Uttarakhand Disaster Management Authority and Disaster Mitigation and Management Centre
Department of Disaster Management, Government of Uttarakhand

Important milestones were achieved in the field of DRR in the respective districts under the programme in terms of institutional strengthening as well as training and capacity building. The programme helped in strengthening the institutional mechanism at district level with regular meetings of the District Disaster Management Authorities with a focus on development of strategies for different works to be carried out in the field.

A number of geological investigations were also carried out in landslide affected areas of the respective district which provided the concerned agencies with appropriate mitigation options.

The climate change studies initiated under the programme when documented would help in framing out short and long term disaster risk reduction strategies for the area.

There is still need to focus particularly on the community based disaster risk reduction aspect with respect to plan preparation. The block and village level plans must be made and regularly updated even after the programme is over. Continuation of work in the field is necessary and the government is making all efforts to address various disaster related concerns.

7.2 Urban risk Reduction (Haridwar, Nainital, Dehradun)

Urban risk reduction was the subcomponent of the Disaster Risk Reduction Programme. The programme focused on involvement of urban local bodies in the process of risk reduction with emphasis on mainstreaming the urban disaster related concerns in development planning process. One of the key deliverables of the project was capacity building of the community and administration to deal with different kinds of risks associated with the urban areas. A number of activities were organized in Dehradun, Nainital and Haridwar to achieve the key deliverables but the situation is still far from satisfactory. Advocacy workshops were organized and attempts were made to sensitize the communities but better coordination is required to be brought forth between the various agencies responsible for the development of urban areas.

Urban Risk Reduction (Haridwar, Nainital, Dehradun)

URR project (2009 to 2012)	Hazard, Risk & Vulnerability Assessment	Amendment of existing building byelaws/workshops for policy makers on techno legal regime	Establishment of City EOCs	Preparation of city disaster management action plan	Ward level plans	Advocacy workshops for mainstreaming URR	School safety
Achievement	HRVA of Nainital city was completed and a workshop was also organized in the city inviting all major stakeholders. HRVA of Dehradun and Haridwar in progress by DMMC	An expert consultant couldn't be recruited within project period which leaves with limited scope of amendment of building byelaws. No specific workshop was organized with respect to Techno legal regime under URR.	Since all the districts have district control rooms, no separate city control rooms were established in URR.	Dehradun CDMAP draft prepared. Nainital draft DDMAP was updated.	Despite of efforts being made the work in this sector remains negligible. In Nainital ward level orientation programme were organized but no plans are yet being formulated in cities.	Three such workshops were organized .2 in Dehradun and one in Nainital. It helped the concerned urban agencies to come forward with their suggestions.	Work is done in this sector in all the three cities.SDMAPs have were prepared by the schools in Dehradun and teachers training, School DMTs training were organised along with regular awareness generation programmes.

Under the Urban Risk Reduction project excellent work has been done in school safety and hazard risk vulnerability assessment but community level preparedness and planning together with issues related to amendment and enforcement of building byelaws remain to be addressed appropriately.

Way forward and Concluding remarks

8. Way forward and concluding remarks

The efforts to reduce disaster related risks with investment in capacity building measures alone is not going to be effective unless other related issues are appropriately addressed. This section summarizes some of the activities that are required to be undertaken for sustainably attaining the goal of disaster risk reduction.

▪ **State Disaster Management Policy and Plan**

Despite enormous work done in the state in the field of disaster risk reduction there is need for the formulation of disaster management policy at state level. This would help in better facilitation of various disaster management related activities and would enhance cooperation amongst various stakeholders. Formulation of guidelines in accordance with the state disaster management policy would help in achieving goal of disaster resilient community and state.

In addition to this the draft of the state disaster management plan is required to be approved by the SDMA.

▪ **Strengthening HR support at SDMA and making SDMA more functional**

The State Government has already sanctioned man power for DDMA's but HR support for SDMA has not yet been sanctioned. It needs to be understood that the SDMA cannot become functional and living entity unless it is provided with appropriate manpower.

▪ **Hazard risk and vulnerability assessment in development planning**

HRVA related activities are being carried out in the state but at this pace covering the entire state would be a distant dream. It is therefore required that the pace of these activities be accelerated and this important task be completed in a time bound manner.

Efforts are also required to disseminate the results of the HRVA studies amongst different stakeholders, particularly so the masses. This would help in bringing forth voluntary compliance of disaster safe technologies and techniques.

At the same time efforts should be undertaken to ensure that the HRVA studies of the area are consulted and taken note of while undertaking developmental planning. This would help in containing if not reducing the vulnerability. Efforts should at the same time be made to give legal sanctity to this aspect.

There is also emerging need to incorporate socioeconomic vulnerability related aspects in the HRVA.

▪ Improvement of capacity in Post Disaster Damage and Need Assessment

One training programme on PDNA was organised under the project with the support of NIDM. In future more of such training programmes should be organized, particularly at the district level in order to strengthen the capacities of stakeholders working in the field.

There exists scope in improvement of post disaster damage assessment methodologies and practices. A more detailed and comprehensive damage assessment would only help in better assessing the impact of disasters but would also result in better risk management.

▪ Community based disaster risk reduction

The State Government is undertaking search, rescue and first aid programs of 10 days duration at Nayaya Panchayat level on regular basis. Details of the persons trained through these programs are put on the website of DMMC. It is however required that disaster management related sensitization programs be also organized in the villages simultaneously and DM plans be prepared. This information can subsequently be put on website and would be helpful in effective management of situation on the aftermath of any disaster. This would at the same time be helpful in vulnerability assessment and would also provide overview of the resources available at the grassroots level.

▪ Coordination and information sharing

It was observed that despite a well defined strategy and properly chalked out project deliverables the expected results could not be achieved on many aspects especially preparation of ward and village level plans and amendment in building byelaws. Lack of coordination and information sharing mechanism between the departments was identified as being largely responsible for this. The compliance mechanism also needs to be strengthened in order to get desired results. Attempts should be made to ensure that the recommendations of the advocacy workshops are translated in to government orders. Technical committee are also required to be put in place for suggesting ways of mainstreaming different aspects of URR in development projects.

▪ Review and enforcement of building byelaws

There is need to review the building byelaws of the state with respect to DRR. Certain amendments have however been made by the concerned department but more focused approach is required to create a platform for all stakeholders to discuss the various related issues and to formulate a robust mechanism for effective implementation of the building byelaws taking in to consideration the disaster scenario of the state.

▪ **Risk sharing / financing**

On the aftermath of any natural calamity the government extends relief to the disaster affected population in accordance with the norms of the State Disaster Response Fund (SDRF). This amount is often notional and therefore to overcome the discontent of the masses the government is often forced to announce additional relief amount. This on the one hand results in non uniform relief to the victims of different disasters while on the other hand it results in extra burden upon public exchequer that the state government cannot afford.

It is therefore required that viable options of risk transfer be explored and acted upon. To begin with the state government can start with BPL households and once found to be working the scheme can be extended to cover other beneficiaries.

Concluding Remarks

The GoI - UNDP programme supported the Department of Disaster Management, Government of Uttarakhand in various ways. The work in the field has however to be carried out continuously and various disaster management related concerns have to be dovetailed in development planning so as to build a resilient society. Major challenge in the field of disaster management however is to convince the development agencies to integrate disaster risk reduction measures in the development planning process.

Sustainability of disaster risk reduction initiatives is another challenge and for this both capacity building and awareness related initiatives have to be carried out on regular basis. The institutional capacity building must be done in a manner that it ensures sustainability of the initiatives.

Financial status of the DRR Programme

9. Financial status of DRR Programme

In order to carry out the different activities as per key deliverables the financial support under the programme was provided by the National Disaster Management Authority India as well as United Nations Development Programme, India.

The activities carried out under the programme were made possible because of the Grant in Aid received under the programme as per the yearly Annual work plans prepared by the state Nodal agency and approved by the implementing agencies in order to carry out the various activities.

Table3: Financial expenditure DRR Programme as on 31st Dec 2012

S.No.	Head	Amount
1	Total Grant in Aid received under the DRR Programme (Inclusive of bank Interest)	11,970,110.00
2	Expenditure incurred in DRR	9,486,601.00
3	Expenditure incurred in URR	2,448,583.00

Source: Total expenditure statement DRR Programme 31.12.2012,CA Report

In the DRR programme the maximum project fund was utilized at first place for Human Resource and administrative travel cost. With respect to different activity heads in the Disaster Risk Reduction Programme the maximum grant in aid was utilized in training and capacity building followed by DDMA strengthening and Vulnerability Assessment studies. Overall the DRR programme fund helped in strengthening the institutional capacity as well as building the capacity of government officials to a considerable extent.

Similarly in the URR programme with respect to different activity heads the maximum fund was utilized in School safety and strengthening capacity of urban stakeholders. The detail of the investment state made in the said activities is provided in financial audit sheets attached.

ANNEXURE I
Activity sheet DRR

Sl. No	Date	Event	No./ Type of Participants	Achievement/ Accomplishment/Brief description
State level activities				
1	6th to 8th May 2010	Orientation of DM Specialists and Geologists	15 Participants/The DM specialists, geologists recruited ,GSI resource persons and DMMC officials	The new team under DRR project team having one DM specialist and one Geologist in all 3 DRR districts have been oriented so that the project will function in a well organized manner. This programme helped the new recruits to get conversant with the methodology to be adopted for project work and the ways to achieve different project deliverables.
2	28 May 2010, 2010	Constitution and meeting of State steering committee	15 Participants	Approval of work plans in the meeting. The SSC gave its approval to the work plan and budget of the three districts (Pithoragarh, Chamoli and Uttarkashi) along with that of the three urban areas (Dehradun, Hardwar and Nainital).
3	11 Aug 2010	Meeting of State steering committee	15 Participants	The State Steering Committee approved the recommendations of the Regional Consultation Workshop held at Nainital on 8-9th July 2010. The annual work plan and the budget of the three cities (Dehradun, Hardwar and Nainital) selected under URR project were also approved by the SSC. The recommendations provided in this meeting will act as base for project implementation process.
4	11 August 2010	Meeting with NGOs and Interagency groups	16 NGOs participated in the meeting.	The aim of this meeting was to have interaction with the NGOs working in the State on Disaster Management and to share the resources and information for better preparedness response and coordination in the State.
5	9-11th December 2010	TOT of Volunteers on CBDP	31 volunteers / from NGOs and NYKS from six districts viz; Chamoli, Uttarkashi, Pithoragarh, Dehradun, Hardwar and Nainital	The main objective of the programme was to train the volunteers on community based disaster preparedness. The three day event was prepared in a way to impart maximum information and important tools for community level work to the participants.
6	22nd to 24th June 2011	State Level Three Day Training Programme on Post Disaster Need Assessment) at Hotel	32 participants/stakeholders included Different Administrative Officers,	The objective was to apply new methods and modify the existing method of damage and loss assessment and prioritizing investment for disaster recovery

		Aketa, Dehradun.	district level Officers and Nodal Officers.	
7	7 April to 22nd April	People's Perception of the Impact of Climate induced changes in their surroundings (Bhagirathi Valley district Chamoli)	312 people interviewed	(Data Collection)
8	A field visit was done from 15-05-2012 to 22-05-2012	People's Perception of the Impact of Climate induced changes in their surroundings (Niti Valley district Chamoli)	195 people interviewed	(Data Collection)
9	11 June to 11 July 2012	People's Perception of the Impact of Climate induced changes in their surroundings (Pithoragarh):Byas and Johar valley	An approximate of 200 people interviewed	(Data Collection)
Pithoragarh				
10	19-06-10	Simulation exercise in Pithoragarh	42 participants/all concerned line department officials.	The exercise was conducted keeping in mind the communication and response structure and plan in any disaster situation. It also aimed at getting the District administration and paramilitary force together and specifying the responsibilities during any disaster. It's a way forward in checking the existing response measures.
11	2nd July 2010	Advanced training on handling of Heavy Duty Mechanical Equipments	43 participants/Patwaris, Block officers	To train participants in handling the equipments in case of any emergency. This will help in development of skilled force to be used in case of any disaster situation.
12	12th to 16th July 2010	A search and rescue training with Department of Fire, Revenue, PRD and Police at Police Line	30 Participants	The training programme helped in making the participants well versed with the different kind of search and rescue techniques so that the same will be applied in case of emergency.
13	19th to 23rd July 2010		25 Participants	
14	20th August 2010	Block Education officers meeting		To orient them in school safety programs to be organized in different blocks

15	14th August 2010.	Orientation programme for NCC cadets	500	Oriented around 500 NCC Cadets including boys and girls Cadets of different schools at Bharkatiya NCC Camp
16	30th 31 august and 3rd,4th 6th Sept 2010	Orientation Programme for Government as well as Private Colleges Principals of Block Dharchula and Munsyari at Tahsil Pithoragarh Hall, Pithoragarh	160	To make them aware regarding school safety so that preparedness levels in schools must be strengthened.
17	1-5th Sept 2010	Awareness generation through essay debate and painting competition	63 schools participated	Programmes were organized for junior and senior section in cooperation from a local Talent group. It was a good step because this will lead to mass awareness.
18	13th October 2010	Drawing and painting competition for school students at Saraswati Dev Singh Government Inter College, Pithoragarh	20 schools participated	The theme of the painting competition was “Uttarakhand ki Aapdayen aur Bachav ke Upaye/ disasters in Uttarakhand and safety measures. This helps in generating awareness among school children regarding disasters and the need for preparedness.
19	1st November, 2010	A Rally for “No Crackers day” was organized with the Green Valley Public School	500	The main objectives for organizing the rally was that to Save our Environment and to avoid the risk which could happen by the use of these fireworks and avoid accidental injuries specially during festive season.
20	26th November 2010	One day workshop with Government Inter College, Berinag, school teachers and students on school safety	Faculty and 500 school children	The aim was to discuss role and responsibilities of school teachers and student during any kind of Disaster situations
21	27 November 2010	Meeting for Revenue staff, Block level officers, RES Engineers and SSA Coordinators (2 meetings)		To discuss role and responsibilities of Revenue departments, Block Officers, RES Engineers and Coordinators during any kind of Disastrous situations. To share basic rules of Disaster Earthquake Resistant Construction features
22	20th of December 2010.	Orientation Programme for NGO’s, Media representatives, at zilla panchayat hall Pithoragarh	30	To discuss disaster response with respect to different sectors

23	26th to 31st December 2010	Training Programme For Police, Home Guards, Prantiya Rakshak Dal and Revenue patwari and staff of Dharchula and Munsyari Block.	40	The programme was organized at Tehsil Dharchula/Block Hall as well as Galati Mountaineering Rock site in Dharchula. This helped in strengthening the human force responsible to act during emergency.
24	21 -01- 2011	One day Orientation programme at Nagarpalika Hall	41	The programme focuses on earthquake safe construction . The hazard resistant construction technology techniques have been described to the participants which included engineers, Masons contractors etc. It will help in making the related workforce conversant with the earthquake safe construction.
25	22-01-2011	One day orientation programme at Block Bin and Munakot	39	
26	24-01-2011	DDMA Meeting	20	Monthly meeting
27	07-02-2011 to 09-02-2011	Training programme on Disaster Management With NHPC at Tapowan, Dharchula	136	In the training programme all NHPC line department officials/Staff, CISF training participants, participants from Fire department Pithoragarh, Forest Department Officer, and Police Staff participated. All DM related aspects were covered in the training programme including strategies to mainstream DRR in development projects
28	14-02-2011	One day Orientation Programme at Block Bin and Munakot	72/ PRI's, SSA Coordinator, Gram Pradhan, Contractors, Masons, Engineers	Earthquake Safe Construction
29	14 -03-2011	One day Orientation Programme at Tehsil Munsyari	24/ PRI's, SSA Coordinator, Gram Pradhan, Contractors, Masons, Engineers	Earthquake Safe Construction
30	16.03 2011	Orientation Programme for at Block Kanalichhina	114/ Revenue staff and Block Officials, Masons, Contractors, Engineers, Public Representative, Gram Pradhan and SSA Coordinator	Earthquake safe Constructions
31	20-04-2011	DDMA meeting	45	Formation of crisis management group
32	24-04-2011	Meeting with NGOs	15	Role of NGOs in Disaster Management. The programme will help in

33	12-05-2011	Meeting with NGOs	05	making NGOs aware about their role in Disaster Management and encouraging them to work in the field with the community.
34	26-05-2011 to 28-05-2011	Orientation of Self Help Group in Disaster Management at a Tharkot Training Centre in programme organised by Lok Sanchar and Vikash Samiti (LSM)	25	This will help in development of capacity of the local community.
35	02-05-2011	Meeting with school staff of New Beershiba Public School and Mock Exercise for students	37 Staff members And 1300 students in two batches	School Safety and mock exercise (Drop , cover and hold)
36	28-05-2011	Orientation Programme for Principals of Government College's & Block education Officers organised by Block education officer, Bin block	50	School safety
37	08-06-2011	DDMA Meeting	39	It was held regarding Preparation for monsoon
38	13-06-2011	Meeting on School Safety and mock exercise at L.W.S.College, Bhatkot	850	The meeting helped in orienting all school staff on school disaster management action plan. The mock exercises afterwards helped the school authorities to review the plan and make necessary amendments in order to make the response mechanism more active.
39	29-06-2011 to 30-06-2011	Meeting with Self Help Groups at Urg Panchayat Ghar	20	This will help in development of capacity of the local community.
40	29th August 2011	Mock exercise on earthquake at Gangotri Garbyal GGIC	28 teachers and 1000 students	The exercise helped in checking the preparedness levels
41	30 Aug 2011	Orientation programme on school safety at green valley public school and drop cover and hold	25 teachers student 500	The programme helped in generating awareness among school students regarding disasters and especially the process of carrying drop cover and hold exercise.

42	13th Oct 2011	Movie Himalaya kid had shown to NCC students at DEOC pithorgarh	35 students class V	Such programmes helps in generating mass awareness about the different kinds of disaster and the different kind of measures to be adopted in case of a specific disaster. These programs are a continuous process and can't be organized under one programme. This need to be regularly organized as much as possible so that the voice must reach to maximum.
43	15th Oct 2011	Sensitization programme at Wisdom school	-	
44	27th sept to 4th Oct 2012	Exhibition on Disaster Management at saraswati devi singh ground	200 people daily	
45	17th Oct 22 Oct	Exhibition/stall on disaster management	200 people daily	
46	Feb 2012	Six awareness and sensitization programme were conducted for NSS students.	An approximate number of 530 students	
		Sensitisation programmes for 59 distant villages of Dharchula and Munsiyari blocks were organised.	59 distant villages of Dharchula and Munsiyari block.	
47	4th 18th and 25th of May 2012	The members of the Block Development Committees and District Panchayats were sensitised on Disaster Management	Pithoragarh (24 members), Dharchula Panchayat (41 members), and Berinag panchayat (31 members)	
48	26 June 2012	The District Disaster Management Authority meeting		Regular meetings to discuss the preparedness measures for monsoon
Chamoli				
49	17 June 2010	A district level departmental officers meeting	17 Officers	The Departmental plans have been asked from all departments for updating the existing District Plans. The updating of DM plans of different departments will help in a more effective response in the district
50	28 July, 2010	Orientation cum training programme of Zila Panchayat	Zila panchayat members	The members were made aware of the DRR Programme in the state and objectives of the same. The members were also made aware of the

		Members		existing DM act, 2005. These programmes help in taking disaster management to grass root levels.
51	21 August, 2010	A one day meeting of the Block level Education Officers on school safety	Block level education officers	The officers were sensitized on disaster scenario in the State, its effects and the importance of school safety. Such meetings will help in preparation of school safety disaster Management action plan.
52	29th September 2010	A one day workshop in Ghat block of all Principals and Teachers under the supervision of Assistant Block Education Officer	67 teachers	The teachers were sensitized on the issue of disaster, their role and their contribution towards school safety. The school format and process to fill the format was also discussed. A step forward in school safety.
53	13th October 2010	Drawing–painting competition of school children was organised in Girls Inter College.	38 students participated	Awareness generation activity
54	30th Nov 2010.	A one day meeting with the NGO with respect to capacity building in DM	five NGO's participated	The main points focused were that the committees which are formed at village level should be activated time to time. People should be given different trainings on different disasters like at the time of landslide, earthquake etc. Awareness programs should be done time to time
55	2nd , 3rd and 5th Dec 2010	One day orientation program at different tehsils and Thana	-	
56	January 2011	One day Capacity building program in block Narayanbagarh	56/ for PRIs , Teachers and other officials	Role in disasters, DM Act,2005 and Seven Desk system
57	January 2011	One day orientation program for media persons	15/reporters from different media channels	Role of Media in Disaster Management. This will help in placing disaster preparedness at priority level and generating awareness among masses about the necessary measures to be taken.
58	10-02-2011	DDMA Meeting	15	Monthly meeting
59	10-02-2011	Advocacy workshop	15	Incorporation of DM concerns in development plan of the district. Such advocacy workshops will help in finding out strategies to incorporated DM concerns in development plans. The advocacy workshop leads to many recommendations which need proper follow up in future to strengthen the institutional mechanism.

60	24 -02-2011	One day Orientation programme at Gairsain	22	Capacity building of PRIs , Teachers and other officials
61	May 2011	One day Drawing and Painting competition at Adarsh Vidya Mandir Samiti High School, tehsil Karanprayag.	47 students	Awareness generation
62	16-06-2011	One day orientation programme for NCC cadets	250	
63	14-07-2011	DDMA Meeting	32	It involved discussion on updating of district disaster management action plan. The updation will only help the district administration in better utilization of plan during disaster situation.
64	18-07-2011	Meeting of infrastructure desk related officers	12	The meeting was organized to discuss the preparatory measures of the infrastructure desk.
65	September 2011	One day Orientation programme for NGOs	-	Role of NGOs in Disaster Management
66	20th-23rd September	Conducted an orientation/ sensitization training programme in block Joshimath.	55 PRI's, 75 Teachers and 52 government officials	Capacity building of PRIs , Teachers and other officials in Disaster management
67	12-10-2011	Essay writing competition		Awareness generation activity
68	November 2011	One day orientation program in Junior high school	8 Teachers, 100 students	Awareness generation activity
69	November 2011	Orientation on NCC Cadets	400	Awareness generation activity
70	December 2011	One day program on first aid with red cross trainers in eight blocks	240(30/block)/ NGOs, teachers, Ex servicemen	First aid

71	December 2011	Drawing and painting competition in two schools viz. Navodaya Vidyalaya, Pipalkoti and High school, Berangna.	80 students	Awareness generation activity
72	23rd March 2012	A one day awareness programme in the development block Narayan Bagad of Chamoli	A total of 50 participants/ PRI members	The public representatives can act as a source for active community participation. With a well ware and trained representatives we can hope for better prepared community.
73	8th of June 2012	Organisation of one day training programme for police personnel on handling and operating disaster management related equipments	22 police personnel	The training help the concerned participants to update their skills regarding handling of disaster management related equipments
74	10th and 11th of June 2012	One day training programme on disaster management organised at Pokhri block Chamoli	A total of 50 persons attended/ for public representatives	The public representatives can act as a source for active community participation. With a well ware and trained representatives we can hope for better prepared community.
75	21st June 2012	The District Disaster Management Authority meeting		Regular meeting to discuss monsoon related preparedness level
Uttarkashi				
76	24 of June, 2010	District level departmental officers and seven desk nodal officers meeting	32 officers	The meeting was organized to discuss the preparation of DDMAP and preparation for simulation exercise with nodal officers. At the meeting the DDMAP, DRR Programme strategy and DM Act, 2005 were discussed
77	8th – 29th July, 2010	One day Search & Rescue and First-Aid training programme of 05 police stations and 06 equipped Tehsils	206 participants	The groups were also provided with the information on how to maintain the equipments and the record of the same. As per the letter of commissioner, tehsils /police station level disaster rescue teams were formed.

78	1st of August, 2010	DDMA Meeting	12 members of DDMA and others officers are participated in the meeting	Important decisions taken according to which the Tehsildar /BDO will collect the information regarding natural disasters and send it to DEOC on regular basis. Under DRR programme suggestions can be given for work under different development programmes. In the meeting it was decided that survey and assessment of School buildings and mock drills will be carried out. Also in the meeting it was decided that s two day training programme under DIET to be organized under DRR
79	08 September, 2010	Training of advance search & rescue equipment for police personals at police line	30 participants	This training programme helped in making the police personnel more equipped with the disaster related technology. The training will help them to act with a better preparedness level in case of emergency.
80	20 September 2010	DDMA meeting		Regular monthly meeting
81	13 October, 2010	Drawing & painting competition for junior & senior division at Goshwami Ganesh Datt Vidhya Mandir Inter College, Uttarkashi	57 Students from 10 schools	Awareness generation related activity
82	24-11-2010	District level officer's and departmental nodal officers training	49 Participants	The training was held for making the participants aware about the ways to update the existing district disaster Management action plan and how to use the plan in case of emergency.
83	November 2010	Fixed signboards of disaster management about landslide affected areas of Yamunotri and Gangotri NH		Awareness generation activity
84	03-12-2010.	ADO,s Meeting at District Panchyat raj office	10 officers participated	
85	31-12-2010	DDMA/district level Dept. Nodal officer's meeting	53 officers participated	The different works under disaster management carried out in the district were reviewed in the meeting and future possible measures to take as far as preparedness and response are concerned were discussed.
86	06 to 08 of December	Two Days training of Police/Homegaurd/PRD and	56 personals participated	Helps in having a better trained force to act during disasters.

		then a short Mock Drill at NH 108		
87	28-12-2010 to 05-01-2011	Tehsil-wise Training Programme of patwaries/VDO,s & other revenue personnels	170 officers participated	Such programmes will help in active participation from key institutes in working towards disaster management.
88	06-01-2011	Workshop for NGOs	14 NGOs	The workshop was organized in order to have a better coordination between government and NGOs working in the field of disaster.
89	12-01-2011	Workshop for media	26	The role and responsibilities of Media were discussed in the workshop. Such workshops help in placing disaster management as a focus area
90	04-02-2011	Orientation programme for NCC Cadets	135	Awareness generation activity
91	18-03-2011	Orientation programme for Capacity building of PRIs , Teachers and other officials	47	Awareness generation activity
92	18-03-2011	Organized Training of Collectorate officials about fire safety with the help of fire department	34 officials	The training helped the participants to equip with the knowledge fire fighting techniques.
93	26-04-2011	DDMA Meeting	40	A review meeting under the chairperson of DDMA (District Magistrate) of district level officers about disaster management along with Yatra preparedness was held.
94	26-04-2011	One day Orientation programme for Van panchayat members	225	Disaster management
95	23-05-2011	Training ,mock drill and Essay Writing competition for NSS Students at GIC Motali	102	School level mock drill organized.
96	29-06-2011	DDMA Meeting	40	Monthly meeting
97	15-06-2011	One day Orientation programme of Van panchayat institution	53	Awareness generation with respect to disaster management.

98	Dec and Jan 2011	Awareness generation programmes in 9 schools of the district	2175 students	Awareness generation activity
99	9th, 21st, 27th of April 2012	Three DDMA meetings regarding Char Dham Yatra	DDMA members and stakeholders	The meetings were held in presence of all appointed nodal officers of different departments on inspecting the preparedness levels and arrangements made by concerned agencies regarding char Dham yatra preparedness and the level of preparedness regarding the monsoon season.
100	20th June 2012	A meeting of District administration regarding Char Dham Yatra		
101	24th June 2012.	A meeting was held with different stakeholders on disaster preparedness issues regarding the monsoon season		
102	7th July 2012	A meeting of District administration was held on regarding preparedness level in monsoon with all concerned stakeholders.		
103	31st July 2012	Meeting of District administration		

ANNEXURE II
Activity sheet URR

Sl. No	Date	Event	No./ Type of Participants	Achievement/ Accomplishment/brief description
State level activities				
1	July 8 th -9 th 2010	Regional Consultation Workshop for Urban Risk Reduction :Nainital	46 participants /academicians from key resource institutions, officials from Municipal Corporations, Development Authorities, District Administration, Department of Urban Development, Housing, JNNURM Project and Town Planning.	The main objectives of this two days consultation workshop was to discuss roles and responsibilities of various stakeholders under Urban Risk Reduction Project, Mainstreaming disaster risk reduction elements in the ongoing urban development programmes / schemes and to address the issues and challenges in urban areas and the implementation strategy for this programme. Key recommendations were given which will form base for project activities.
2	13 th July 2010	Workshop on Risk-Vulnerability Analysis of Mussoorie City	Honorable Minister of State for Disaster Management Mr. Khajan Das, Hon'ble M.L.A of Mussoorie Mr. G. S. Gunsola , Hon'ble Chairman Nagar Palika Mr. O. P. Uniyal, All members Nagar Palika Parishad, Officers from District Administration and other departments, NGO's and the community	The main objective of this workshop was to discuss the results of the present study with the Policy makers, Public Representatives, District Administration, Community and other organizations and to develop a future strategy for the mitigation of the earthquake threat.
3	26 th October 2010	Workshop on Risk Vulnerability Analysis of	Hon'ble Minister for Industry, Transport, Protocol and Rural Engineering Services Mr. Banshi Dhar Bhagat, Hon'ble M.L.A of Nainital Mr. Kharak	A detailed risk and vulnerability analysis of Nainital city was carried out. A total of 3,000 buildings spread over 13 residential Wards of Nainital were surveyed under the present study. The main objective of this workshop was to discuss the results of the present study with the Policy makers, Public Representatives, District Administration,

		Nainital city	Singh Bora, Hon'ble Chairman Nagar Palika Mr. Mukesh Joshi, District Magistrate Nainital Mr. Shailesh Bagoli and all members of Nagar Palika Parishad, Officers from District Administration and other departments, representatives of Universities, NGO's and the community	Community and other organizations and to develop a future strategy for the mitigation of the earthquake threat. The workshop is a step further in achieving goal of disaster resilient cities. A comprehensive study of this level will ultimately help policy planners in formulating new development policies and guidelines taking in to consideration the character of the particular area.
4	20 and 21 st of May 2011	Two day training workshop on earthquake safe construction practices for Engineers.	31 engineers from different line departments of the state.	The purpose of the training programme was to impart knowledge and skill about earthquake safe construction practice to engineers. The aim of the workshop was to provide knowledge to engineers on Seismic Hazard Risk Estimation, Structural and Non Structural effects of earthquake, Earthquake Resistant Design Concept, Earthquake Safe Construction of new buildings, Seismic Evaluation and Retrofitting Technologies, Code Provisions and Issues and also the Techno Legal regime.
Dehradun				
5	31 st August and 1 st September, 2010	Orientation programme for Principals of Intercolleges	50 participants/Principals of Inter college (12th school)	The purpose of the orientation programme was to sensitise the school principals on the need and importance of school safety with respect to disasters and to follow the training of teachers as well as students and school plan preparation schedule in all the selected schools
6	20-23 September, 2010	Orientation programme for primary school principals	59 Participants/Principals	To make the principals aware about the school safety and preparation of school DM Plan.
7	29,30 Sept, 2010 and 1,4,5 Oct 2010	Teachers training on preparation of school disaster Management Plan	92 Participants/teachers	Teachers were trained on preparation of an accurate school plan, this will help in better preparedness against disaster at school level.92 teachers trained from 22 Intercolleges. All the 22 Intercolleges (12 th) Prepared their school disaster management action plan and submitted to the department with names of all team members in it.

8	16th September, 2010	Orientation/Sensitisation Programme Organised For City Level NGOS	3 Participants/NGOs	The main aim is to train the Civil Society Organisations /NGOs in Community Based Disaster Management Planning with identification of volunteers. But the participation level was very low with respect to what was expected.
9	13-10-2010	Drawing Painting competition on International day for Disaster reduction	29 Students participated along with their teachers	To aware the students on disaster with help of generating interest through competitions.
10	19-10-2010	Advocacy Workshop On Mainstreaming Urban Risk Reduction in Development Planning.	25 Participants/ all line departments officials including members from MDDA, Municipal Corporation, Town and country Planning, department of Urban Development, Housing board, PWD, Architects and Engineers associations, Health department and major stakeholders within the city	With regard to mainstreaming urban risk reduction in development planning an advocacy workshop with in Dehradun city was organized. The suggestion given by different departments were noted down in the discussion session and further the work on mainstreaming DRR in different plans and projects will be strengthened.
11	20 and 21st of January 2011	One Day Training Programme For Teachers (School DMT Members) On First Aid, Search And Rescue And Fire Safety	37 teachers from 19 schools attended the programme	The aim of the training programme was to train the school teachers who are part of school disaster management team. The aim of organizing the training programme was to equip these disaster management team members with knowledge of life saving skills. The training programme emphasize on imparting practical skills to the participants. The 37 Teachers who are part of their respective school disaster management teams have been trained.
12	15th March 2011	Screening of movie (TIFAC) on safe construction practices at Dehradun Institute of Technology	120 students of architecture	These programmes were targeted to sensitize a particular section within the education sector. Overall it helps in sensitizing the

13	17th March 2011	Screening of movie (TIFAC) on safe construction practices at Uttaranchal institute of Management on	100 students along with their Faculty members.	students especially from the technical fields like architecture to grasp the basic knowledge and to work in their respective sector with focus on hazard resistant construction technology.
14	25 March 2011	Sensitization Programme for students of UPES at seminar hall UPES	50 students attended the programme	
15	15-04-11	Sensitization Programme on Earthquake Safe Construction Practices in Dehradun Institute of Technology	100 students	The programme helps in sensitizing the future career professionals in the field of seismic resistant construction technology
16	6-19th May 2011	School Level DMT Trainings in the city of Dehradun	250 students approx	The two day training programme includes half day session of first aid on first day and half day session of Search and Rescue on second day. These DMTs have been trained by resource persons on life saving skills.
	18-19th May 2011	workshop on “Disaster Preparedness and Emergency Response” at State School Of Nursing	100participants/students and faculty	
17	3rd to 12th August 2011	Orientation/Sensitization Programme for School Level Disaster Management Teams on First Aid and Search & Rescue	350 students	To impart practical skills to the teams so that the same can be used in case of any emergency with in school premises. The DMTs formed are now aware of the basic life saving skills.
18	26 th September 2011	Orientation /Sensitization programme for school level disaster management team on first aid and search and rescue at KV 1 Salawala ,Hathibadkala	54 students	The sensitization programme covered the basics of first aid and search and rescue of about 3 hour session

19	18-11-2011	Advocacy workshop on mainstreaming disaster risk reduction in housing sector	13 participant/Officials from PWD, and the Institution of Engineers India.	This advocacy workshop is a step forward in finding out ways and solutions to reduce risk through incorporation of risk reduction measures in housing sector. However a lot more need to be done both at structural and non structural level and public and private levels. There were a total of 13 participants from different agencies present in the workshop however a lot more participation in such workshops from concerned agencies will be needed.
20	17/01/12	Meeting with Mehant IndiresH Hospital staff and DMMC members	6 participant/ DMMC members and hospital assistant superintendent and civil engineer	In the meeting it was emphasised upon that hospital safety and initiation of non structural seismic vulnerability assessment study.
21	22 and 24 Feb 2012	Sensitization and orientation programme for NSS students	220 students from DBS college and Blue mountain group of colleges	The sensitization programme involved making the participants aware about the disaster terminology, the state and city scenario in terms of natural hazards and the need to work in the direction. The basic dos and don'ts were explained to the students and emphasis was laid on the importance of sharing the information
22	Jan and Feb 2012	Field visits :Visual Inspection survey of Chakrata road	-	Report prepared on Implications of Chakrata road widening efforts and shared with all the concerned stakeholders fo the Dehradun city in March 2012.
23	March and April 2012	Survey/field visits :Non structural seismic vulnerability assessment of Mehant IndiresH hospital	-	The Non structural seismic vulnerability assessment reports for Mehant IndiresH hospital was prepared and circulated to the concerned hospital The report contains the findings of the survey being done in the selected hospital/health centre premises in the month of April 2012.The report will help the concerned authorities to take appropriate measures in the field of hospital preparedness and planning. It suggested simple mitigation measures which can be followed and the non-structural seismic vulnerability can be reduced. The report is available on following links http://dmmc.uk.gov.in/files/IndiresH_Hospital_Final_Report.pdf .
24	1 st ,4 th ,6 th and 7 th of June 2012	Survey/Field visits: Non structural seismic vulnerability assessment of CHC Doiwala ,Raipur,	-	Report prepared the Non structural seismic vulnerability assessment reports of 5 community health centres of Dehradun district were prepared and circulated to the concerned departments. The report is available on following link http://dmmc.uk.gov.in/files/CHC

		Sahaspur, Vikasnagar and Mussoorie respectively.		Final_Report.pdf .
25	6 th to 29 th of August 2012.	Survey/Field visits: Non structural seismic vulnerability assessment of Government Girls Inter Colleges Rajpur Road ,Lakhibagh, Ajabpur Kallan, Kargi and Government Inter colleges Patel Nagar ,Miyawala ,Nalapani,Mehuwala	-	Draft report in preparation and the final version will be shared by the concerned department.
26	28th Sept 2012	Sensitization and orientation programme: Unison Public school Dehradun	200 students of the school	The school students were sensitized on the disasters and their impact on schools. The aim of the sensitization programme was to make them aware about the issue and encourage them for the preparation of school disaster management action plan.
Haridwar				
27	13/10/2010	Awareness generation	Key Govt Dept., Non Govt Organizations, Students and teachers from different schools, NCC, Scout and people	On the eve of International Day for Disaster Reduction an awareness rally on disaster preparedness has been organized. Nukkad Natak has been organized on 13th October, 2010. In school students various competitions like debate, question-answer session on disaster risk reduction has been organized on 13th Oct 2010
28	20/10/2010	DDMA meeting	30 participants	In order to introduce the urban risk reduction project and its components to the DDMA members and to all major stake holders of the city, the DDMA meeting was held in Haridwar Mela control room under the chairmanship of District Magistrate. The suggestions given by DM will be incorporated in future project activities.
29	15th and 16th Nov 2010	2 Teacher training Programme: At Balla Inter College and Dr. Hariram Inter college	40 teachers from 11 schools participated	The teachers have been trained on preparation of school disaster Management action plan .

	Nainital			
30	26 Nov 2010	DDMA meeting	All stakeholders	All major components of the projects like Institutional strengthening, awareness generation programme, school safety programme, capacity building initiative, Hazard risk vulnerability analysis etc and its tenure and implementation strategy were briefly discussed in the meeting. The strategy to be adopted for implementation of URR was finalized in the meeting.
31	27 Nov 2010	Meeting with ward councilors	All ward councilors	This meeting was focused on introduction of the Urban Risk Reduction Project. It was decided in the meeting that all decisions related to activities of the project “Urban Risk Reduction” will be taken in consultation with Nagar Palika Parishad- Nainital. The disaster management committees will be formed at ward level, after this ward level disaster management action plan will be developed
32	13/4/11	Meeting of DDMA	all ward members of Urban Local Body, Members of Civil Societies, media persons and NGOs were participated in addition to the DDMA members	All important points were discussed regarding the project deliverable and chalking out of sector specific strategies
33	21/4/11	One day workshop for ward councilors	Ward members, officers of ULB and NGOs	The workshop covered the awareness strategy and preference of local/ward problems in DM Planning.
34	July 2011	First aid training	160 Volunteers	The volunteers are trained to ensure the quick and effective response during emergency
35	5/8/11	Workshop on mainstreaming DRR in development programmes	11 officials, urban development, UJS, Health, JNNURM, Education department, Lake development authority, Power corporation, PWD, Water supply dept.	Different suggestions given by the different department representatives were clubbed together and accordingly work will be progressed in the direction.

36	30/8/11	Workshop on preparation of school disaster management action plan	33 participants from Health dept, Power, UUSDIP, Media ,Fire dept, and principals and teachers	The importance of school safety and school disaster management action plan was shared with the participants .all aspects were covered which need to be taken in to consideration during school safety.
37	August 2011 and 14/9/11	Orientation programme for sanitary workers	100 Participants were sensitized on disaster management in two batches in month of Aug and Sept 2011.	The participants were made aware of the overall disaster scenario of the state and specific to Nainital cities and role and responsibilities as a sanitary worker .It has also been asked that participant must share all important information provided through this programme in their respective communities.
38	26 /9/2011	Orientation cum sensitization workshop for self help group	At HariNagar ward	Main objective was to orient the self help group on community based disaster management
39	3rd and 9th Oct 2011	Ward level Awareness programmes for community	Ramlila maidan, Narayan nagar	The main objective was to make the community aware of the importance of community based disaster risk reduction and importance of ward level committees and teams.800 People and 400 women among them sensitized.
40	10/9/11		Primary school Hari Nagar	
41	10/9/11		Snow view ward and Sher ka Danda ward	

