

Impact Assessment of M8.7 Shillong 1897 Earthquake Scenario: NE Multi State Preparedness Campaign Project



REPORT



Indian Institute of Public Administration

New Delhi

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REPORT

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Impact Assessment of M 8.7
Shillong 1897 Earthquake Scenario:
NE Multi State Preparedness
Campaign Project



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ACRONYMS

Abbreviation	Full Form
AAR	After Action Report
AHA	ASEAN Co-coordinating Centre for Humanitarian Assistance on disaster management
ASDMA	Assam State Disaster Management Authority
CAG	Comptroller and auditor general
CDP	Capacity Development Program
CMO	Chief Medical Officer
CRPF	Central Reserve Police Force
CRS	Central Recording Station
CSIR	Council of Scientific and Industrial Research
DAVP	Directorate of Advertising and Visual publicity
DDMA	District Disaster Management Authority
DEoC	District Emergency Operation Centers
DEOC	District Emergency Operation system
DM	Disaster Management
DM&R	Disaster Management and Research
DSS	Disaster Support Services
DTS	Direct Trainer Skill (DTS)
ECS	Electronic Clearing System
EoCs	Emergency Operation Centre (EoCs)
ESF	Emergency Support Functions
FYP	Financial Year Plan
HPC	High Performance Computing
HQ	Head quarter
IIPA	Indian Institute of Public Administration
IRS	Incident Response System
IRT	Incident Response Team
ITBP	Indo-Tibetan Border Police Force
MMEX	Mega Mock Exercise
MSDA	Meghalaya State Disaster Authority
MSK Scale	Medvedev–Sponheuer–Karnik scale
NBC	National Building Code
NDMA	National Disaster management Authority
NDRF	National Disaster Response Force
NE	North East
NEDFI	North Eastern Development Finance Corporation
NEIST	North East Institute of Science and Technology
NEWSN	North Eats Wide Seismic Network
NGO	Non-Government Organizations
NIDM	National Institute of Disaster Management
NIPCCD	National Institute of Public Cooperation and Child Development,
NIRD	National Institute of Rural Development
PMC	Project Monitoring Committee
PMU	Project Management Unit
RVS	Rapid Visual Screening
RCC	Reinforced Cement Concrete
SAARC	South Asian Association for Regional Association
SAR	Search and Rescue

SCOs	State Coordinating Officer
SDMA	State Disaster Management Authority
SDRF	State Disaster Response Force
SEOC	State Emergency Operation Centers
SoPs	Standard Operating Procedures
SIPARD	State Institute of Public Administration and Rural Development
SWOT	Strength Weakness Opportunities ad Threats
TSDMA	Tripura State Disaster Management Authority
TTX	Table Top Exercise
UC	Utilization Certificate

EXECUTIVE SUMMARY

National Disaster Management Authority (NDMA), Ministry of Home Affairs, Government of India has entrusted , Indian Institute of Public Administration (IIPA) to evaluate the project on Evaluation of “**M 8.7 Shillong 1897 Earthquake Scenario: NE Multi State Preparedness Campaign Project**” conducted by CSIR-NEIST, Jorhat in collaboration with NDMA. The evaluation of the project has been carried out for three main activities *viz.* generating awareness, through rapid visual survey (RVS) trainings, mass casualty management in schools and hospitals and capacity building of various stakeholders including State and district Level Nodal Officers from State Governments, Public Sector Organizations and all related line departments of all the eight states. Lastly, the assessment of the multi-state earthquake disaster preparedness and to evolve the coordinated response of SDMAs and NDMA.

The main objective of this comprehensive evaluation was to revisit the experiences for bringing about improvement in designing and implementing earthquake scenario project activities and conduct similar mega mock exercise in other seismically active regions of the country.

To meet the evaluation objectives, the primary and secondary data collection techniques were adopted. The primary data collection comprised of interaction with stakeholders, *on-site* data collection from CSIR-NEIST, few SDMA’s *viz.* Assam, Sikkim, Tripura, Manipur and NDMA through visits, series of interviews with stakeholders to assess their level of understanding. Google forms were sent to the stakeholders to receive their feedback. Consultative meetings were held at Assam Disaster Management Authority (ASDMA) and Sikkim State Disaster Management Authority (SSDMA), Tripura and Manipur. Few brainstorming sessions were also held with Earthquake experts. Discussions and deliberations were also held with the concerned officers of NDMA. Secondary data includes detailed project report, supporting annexures submitted by CSIR-NEIST to NDMA, District and state Disaster Management Plan documents, financial transaction documents of eight project study states. The evaluation criteria were developed based on both primary and secondary data sources. Analysis of responses acted as enablers to understand the impact of earthquake and its preparedness. This analysis also helped to identify gaps in the formulation of the strategy for disaster preparedness.

Findings

Based on both the primary and secondary data certain recommendations and suggestions are made. The findings of the project are summarized below:

Unique Initiative: The project was very unique initiative undertaken in the country at a multi-state level. It generated mass awareness in all the concerned states and most of the states are now reviewing their preparedness and enhancing their disaster response capacity.

Well Timed: The project is very timely catering to a seismically dynamic North-East Region with the ever increasing population and the haphazard growth and development.

Well- Synced participation of Nodal agencies and line departments: The success of the project was largely due to active participation of the SDMA, DDMA, various line departments, schools, civil defence organizations, hospitals, media houses and various other stakeholders.

Need to re-visit DMPs: The states and districts need to revisit their State and District level Disaster Management plans in the light of new development. Due care should be taken to incorporate IRS.

Launch of functional EoCs: EoCs both at state and district levels must be set up, to have a better response system.

Establishment of “stand-alone disaster network”: A stand-alone disaster network should be launched which shall be the foundation and lifeline in disaster situations.

Provisions for State Response Plan. In the follow up, the project states may be requested to identify lessons learned and prepare a separate “*State Response Plan*”.

Value addition of the Study: The capacity building should have been two –pronged, one, capacitate NEIST to disseminate scientific research to functional aspects in the state and the second prong should have been SDMA/NDMA to use scientific knowledge in their response mechanism.

Emphasis on Micro- Zonation: Micro-zonation of potential area of the state *viz.* the state capitals, economic zones etc. should be taken up as this would provide the basis for site-specific risk analysis, which can assist in the mitigation of damages caused by earthquake and it would assist in its preparedness.

Strengths of Mega Mock Exercises: Mega Mock Exercises were mostly appreciated by most of the states. It was a great opportunity for the states to understand response status, identify gaps and improve coordination.

Efficiency of CDP trainings

CDP trainings were very efficient in enhancing their knowledge about Emergency Response Plan (ERP) and Standard Operation Procedures (SoPs). It was also observed that gaps do exist in

manpower and equipment procurement.

Role of Print media

Print Media helped in generating awareness amongst the public. On the contrary TV and Radio were not able to pronounce relative results, the shortcoming can be further analysed.

Enforcement of strict implementation of Building Code and RVS training: National Building Code (NBC) should be enforced which would help in regulation. Adequate number of young engineers' from each district must be trained under RVS program conducted by NDMA.

Relevance of RVS training: 47% of the respondents found the RVS training extremely relevant for the overall development in the present scenario as well as in the future.

Impact of School Sensitization Workshop: 59% of the respondents felt that the school sensitization workshop has provided information and knowledge to a great extent. Whereas 53% acknowledged the inculcation of habit of earthquake safety through school sensitization programs.

Hospital Management Exercises: The evacuation plans must be more specific laying stress upon the identification of area which would support the people after mass evacuation.

Well-structured Hospital Contingency Plan: The hospital contingency and medical plan should be tested and validated by conducting mock exercises regularly.

Dedicated disaster communication network: A dedicated disaster communication network should be in place which would lead to a faster disaster related communication without hampering police communication network. Almost all states emphasised the need to strengthen their communication system.

Need of Special DM module for Police and Medical Personnel: There is a need for a special module on DM for police and medical personnel. Well-equipped SDRFs must be raised in the North-East States with immediate effect

Shortage of DM Equipment: The line department with special reference to fire department has acute shortage of fire-fighting equipment. It is also recommended that SAR team comprising of the civil defence and volunteers should be formulated capacitating the team members to handle the DM equipment

Few changes in logistics: Few changes in logistics can work wonders for e.g.; control room and Incident Response Team should be placed in well-equipped control room. IRT should be alerted through dedicated communication system rather than the cellular phones.

Regularization of release of instalments' of grant released: Due to the re-appropriation of funds under ODMP, study team on interaction found that there was some delay in the release of grants.

Graduated Incremental Benefits: It is observed that incremental benefits graduated in Mega Mock Drill from 2014 to 2015 IRS model used for the first time. All props used for the various activities were stacked in an organized manner with a colour coding scheme for quick response.

Recommendations and Way Forward

The activities carried out in the course of project duration of 22 months are evolved on *real time* basis and most of them were very significant such as Capacity Development Programs, Mass Media Campaigns, Rapid Visual Surveys, School Children Sensitization, Table Top Exercise and Mega Mock Exercise. By and large the project was very successful as it looped in all major stakeholders, nevertheless there are a few gaps which should be plugged-in future ventures.

The IIPA team in its interaction with the project investigation team at CSIR-NEIST and NDMA found that there were a few gaps mentioned below:

Grooming states as potential ambassadors: It is beyond doubt that NDMA has conducted the Mega Mock Exercises successfully. It is to be further emphasized that there should be involvement of states in conducting the Mega Mock Exercises. This would facilitate in grooming the states making them more informed on the management of financial and administrative aspects. Thus paving way for the states to pose as potential ambassadors.

Sharing and disseminating scientific knowledge generated by CSIR-NEIST: It is found that the host institute being a premier expert in earthquake scenario generation, should strengthen the SDMAs by sharing and disseminating its scientific findings. This sharing would eventually help in making states better equipped. Similarly flyers, primers and pamphlets should be produced by CSIR-NEIST which would strengthen the SDMAs.

Institutional understanding between NDMA and CSIR- NEIST: The release of funds was a constraint .The closing of Police modernization scheme led to unattended residual liabilities under the ODMP. As a result the timely release of funds were hampered.

Fund utilization by states: On discussion it was found that the funds earmarked for various pre-preparatory activities of the mega mock exercise escalated in Tripura with reference to Dhalai District. However the exceeded amount was settled by the state government. The IIPA's study team on discussion with both the parities (CSIR-NEIST and TSDMA) feels that the delay in submission of utilisation certificate led to some issues of settling the accounts. It was observed by IIPA's study team on discussion with the project investigator that states of Meghalaya, Assam, Sikkim were cooperative.

Handholding and Sustainability efforts: The project has generated a lot of mass awareness and sensitization. Several new programs such as “*Gyan Jyoti*” program an initiative of Assam

Government, and “Science Motivation Programme”, a CSIR initiative have been started as an inspiration from this mega project. It was observed that the different line departments work in a well-coordinated manner. The star examples are Sikkim and Tripura state to quote for its routine and well-coordinated mock drills. Recently a mock drill was conducted in Tripura on 16 June, covering all eight districts.

Regular re-visits of Disaster management Plans: It was observed that there was an urgent need for trained police personnel in Disaster Management. Disaster Management Plans are obsolete and there is need to revisit them and remove the redundancy.

Inventorization of Resources The inventory of resources was also a major issue as it was not incomplete in most cases. Resource/inventories mapping. IRS guidelines should also be a part and parcel of the plans.

Provisioning for Procurement of updated DM Equipment: There is a lack of Disaster Management equipment with different line departments.

Trained Manpower: There should be proper training of the manpower to operate the disaster management equipment.

Ease of availability of Building Code: The building codes must be available in public domain. ULBs should be looped while generating Census report which should also incorporate building roof walls, number of storey as this will equip in better understanding of the vulnerability.

Need for RVS of strategic buildings: The stakeholders opinioned that. RVS of all critical life line buildings followed by other government and private buildings should be taken up as an urgent step.

Wider outreach of Scientific Findings: State governments and related agencies must make the relevant data accessible to the teams engaged in developing such hypothetical scenarios. The project would be extremely beneficial in generating awareness amongst the stakeholders about an earthquake of high magnitude in all the eight NE states. The loss to life and property can be minimized by incorporating the knowledge developed in this project in the relevant disaster management prepared plans of the states. All major stakeholder groups, leaders and policy makers, engineers and architects, disaster management professionals, and people at large will benefit from the knowledge developed during the project.

The outputs from the project will be useful for NDMA, NIDM, several Committees working on earthquake mitigation, architects and engineers, insurance agencies, people involved in land use planning, and in various aspects of public and financial policies dealing with multi state earthquake disaster preparedness and emergency planning and management.

PROJECT BACKGROUND AND CONTEXT

1. Background

The NE India encompassed by the ancient plate margin is seismically a very active zone. The 1897 Earth Quake of Shillong of 8.7 Richter Scale is considered to be most massive which devastated the entire plateau and affected the NE region running about 650,000 square km masonry structures being present in the region. A revisit of the Shillong earthquake in the present day context may present a very damaging scenario because of the increasing population and rapid changes in building typology in the region. A hypothetical earthquake scenario for the 1897 Shillong earthquake would help to see the capacity of the state to handle such massive earthquakes. A well-crafted earthquake scenario provides a powerful tool to draft the mitigation policies and set priorities that will systematically reduce the impact of the earthquakes.

With this as the backdrop NDMA entrusted CSIR – NEIST, the development of science based earthquake scenario for M 8.7 Shillong Earthquake and coordination of project activities. The main responsibility of CSIR - NEIST Jorhat was creation of a scientific scenario for a repeat of M 8.7 Earthquake and to regulate fund to State Disaster Management Authorities (SDMAs) for the conduct of awareness generation and Capacity Development programs (IRS/TTx/MMEEx) which were all performed directly by NDMA without involving/consulting CSIR –NEIST (Annexure IV). The project starting from November, 2015 was of one and a half year duration.

The organization activities- meetings/workshops (preparatory) for implementing public awareness (including Media Plan) throughout North East Region were organized directly by NDMA with assistance from ASDMA Guwahati. Seismic Hazard–Risk Evaluation is currently under the priority research agenda of CSIR- NEIST. The Institute is equipped with basic infrastructure and trained manpower for monitoring the seismicity of NE India on a real-time basis and actively engaged in seismic micro zonation and other risk reduction programs for the region. Over the years, NEIST has developed strong collaborative linkages with various State departments and Academic Institutions to intensify hazard risk reduction programs.

NEIST in partnership with NEC and State Disaster Management Authorities (SDMA) following the guidelines of NDMA formulated an action plan for strengthening the pre- disaster

earthquake preparedness and mitigation programs. The NE consortium for Natural Hazard–Risk Reduction headed by NEC Shillong has decided to take up such programs more vigorously during for the 12th FYP. The expert group has identified Action Plan with the following major points:

- Phase wise expansion of the NEWSN (North East Wide Area Seismic Network), creation of seismic subnets & intensive monitoring with the involvement of State Agencies. Update information on active source zones/tectonic lineaments.
- Site Specific Seismic Early Warning & Hazard communication
- Identification of precursory phenomena & involvement of School/College students & teachers to support scientific community
- Adoption of Seismic Micro zoning procedures for NE State capitals & other populated urban areas. Creation of scenario earthquakes for Hazard-risk vulnerability assessment
- Involvement of locally available trained manpower to intensify the hazard reduction and public awareness programs.

Keeping the above into consideration CSIR-NEIST in association with NDMA implemented the scenario exercise for a repeat of the M.8.7 Shillong Earthquake to assess the anticipated impact on the North Eastern States.

1.1 Need of the Project

Being situated in the seismically active zone the North Eastern region is vulnerable to high intensity earthquakes which can lead to massive destruction of the social, economic as well as the ecological condition of the State. The rapid increase of population and urbanization has changed the building typology as the traditional houses and buildings have been replaced by non-engineered concrete structures to accommodate the population. The change in the building typology taken with the high seismic vulnerability of the region presents a very damaging scenario in the event of an earthquake of high intensity. In an effort to provide an in-depth knowledge of the likely financial and human lives losses, so as to validate the need to develop mitigation strategies to reduce the impact the science of earthquake scenario has been developed in the recent past. A hypothetical earthquake scenario for the 1897 Shillong earthquake was developed to see the capacity of the state to handle such massive earthquakes. A well-crafted earthquake scenario provides a powerful tool to draft the mitigation policies and set priorities that will systematically reduce the impact of the earthquakes. Keeping the above into

consideration NDMA entrusted CSIR-NEIST to implement the scenario simulation exercise for a sequel of the M.8.7 Shillong Earthquake to assess the anticipated impact on the North Eastern states.

1.2 Objectives of the Project

The objectives of the Project M 8.7 Shillong 1897 Earthquake Scenario: NE Multi –State Preparedness Campaign were:

- 1) Understand the direct and indirect consequences of a big Earthquakes
- 2) To assess multi-state earth quake disaster preparedness
- 3) To evaluate the State/District Disaster Management Plans and Identify Gaps
- 4) To identify and generate the greater level of awareness in community about the vulnerability of the region to high magnitude earthquake for risk reduction.
- 5) To generate awareness amongst the stakeholders and community about an earthquake of high magnitude to see the functioning of SDMAs and allied agencies during the disastrous situation
- 6) To facilitate inter-department and inter-state coordination in order to ensure organized and structured mechanism during the time of disaster.
- 7) Updating Response Plans at Various levels
- 8) Mass Casualty Management
- 9) Coordination between SDMAs, CSIR-NEIST and NDMA and all other stakeholders
- 10) Generate greater Awareness in the region

1.3 Expected deliverables from the Project

Based on the guided framework to cater to the expected deliverables of the project the following table is presented representing the key activities.

Table 1.1: Activities of the Project as per MoU of the Project as per MoU

Sr.No	Activity /Deliverable	Time line (Each quarter -3 months)					
		QTR-1	QTR-2	QTR-3	QTR-4	QTR-5	QTR-6
1	Scenario Development for repeat of M 8.7 1897 earthquake for the NE region (Interpretation of isoseismals of 1897 Shillong earthquake in MSK scale list of districts having various intensity levels)						
2	Assessment of direct and indirect consequences due to repeat of M 8.7 Shillong earthquake in the region						
3	Vulnerability assessment of the critical lifeline buildings training of state government engineers on Rapid Visual Screening						
4	Facilitation of earthquake scenario information to NE States Viz. mass awareness generation, conduct of Capacity development Programs (IRS, TTX& Mock drills) for planning of multistate disaster response and evaluation of inter-agency and interagency coordination mechanism						
5	Conduct of Schools sensitization workshops						
6	Facilitation of conduct of multistate mega mock exercises – Gaps identification and subsequent integration of findings into scenario assessment report						
7	Mass awareness activities in each NE States on the Scenario and State wise report preparation						
8	Process documentation and submission of final project report (Loss/damage estimation, lessons learnt)						

Source: MoU signed between NDMA and CSIR-NEIST, Jorhat, 15th Nov, 2013

1.4 Project Activities

The Key activities carried out under the project and the time line is listed below in the table below

Table 1.2: Activities undertaken under the project

Sr.No	Project Activities	Date and State in which the Activity was undertaken							
		Assam	Arunachal	Meghalaya	Manipur	Mizoram	Nagaland	Sikkim	Tripura
1.	DM related Workshop Administrative Staff College , Khanapara, Guwahati	21-22 nd Aug, 2013							
2.	Stakeholders Meeting by MSDMA			15 th Oct ,2013					
3.	Capacity Development Programs Tura			17 th - 19 th Oct,2013					
4.	Capacity Development Programs Shillong			18 th -19 th Oct, 2013					
5.	Capacity Development Programs ,at Itanagar and Lohit		24 th -26 th Sept 2013						
6.	Capacity Development Programs , Kohima and Mokokchung					29 th - 31 st Oct. 2013			
7.	Capacity Development Programs, Thoubal				9 th -11 th Dec 2013				
8.	Capacity Development Programs, Imphal				11 th -13 th Dec 2013				
9.	RVS training, SIPARD Agartala								23 rd -29 th Dec 2013
10.	Capacity Development Programs, Dhalai and West Tripura								26 th - 29 th

			Dec 2013
11.	Capacity Development Programs, Dhalai		27 th - 28 th Dec20 13
12.	RVS training, NIPCCD, Guwahati	30 th Dec 2013- 3 rd Jan 2014	
13.	RVS training, LR DM, Conference Hall, Gangtok		27 th Jan-01 Feb 2014
14.	Capacity Development Programs, Gangtok		Jan-20- 22 nd 20 14
15.	Capacity Development Programs, Namchi		Jan 21- 23 rd 201 4
16.	RVS training, Kohima		27 th Jan-1 st Feb 2014
17.	Three days training on IRS for IRT held at MATI	27 th -29 th Jan, 2014	
18.	Team from MSDMA and DDMAs of East Khasians West Garo Hills deputed to observe Dibrugarh Emergency Management Exercise	3 rd -7 th Feb,2014	
19.	Capacity Development Programs, Aizwal and Serchiip		3 rd -5 th Feb 2014
20.	Mock drill and Table Top Exercise , Serchip , Assam		4 th -5 th Feb,20 14
21.	Media sensitization Workshop at NIRD, Guwahati		

22.	Meeting at NSDFi, Ganesh for finalization of state Media Awareness plan	11 th Feb 2014	
23.	Video conference between MSDMA, DDMA and revenue department		19 th Feb,2014
24.	Review Meeting		20 th Feb, 2014
25.	Three days training on IRS for IRT ,Tura Circuit House		24 th -26 th Feb,2014
26.	Capacity Development Programs, Jorhat and Guwahati	24 th - 26 th Feb 2014	
27.	RVS training, MATI, Shillong		3-7 th Mar 2014
28.	Review Meeting , Shillong		7 th March,2014
29.	Rally cum Awareness programme on MMEx, at NongohRaiBhoi District		8 th Mar2014
30.	Mega Mock Exercise ,Shillong and Tura		10 th Mar2014
31.	Mega Mock Exercise Guwahati and Jorhat	10 th Mar 2014	10 th Mar2014
32.	Mega Mock Exercise Itanagar and Ziro	10 th Mar2014	
33.	Mega Mock Exercise Gangtok and Mangam		10 th Mar,2014
34.	Mega Mock Exercise Kohima and Dimapur		13 th Mar, 2014
35.	Mega Mock Exercise Imphal and Thoubal		13 th Mar,2014
36.	Mega Mock Exercise Agartala and Ambassa		13 th Mar,2014
37.	Mega Mock Exercise Aizwal and Serchip		13 th Mar,2014

38.	Mega Mock Exercise Silchar	13 th Mar, 2014		
39.	RVS training, Conf. hall UD&housing Department , Jorhat	15 th - 16 th June,2014		
40.	RVS training, Conf. hall UD& housing DepptItanagar	19 th Jun— 22 nd June, 2014		
41.	SCS Gangtok			12 th Sep,201 4
42.	SCS,Agartala			19 th Sep,201
43.	SCS, Imphal		25 th Sept, 2014	
44.	SCS,Aizwal			29 th Sept, 2014
45.	SCS,Guwahati	15 th Oct, 2014		
46.	SCS Kohima			17 th Jul, 2015
47.	SCS Shillong		31 st Jul,2015	
48.	SCS Itanagar	30 th Sept,2015		

1.5 Result and Outcome of the Project

The mega mock exercise was conducted by CSIR-NEIST jointly with NDMA covering 17 cities and 80+ locations. Due to vast spread of region and difficult terrain, transportation and logistics constraints the Mega Mock Exercise was conducted in two phases. The main objective of Mega Mock Exercise was to review the state DM plans and to assess the preparedness in response, to develop an understanding of direct and indirect consequences in response to a hypothetical earthquake disaster incidence. The Mega Mock exercise also helped in identifying gaps in Disaster Management and response mechanism and to enhance community resilience. Mega Mock Exercise included a lot of preparedness work such as organization of thirty CDPs for IRS, TTx and Mock Drills, RVS trainings of State engineers and architects, customized media campaign viz. advertisements in newspaper, radio, TV, radio jingles, organization of rallies, street plays, painting, competitions pulling up of posters and hoardings, SMS alerts, distribution of posters and earthquake preparedness guide and resource inventory mechanism.

1.5.1 CDP Training:

CDP trainings were conducted in the two district headquarters of each NE state which included capital of each state. Thirty CDPs were organized for Incident Response System (IRS), Table Top Exercise (TTx) and Mock drills. The participants comprised of the key officials of NDMA, respective State departments, NGOs and other stakeholders. The objectives of the CDP were to review and evaluate the state DM plans, Emergency Response Plan (ERP), Standard Operational Procedure (SoPs), highlighting the roles and responsibilities of the concerned stakeholders, Emergency support and coordination system, identifying the gaps in resources, manpower and equipment, empowering the vulnerable groups, incorporating the concept of Incident Response System (IRS).

1.5.2 RVS training of State Engineers and architects

Rapid Visual Screening (RVS) was conducted by NDMA and CSIR-NEIST in association with the SDMAs for the government engineers, architects and geologist at the respective states capitals of the NE. “Rapid Visual Screening of Masonry Buildings and Rapid Structural Assessment of Schools and Hospitals Buildings” in SAARC countries developed by SAARC Disaster Management Centre was used as training material. The training was inclusive of interactive sessions on local building typologies and popular masonry practices various other basic fundamentals and technical aspects were highlighted. Participants were oriented to vulnerability

scenarios, building technologies etc. The pedagogy of the training included case studies, lectures, videos clips RVS survey, hands -on exercises on RVS techniques, *On- site* RVS survey was also performed by the participants .Training of the government Engineers on RVS methods for Earthquake vulnerability Assessment of life lie buildings was organized by ASDMA in association with CSIR-NEIST at NIPCCD, Guwahati Assam. .Thirty nine civil engineers were given thorough understanding and hands on training on how to conduct a preliminary seismic evaluation of the buildings using RVS techniques. In the five days training technical orientation on the use of the RVS survey format for understanding seismic vulnerability, behavior of RCC structure during earthquakes, *on-site* survey of buildings by the participants, presentation of the findings etc. was done.

1.5.3 Media Campaigns

Media plays avital role in awareness generation campaigns. Media sensitization workshop conducted which was attended by the senior representatives of SDMA and others. Awareness generation campaign was undertaken through North East *Kendras* of all India Radio and Doordarshan by broadcasting/ telecasting in vernacular languages to optimise the outreach and impact of the five spots viz. “*Sallah se Salamati*”, “*Savdhan Haito Jaan Hai*”, “*Tyaari Mein Hai Samajhdaari*”, “*Jhoko Dhako Pakdo*” and non- structural. The agenda of the sensitization workshop was to come up with an awareness campaign plan and method for publicity. Talk shows on awareness generation on earthquakes and imparting importance of preparedness to the people were also done through TV networks. NDMA designed and approved documents publicized through local newspapers, pamphlets, preparedness brochures, AIR, Radio FM, Road rallies and SMS alerts, NDMA calendars were distributed to people. Multilingual advertisement published in Newspapers, 4000 posters, 1600 copies of Earthquake preparedness Guide, directives to states on Emergency Operation Centre (EoC) norms etc.

1.5.4 School Sensitization Workshop

Workshops for sensitizing school children on seismic hazards were conducted by CSIR-NEIST and SDMA in the state capitals of Sikkim, Tripura, Manipur, Mizoram, Assam Nagaland, Meghalaya, and Arunachal Pradesh. The target students were from class VI-X. Besides lectures and demonstrations of search and rescue operations by SDRF and NDRF was also conducted. Children were shown informative documentary films on Earthquakes and safety essentials. 1200-1500 students from different parts of the states participated in these workshops

which were organized in different schools in the different NE states. To sensitize the youth about the preparedness pamphlets were distributed in colleges and schools in North Eastern states. In this campaign the NDRF personnel demonstrated the pre-hospital treatment to the students. A campaign for the school children of Bawngkawn locality was organized which in students from three schools from primary to high school participated. Lectures were organized for the children. Besides sport advertisement was also done from last week of March 2014 to June 2014, the video clip provided by NDMA was translated in the local language and telecasted eight times a day both in LPS and Zonet cable networks. Tenth Festival of books for children was organized at Assam Engineering Institute Field, Guwahati in October, 2014 by *Anweshaan* NGO on earthquake awareness in collaboration with CSIR -NEIST which was attended by thousand children. The program featured lectures and presentation on various aspects of earthquakes, precautions and preparedness. Small video on NDRF activities related to search and rescue operations (after the Bhuj earthquake of 2001) were also screened. A meet of the scientist programme was organized in collaboration with CSIR -NEIST in which eminent scientist and environmentalist spoke to the children about the effects of climate change on Assam and other North Eastern states and the methods of earthquake prediction. An interactive discussion session was also held with the scientist and the children. An exhibition showcasing earthquake and earthquake preparedness as organized by CSIR NEIST Jorhat with various visuals and useful information were displayed for the awareness of the children and the general public.

EVALUATION OF THE PROJECT

2 Objectives of Evaluation

The evaluation of the project has been carried out for following three main activities of the project:

- Generating awareness, sensitization of stakeholders, rapid visual survey (RVS) trainings, mass casualty Management in schools and hospitals and capacity building of various stakeholders including State and district Level Nodal Officers from State Governments, Public Sector Organizations and all related line departments.
- Capacity development trainings on Incident Response System, Table Top & Mock exercises to sensitize officers/stakeholders across the eight North Eastern States namely states Assam, Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland, Sikkim and Tripura
- Assessment of the multistate earthquake disaster preparedness and to evolve the coordinated evaluation of SDMAs and NDMA

2.1 Methodology Adopted for Evaluation

The following methodology was adopted by IIPA to evaluate the activities undertaken by CSIR-NEIST *on site* visit of Assam , Sikkim , Agartala and Imphal was conducted by Prof. Vinod K. Sharma and Dr. Shyamli Singh Project Director(s) for evaluation of the project “M 8.7 Shillong 1897 Earthquake Scenario: NE Multi –State Preparedness Campaign”. They interacted with the stakeholders involved in the different activities *viz.* CDP, RVS, IRS trainings, Mock drills, workshops, meetings etc. The methodology followed for evaluation is as follows:

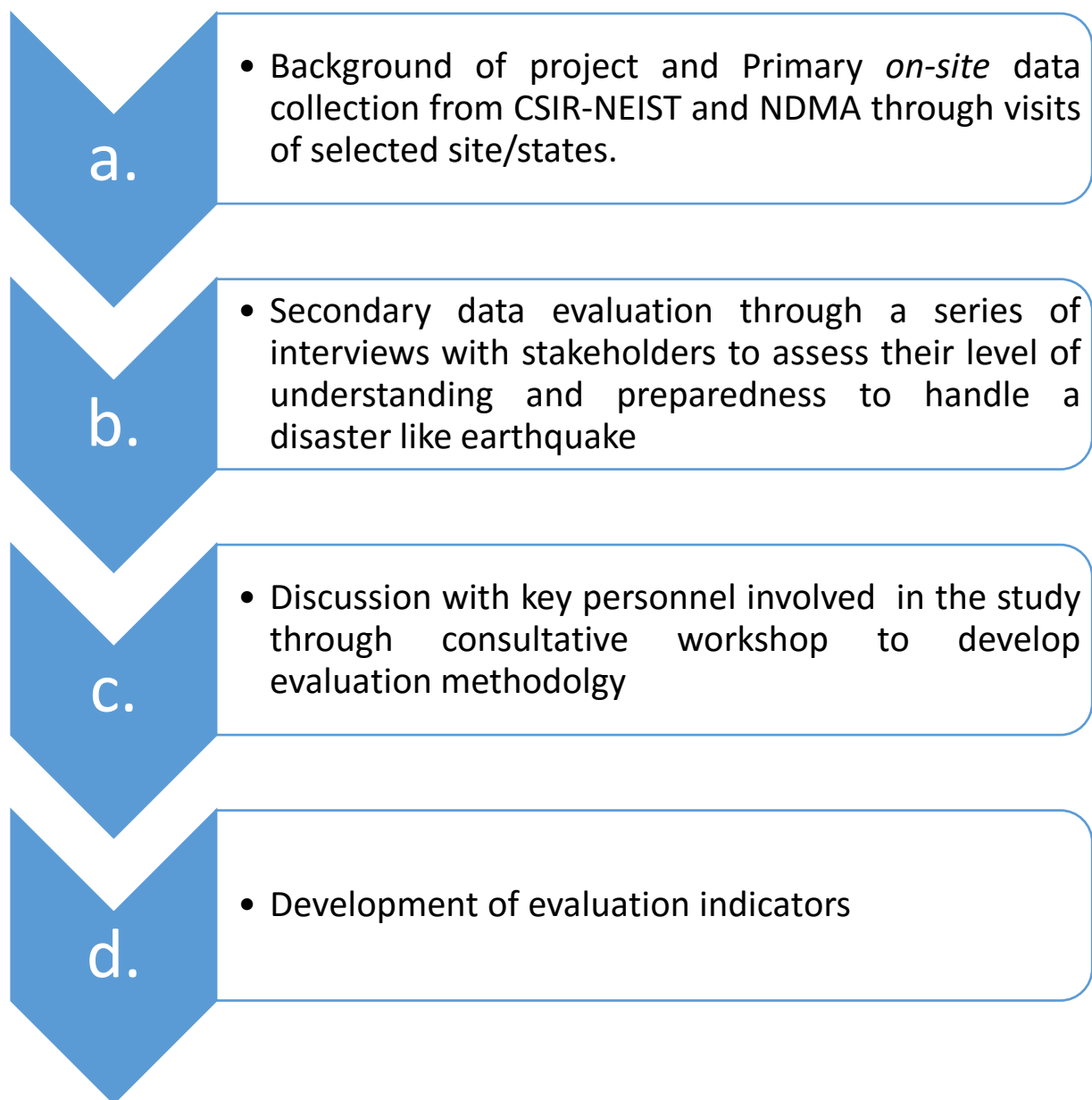


Figure 2.1 : Evaluation methodology adopted by IIPA



Meeting with officials of Manipur



Meeting with Chief Secretary and Secretary of Manipur

2.1.1 Evaluation of project

This evaluation is based on well-established evaluation criteria as set out below (Methodological Framework for Evaluation) with the consultation of earthquake experts:

- Methodology used by CSIR-NEIST
- Relevance of the project with respect to capacity building and awareness generation
- Progress of the project and total outcome
- Fund utilization
- Over-all gain from the project

2.1.2 Evaluation outcome

After the preliminary survey, consultative discussions were done and the parameters for evaluation were developed. Based on the evaluation indicators/ criteria, a Google form attached as (Annexure I) was developed and designed to get the feedback of the stakeholders who had participated in the different programs organized under this project e.g CDP, RVS, School Sensitization Workshop or other earthquake awareness and disaster preparedness activities organized. The emails were circulated in the first week of April and the participants were also telephonically informed about the evaluation and the procedure to fill up the form. The stakeholders were also given reminder mails and calls for submitting the forms (Annexure V). Analyses of the responses facilitated in understanding the impact of these training, programs and workshops on the stakeholders and identify the gaps and help in formulating a strategy for disaster preparedness and mitigation in the NE states.



Consultative workshop at Tripura

2.3 Timeline and Deliverables

The duration of evaluation was for a period of 3 months starting from the month of February 2016 to May, 2016. The activities undertaken by IIPA after the signing of the MoU is summarized below the Gantt chart.

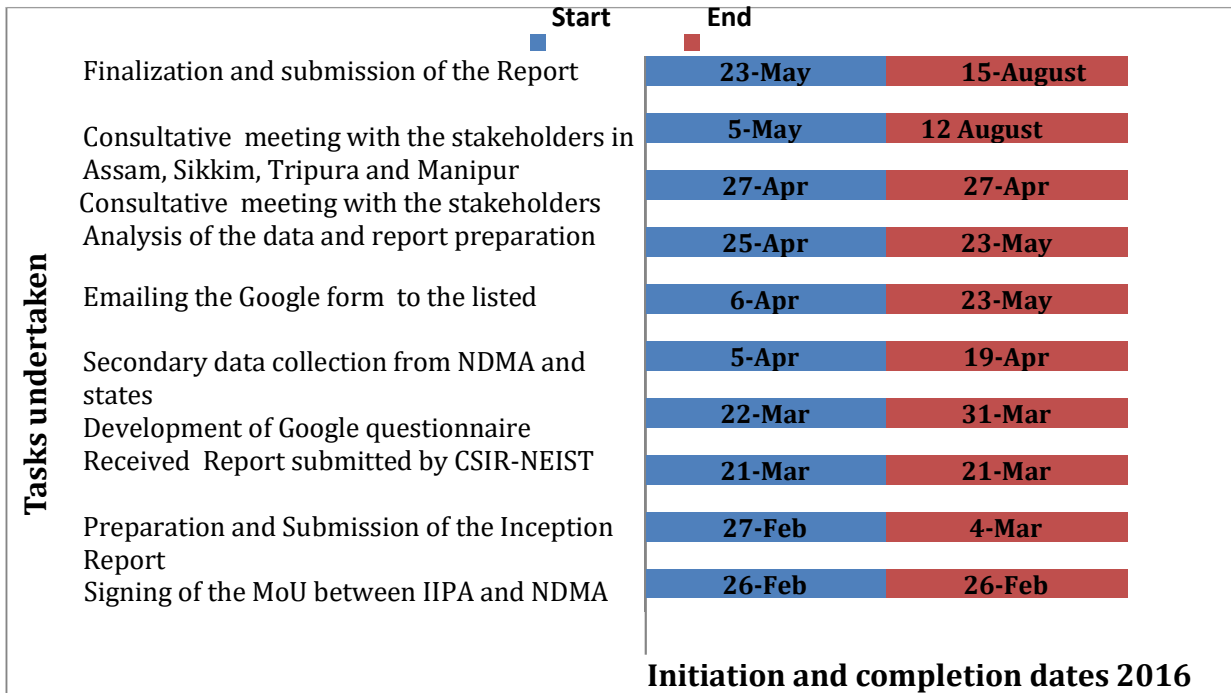


Figure 2.2: Gantt chart of the Activities conducted



Consultative workshop at Manipur

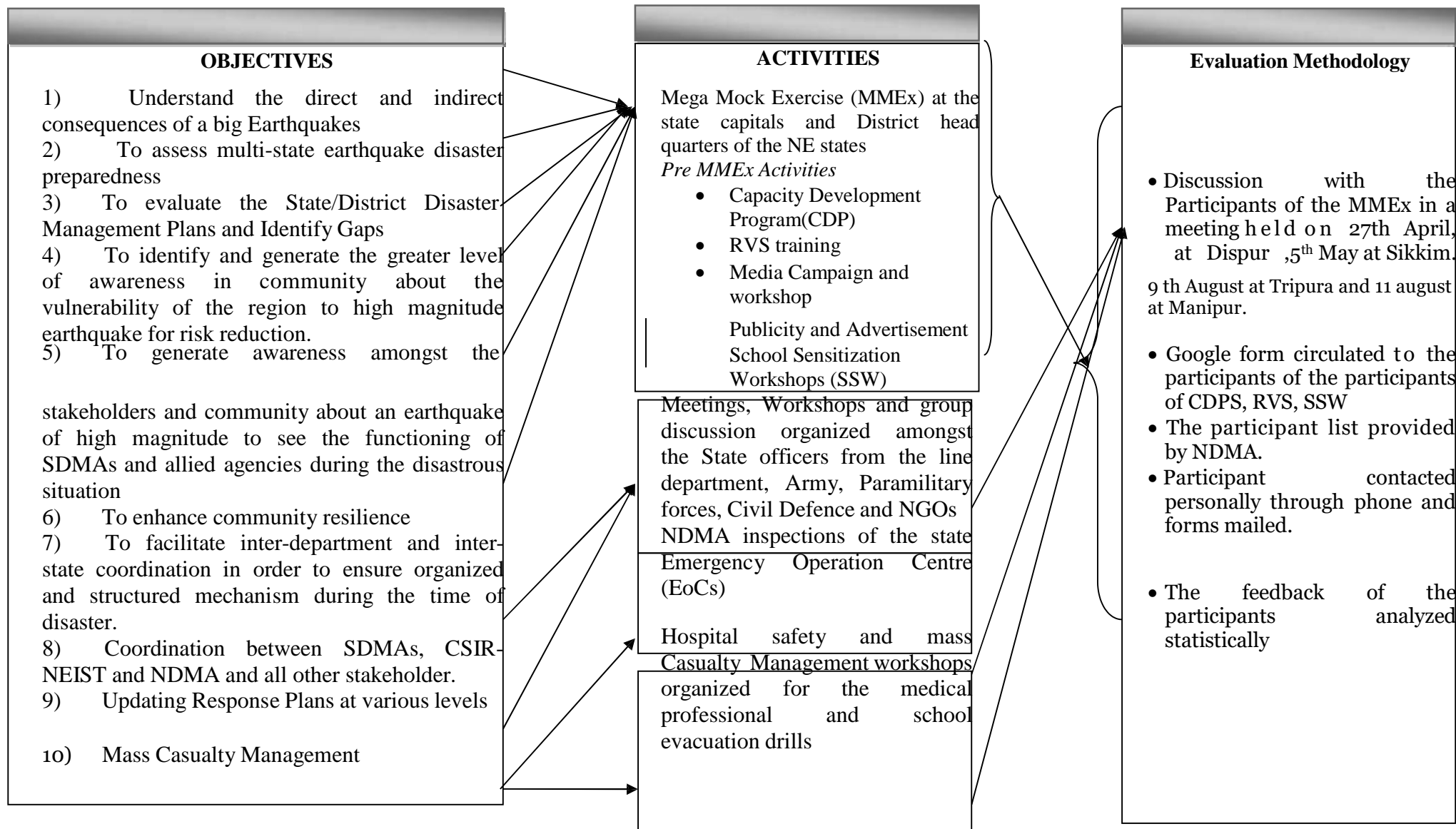


Figure 2.3: Mapping Evaluation Methodology adopted for impact assessment of the activities undertaken

ADMINISTRATIVE AND FINANCIAL ASPECTS OF THE PROJECT

3.1 Financial Aspects

On investigation by IIPA study team about the financial aspects of the project, the project investigator from CSIR-NEIST informed that the release of instalments was delayed and this led to problems related to recruitment of regional coordination officer. It was also found on interaction that the states overspent on various activities (Annexure I attached). The financial management was conducted meticulously. CSIR- NEIST is a central government organization. The institute follows the relevant government regulations and rules approved by its project Management Unit (PMU) for account and fund management. The organization also subjected to statutory and CAG audits. A brief statement of account for expenditure is enclosed (Annexure III). A balance of an unspent amount of Rs. 77 lac is yet to be returned to NDMA as the host institute could not spend it due to delay in release of the instalment of the grant. On the other hand, discussions with NDMA officials brought to light that the irregularities in release of the funds was a reflection of the policy changes. The midway closure of the Scheme of police modernization left a window open for unattended residual liabilities. This study project happens to be under the ambit of one of them. As a result of the closure, there was no budget granted in the financial year 2105-16 (Annexure VI).

The study team is of the opinion that the unspent amount could have been utilized in settling the accounts of the states who have overspent after due consultation with NDMA. Also it is felt by the team that the unutilized money would have been used more productively by producing fliers, pamphlets, white papers, monographs and the like for wider dissemination.

3.2 Administrative Aspects

While awarding such exercises in future, NDMA should have *in-house* experts to ensure close monitoring and reviewing of the progress made with the project team from time to time so that mid-term corrective action can be taken on time. As the functioning of Finance department in a purely scientific institute (in this case CSIR-NEIST) is different from NDMA it is suggested that the disbursing agency should also determine the time required to transfer funds to its partner organizations considering its internal procedures and factor that in the project time line and budget to avoid delays in the progress of the project.

FINDINGS AND DISCUSSIONS OF EVALUATION

4.1 Findings and Discussions of Evaluation

Based on both the primary and secondary data certain recommendations and suggestions are made. The earthquake of such large scale is often disastrous, looking at the current scenario of NE India being encompassed by the ancient plate margin which is seismically very active.

Distinctive Initiative: The project was distinctive undertaken in the country at a multi-state level. Catering to a seismically dynamic North-East Region with the ever swelling population and the haphazard growth and development of the already fragile NE region has become more prone to catastrophes. The success of the venture essentially depended on dynamic partaking of the SDMA, DDMA, various line departments, schools, civil defence organizations, hospitals, media houses and numerous other stakeholders.

During the various stages of assessment, it was found there are a few gaps that need to be plugged in. There is a need for the states and districts to revisit their Disaster Management plans in the light of new development and along with the incorporation of IRS all stakeholders must be taken on board which would facilitate coordination thus helping in formulation action oriented implementable plans. Similarly functional EoCs, both at state and district levels must be established. A stand-alone disaster network which shall be the foundation and lifeline in disaster situations in several cases must be in place. It is observed that no state has provisioned the stand-alone disaster network.

Value addition: It was also observed that the capacity building should have been two -pronged first prong to capacitate NEIST and the second prong to focus on disseminating scientific knowledge to NDMA for all awareness generation activities. The real-time earthquake prediction scenario and the mirror image generated by CSIR-NEIST should have been shared with the concerned states as discussed in the consultative meet held at ASDMA.

Highlighting Micro- Zonation: It is recognized that micro-zonation should be adopted rather than making it a state wise activity. Well-crafted niches and urban agglomerations should be preferred to come up with a more pronounced and extensive study which would help in reflecting better preparedness.

Fortes of Mega Mock Exercises: It is observed that Mega Mock Exercise was mostly appreciated by most of the states. It was great opportunity₂ for the states to understand response status and

improve coordination. This was the first exercise of its kind after Delhi and Mandi State. It offered a pedestal to interact with other state disaster management authorities which helped in learning better through failures and success of each other thus such activities must be promoted. Mega Mock Exercises also pointed out a few more area pertaining to management and casualty.

Enforcement of strict implementation of Building Code and RVS training: The land being a priced commodity in the hands of the private owners has resulted in unplanned expansion of towns which are more prone to earthquake and landslides. Thus strict implementation of National Building Code (NBC) should be enforced which would help in regulation. Adequate number of young engineers from each district must be trained under RVS program conducted by NDMA. These trained engineers should carry out RVS of the life-line buildings and important government buildings followed by private buildings. 59% of the stakeholders felt that vulnerability assessment of buildings should be a planned activity.

Hospital Management Exercises: As far as the mass casualty management exercise is concerned the hospital management plans especially the evacuation plans must be more specific. The stress must be laid upon the identification of area which would support the people after mass evacuation as it has been often seen that it is not the earthquake but lack of basic infrastructure facilities which take a major toll. It is also observed that in case of mass casualty sufficient funds are not available to have enough of tents to house the victims as a result hospitals have to rely on outside vendors.

Well-structured Hospital Exigency Plan: It was observed in the consultative workshops conducted on 27th April, 2016 in ASDMA, Guwahati and on 11th August, 2016 in Manipur that under mass casualty management awareness section that all hospitals should have their hospital contingency plan and also well-structured medical plan likewise all the states must have the hospital contingency and medical plan which must be tested and validated by conducting mock exercises regularly.

Communication: Another sector which needs due care and attention is the communication. It is well known fact that effective communication is the soul of disaster preparedness and mitigation. It was seen during the various pre-preparatory and preparatory exercises that police communication network was used for all disaster related communication. This hampers and interferes with the routine law and order situation. Thus a dedicated disaster communication network should be in place.

Need of Special DM module for Police and Medical Personnel: There is a need for a special module on DM for police and medical personnel. Well-equipped SDRFs must be raised in the North-East States with immediate effect.

Scarcity of DM Gear: The line department with reference to fire department has acute shortage of fire-fighting equipment. Immediate measures should be taken to access the fire-fighting capabilities and steps must be taken to fill gaps such as lack of manpower and limited assets. It is also recommended that SAR team comprising of the civil defence and volunteers must be framed and the team members should be capacitated to handle the DM equipment such as JCB, inflators, lighting tower, angle cutter etc. This was further corroborated through Goggle from survey wherein 53% of the respondents agreed that a gap exists in maintenance and procurement of DM equipment.

Changes in logistics: A change in few logistics can work wonders for e.g.; control room and Incident Response Team should be placed in well-equipped control room. IRT should be alerted through dedicated communication system rather than the cellular phones.

Regularization of release of Instalments' of grant released: IIPA study team on interaction with project investigator found that there was delay in the release of grants, due to administrative and other reasons. This should be fixed in consultation with NDMA officials.

Graduated Incremental Benefits: It is observed that incremental benefits graduated in Mega Mock Drill from 2014 to 2015 IRS model used for the first time. All props used for the various activities were stacked in an organized manner with a color coding scheme for quick response.

4.2 Response Analysis

A standard Google form was developed based on the objectives of the project and preparatory activities viz. CDP, RVS, Media campaign, School Sensitization Workshop conducted. This Google form was then emailed to all the stakeholders. The stakeholder list was obtained from NDMA and CSIR-NEIST. The emails were circulated in the first week of April and the participants were also telephonically informed about the evaluation and the procedure to fill up the form. The stakeholders were also given reminder mails and calls for submitting the forms (Annexure V). Summarized below is the analysis of various parameters as in the questionnaire.

4.2.1 Efficiency of CDP

Figure. 4.1 show that 65% of respondents accepted that CDP trainings were very efficient in enhancing their knowledge about Emergency Response Plan (ERP) and Standard Operation Procedures (SoPs). Regarding understanding of the concept of IRS only 37% felt that the program addressed this component to a good extent without doubts. 53% of the respondents agreed that a gap exists in manpower and equipment procurement.

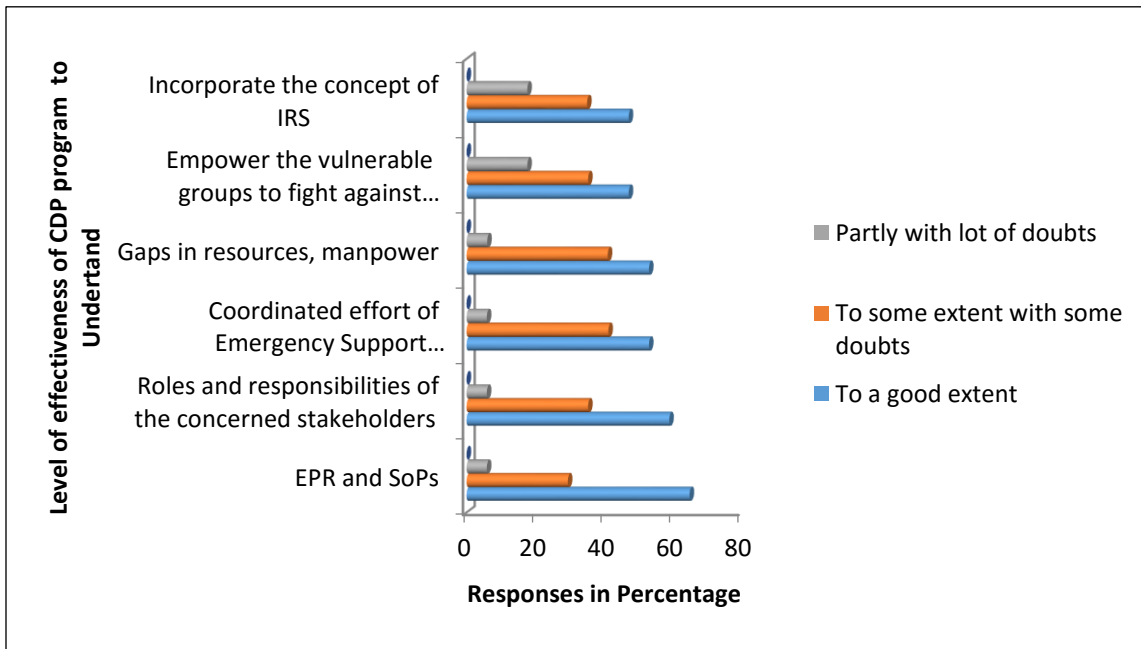


Figure 4.1 Level of Efficiency of the CDP

47% of the respondents felt that area and subject coverage of the CDP was very good whereas only 24% rated it excellent and 29% found it good whereas only 24% rated it excellent and 29% found it good (Figure 4.2.). 41% felt that duration of course components was very good. There was no negative comment on any component of the program

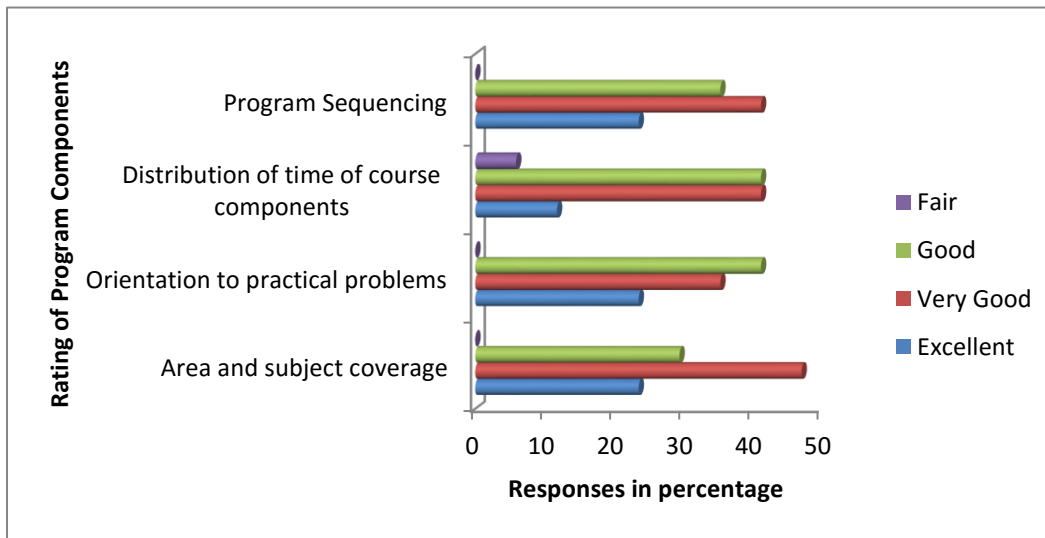


Figure 4.2: Rating of Components of CDP

4.2.2 Role of Print Media in awareness

The question regarding publicity and advertisement in newspaper had a lot of response from the respondents 12% of the respondents accepted that these advertisements helped in generating awareness amongst the public whereas 53% negated the role of advertisement in the same (Figure 4.3).

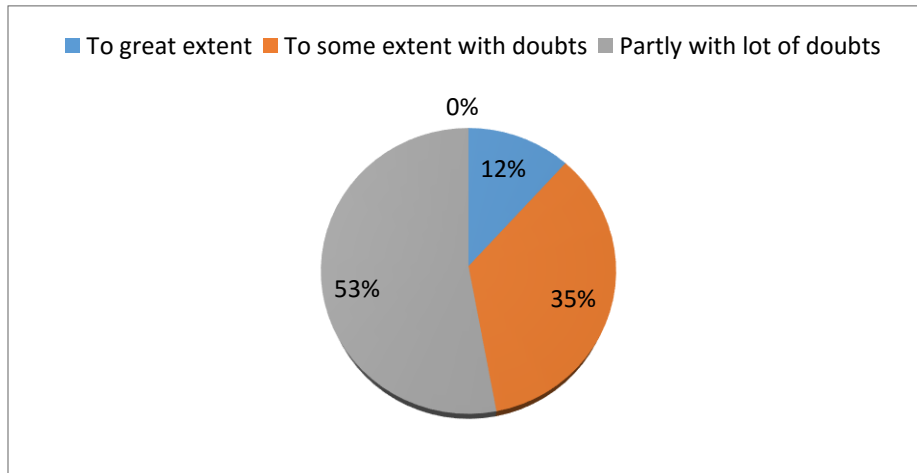


Figure 4.3: Awareness Generation through print media

4.2.3 Achievement of RVS

In response to questions related to RVS, 59% of stakeholders felt that advance vulnerability assessment of buildings in should be conducted. The same number of respondents agreed that the old structures and lifeline buildings should be identified on a priority basis (Figure 4.4).

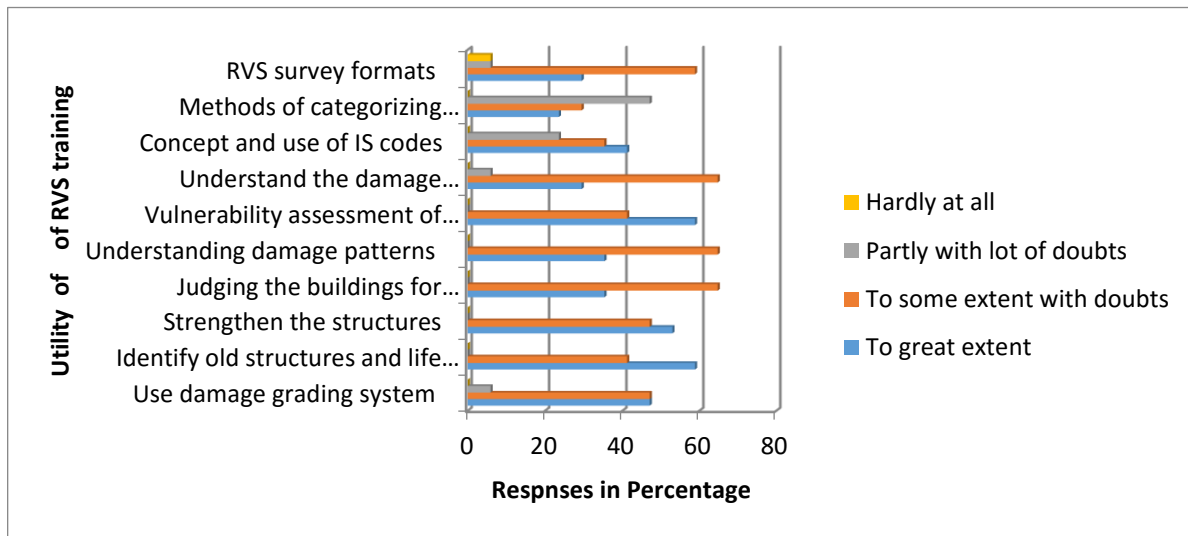


Figure 4.4: Level of achievement of objectives of RVS

Figure 4.5 clearly reflects that 47% of the respondents found the RVS training extremely relevant for the overall development present work as well as in the future.

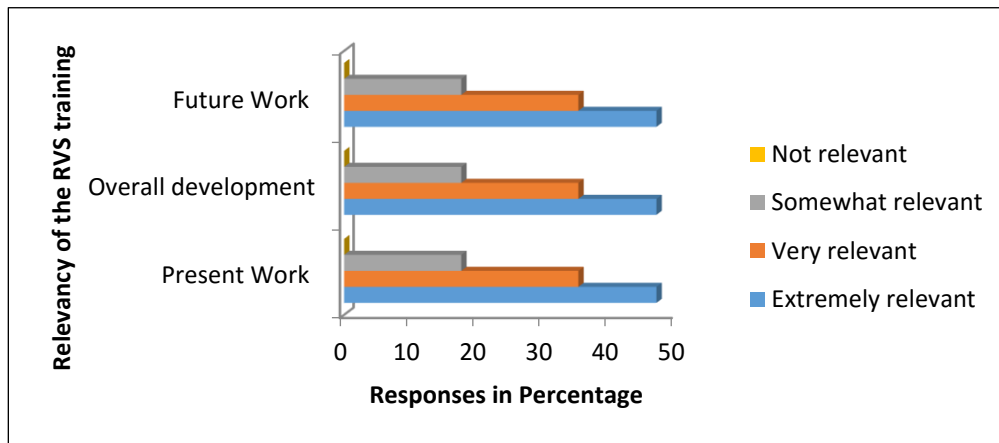


Figure 4.5: Relevancy of RVS training

4.2.4 Achievement of School Sensitization Workshop

Figure 4.6 shows that 59% of the respondents felt that the school sensitization workshop have provided information and knowledge to a great extent. Whereas 53% acknowledged the inculcation of habit of earthquake safety through school sensitization programs. It was very pleasing to observe that none of the respondents had any doubts regarding the enhancement of knowledge of mitigation and preparedness through sensitization workshops.

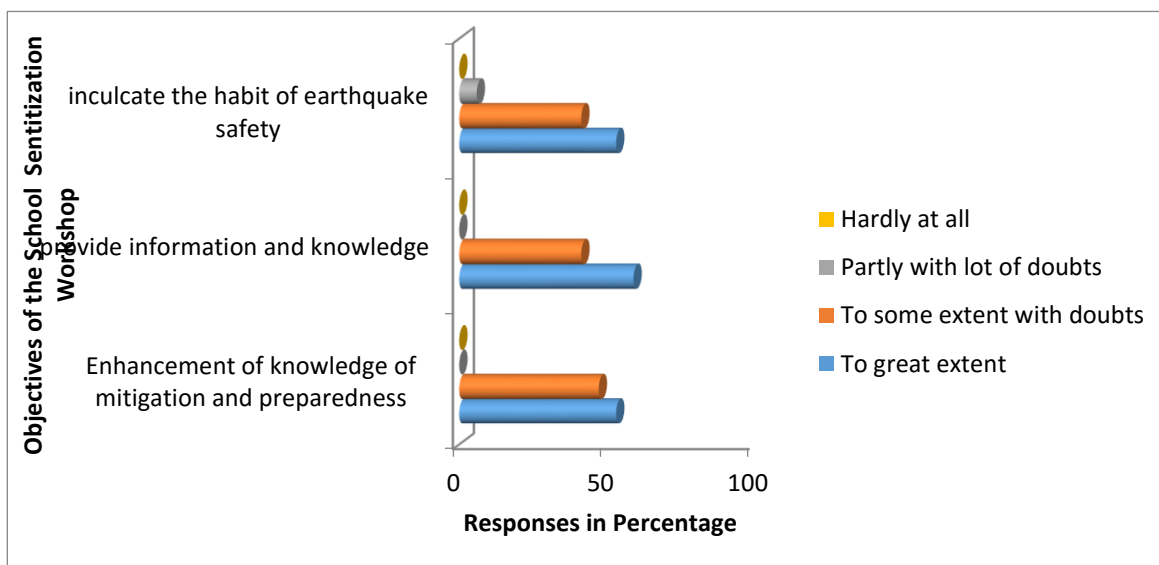


Figure 4. 6: Achievement of objectives of School Sensitization Workshop

Figure 4.7 shows that 76 of respondents agreed that there was an impact of school sensitization Workshops.

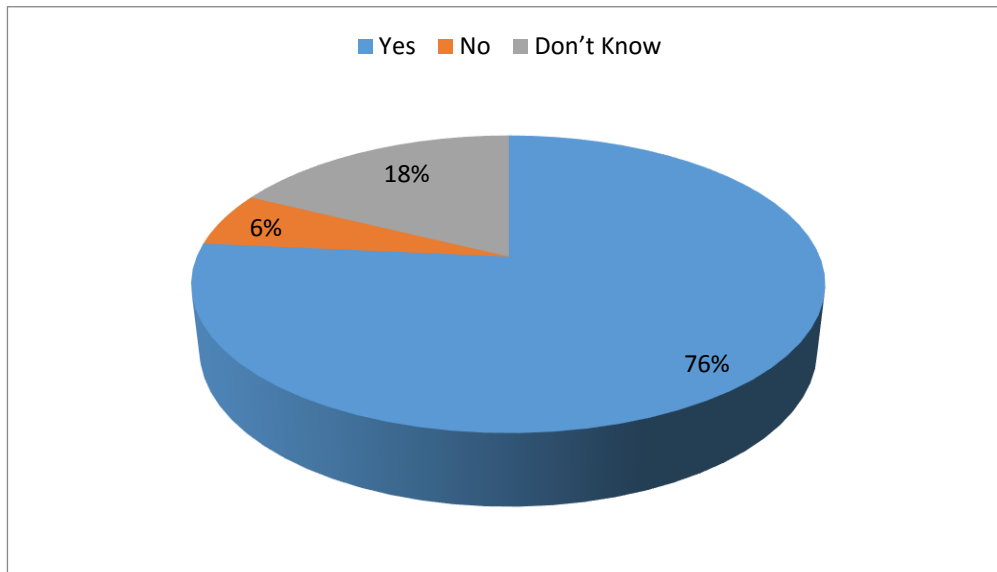


Figure 4.7: Responses for impact of the SSW on children

Out of the various questions such as basics of earthquake, first aid operation, prevention of safety measure, do's and don'ts of earthquake, rescue and search, fire safety norms to check the enhancement of awareness and knowledge of children it was found that 47% children had awareness regarding the dos and don'ts during the earthquake. On the other hand it was surprising to learn that none of them had enhanced their knowledge in fields of fire safety norms and rescue and search (Figure 4.8) operation.

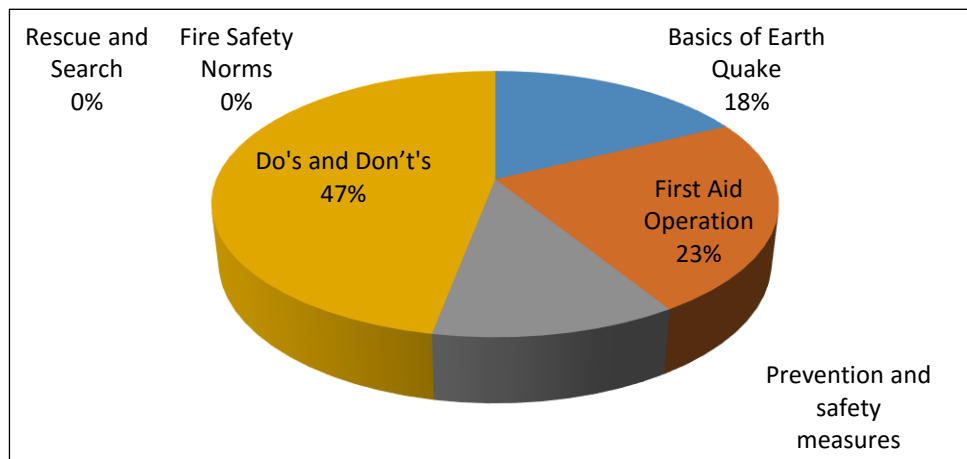


Figure 4.8: Knowledge enhanced by SSW

4.2.5 Achievement of Project Objectives

It was found that 59% of stakeholders felt that the project to a good extent has been able to develop the understanding of the masses about the concept of the direct and indirect consequences of earthquakes

and also regarding the interdepartmental and interstate coordination during the time of earthquakes. Figure 4.9 reflects that 63% respondents expressed some doubts in relation to the assessment multistate preparedness.

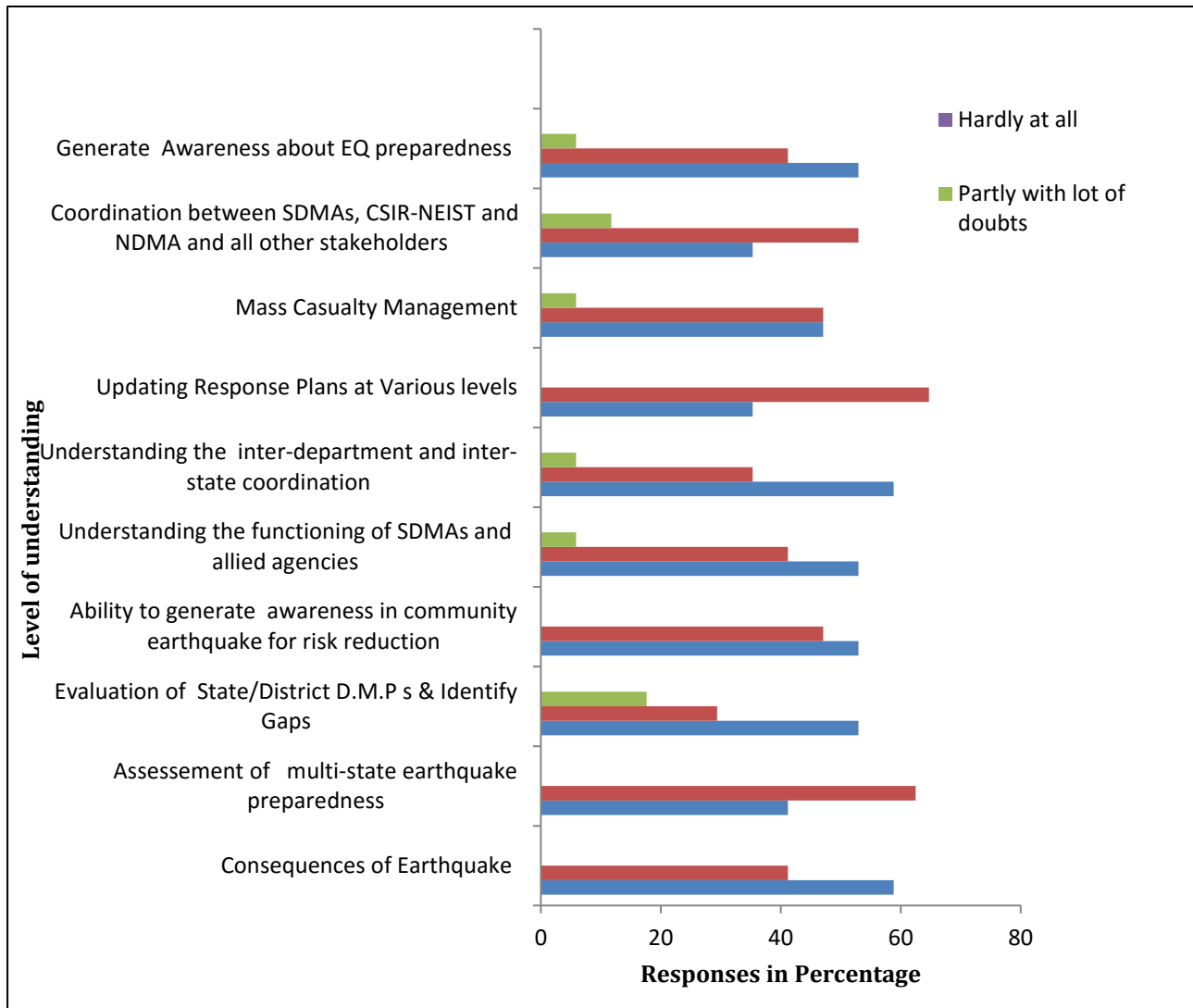


Figure 4.9: Achievement of the objectives of the project.

The response analysis of primary interaction with the concerned stakeholders of Tripura and Manipur is presented Figure 4.10 depicts the: level of achievement of objectives of the programs 100% stakeholders of Tripura and Manipur were of the view that objectives of the CDP program were met. The project has achieved its objectives in terms of generating awareness, increasing the understanding level of the people about high intensity earthquakes and multi-state preparedness. 33% had doubts regarding the concept of state District Management Plans and gap identification.

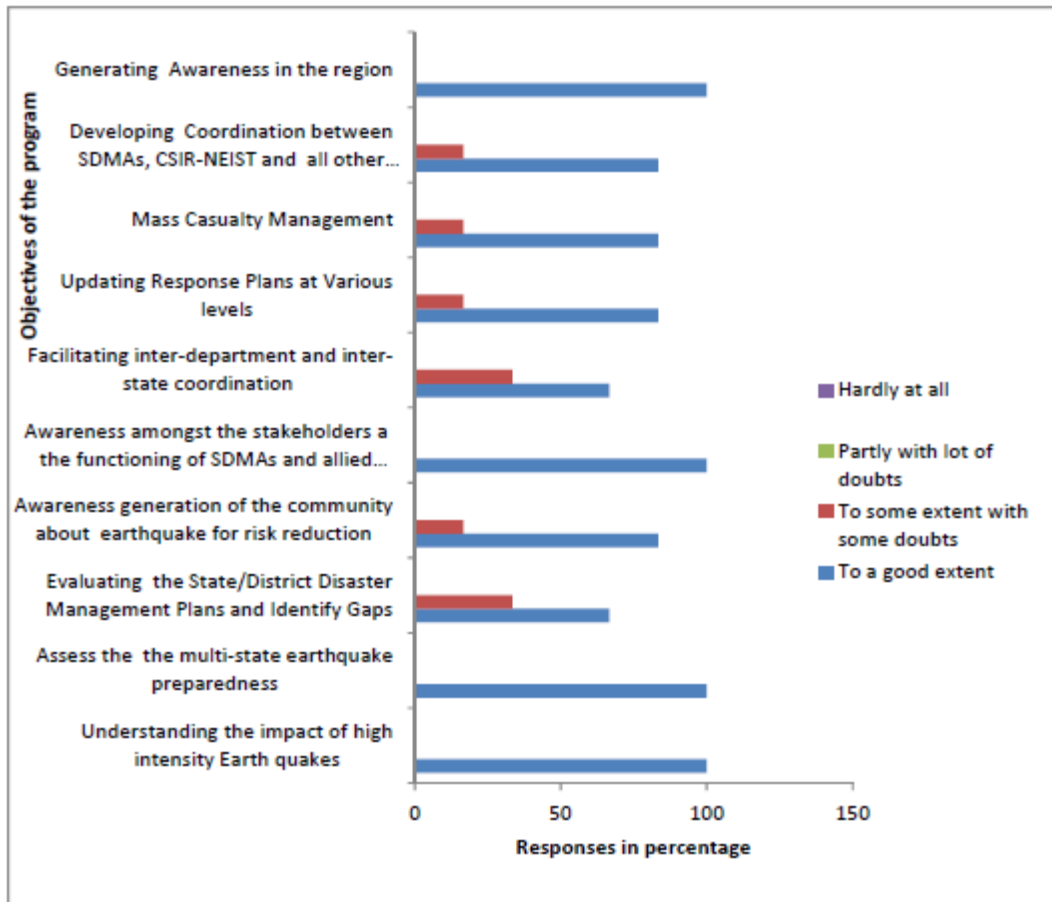


Figure 4.10: Achievement of the objectives of the project (Tripura and Manipur)

50% of the stakeholders of Manipur and Tripura SDMA as shown in the figure 4.10, felt it was extremely relevant for the future earthquake related works. The same response pattern was observed (Figure 4.11) when asked about the relevancy of the program for their knowledge enhancement about earthquakes and its impact. Regarding their present work on earthquake preparedness and mitigation 50% of the participants found it very relevant.

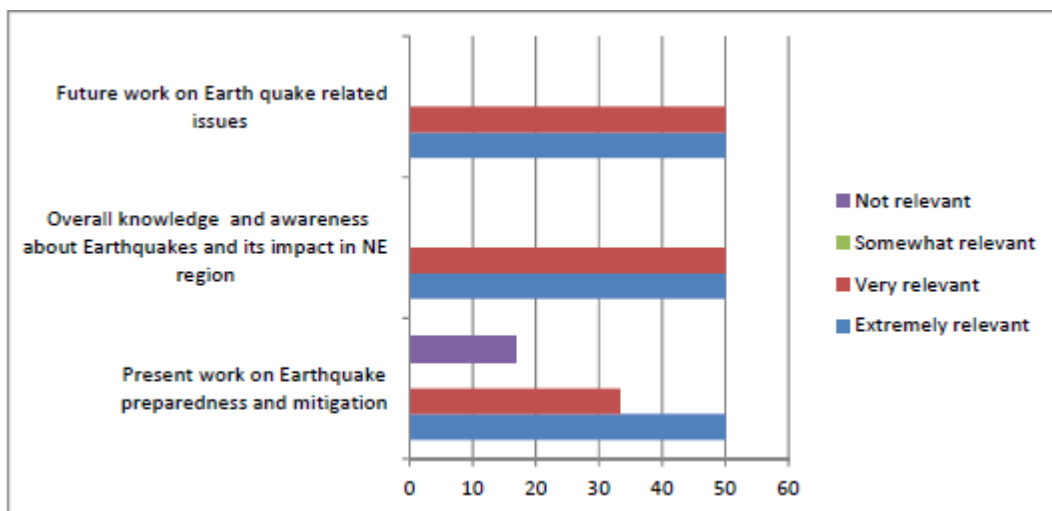


Figure: 4.11 Responses w.r.t to the relevancy of the CDP

0 10 20 30 40 50 60

4.2.6 Knowledge Enhancement

As shown in the figure 4.12, 100% of the participants of Manipur and Tripura SDMA agreed that the CDP helped in enhancing the understanding of the stakeholders regarding the earthquakes and the precautions to be taken. 83% felt that the programs helped in enhancing their knowledge about SDMA functioning and understanding the State Disaster management Plan.

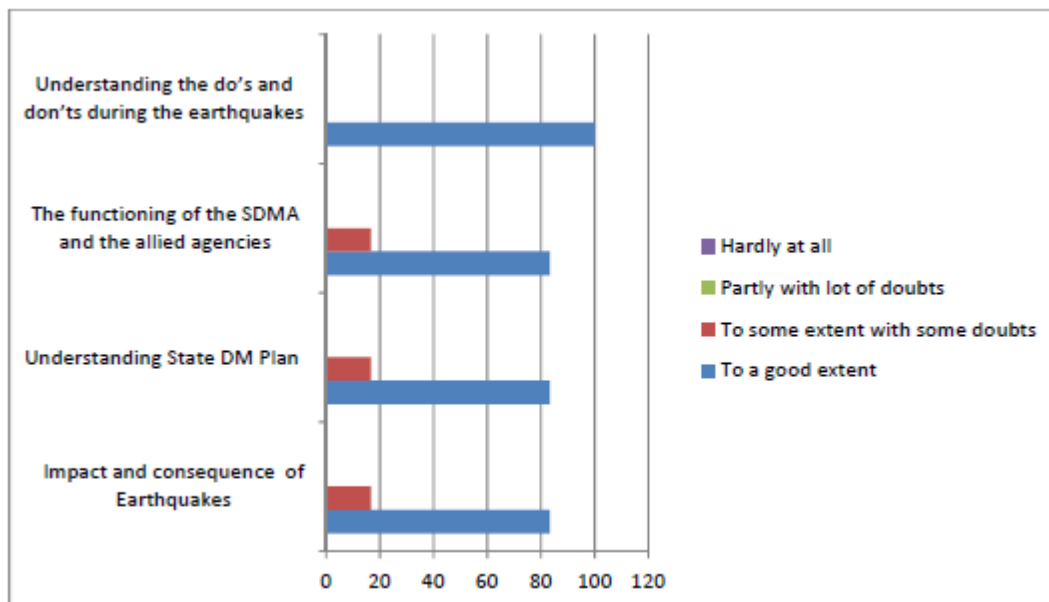


Figure: 4.12 Knowledge enhancement through trainings

4.2.7 Program design

80% of the participants of Manipur and Tripura SDMA felt that the program was very well oriented to practical problems 67% agreed that the program covered the area and subject to a good extent. Regarding the component wise time distribution 67% of them felt that it was covered to good extent and 33% of them had doubts as shown in the figure 4.13 below.

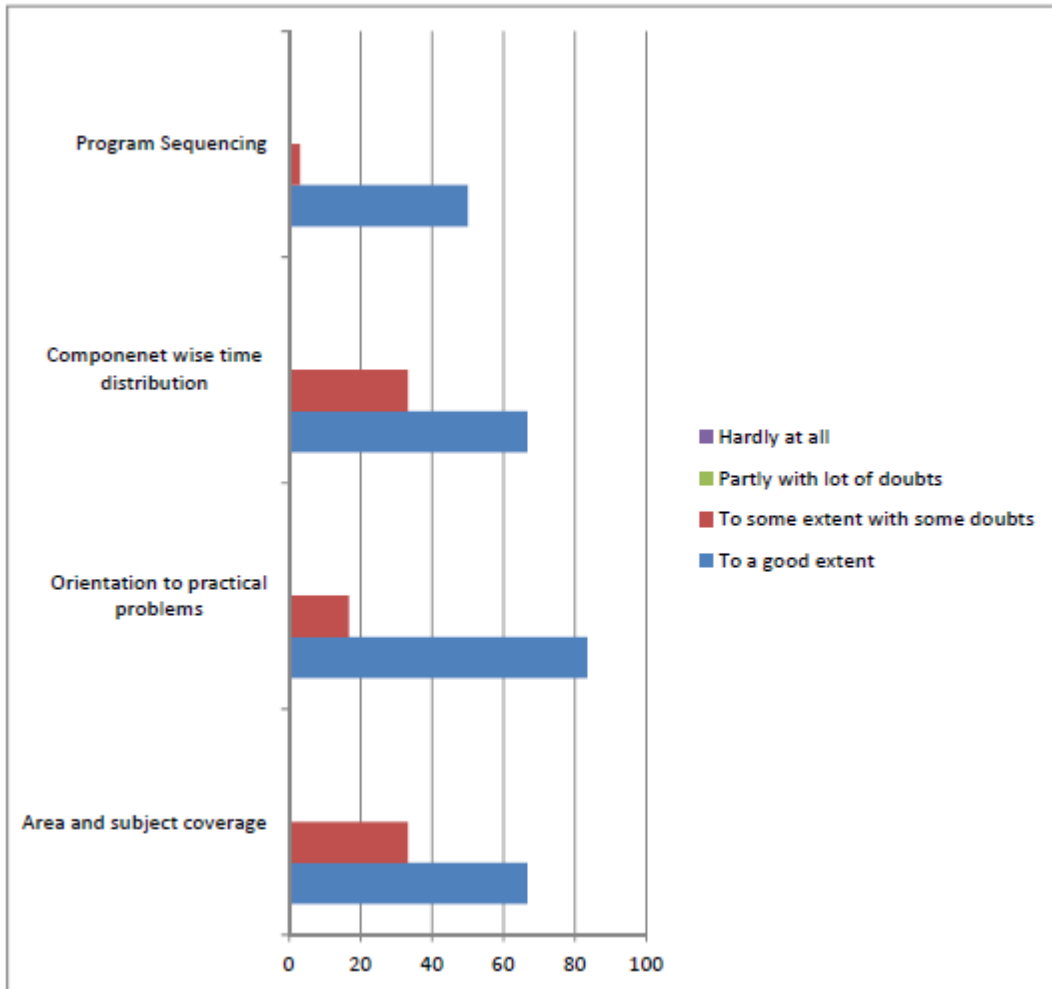


Figure: 4.13 Program Design

4.2.8 Effectiveness of the IRS program

80% of the participants of Manipur and TSDMA agreed that the IRS program helped them to review and evaluate the emergency response plans and Standard Operating Procedure (SOPs). Whereas 80% had doubts about incorporating the concept of IRS. 67% of the participants felt that the IRS program helped them to review and evaluate the roles and responsibilities of the concerned stakeholders. . The responses are depicted in the Figure 4.14 below.

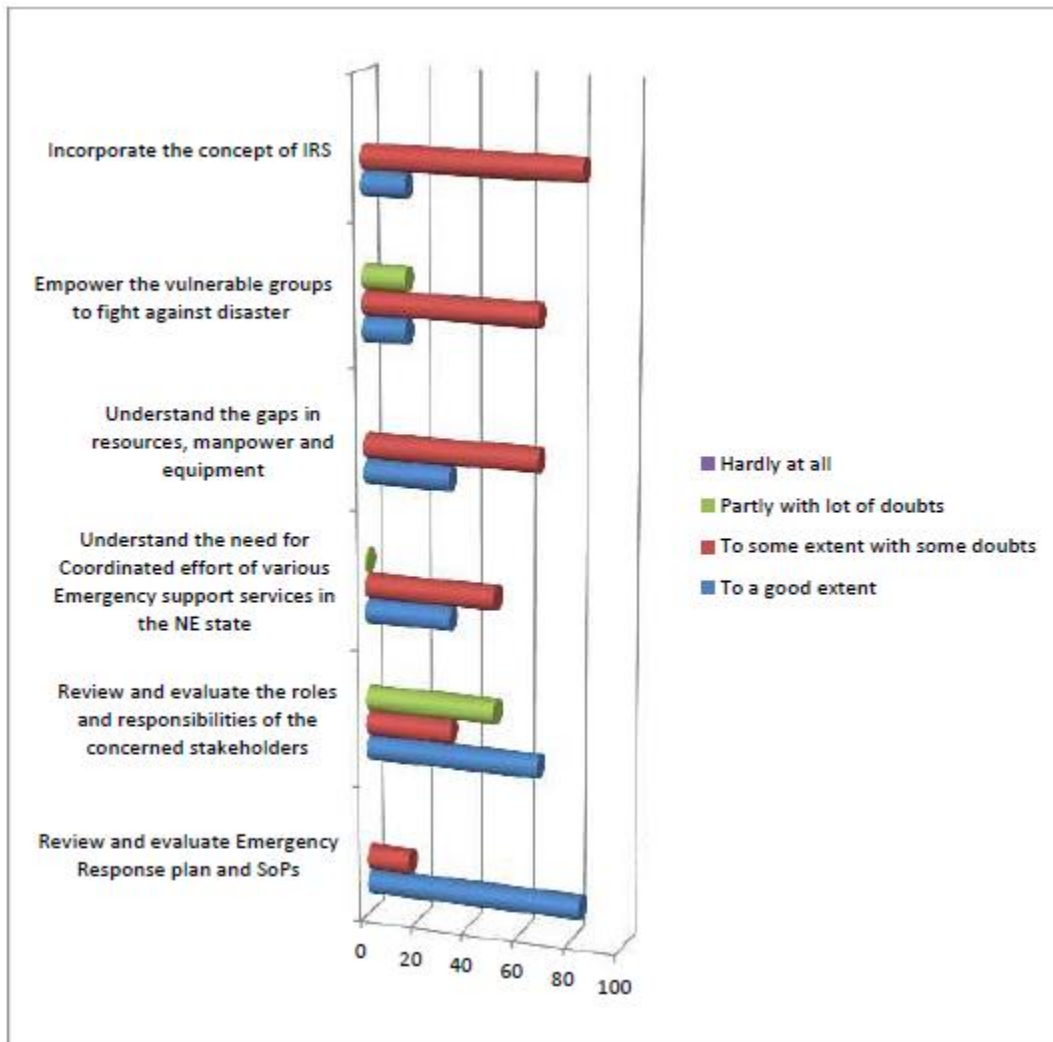


Figure: 4.14 Effectiveness of the IRS program

4.2.9 Training Design

67% of the participants of Tripura and Manipur SDMA felt that the area and subject coverage of the training was very good only 33% rated it excellent. 67% Participants felt that the time distribution amongst various components of the course and trainings orientation to the practical problems was very good as depicted in the figure 4.15 below.

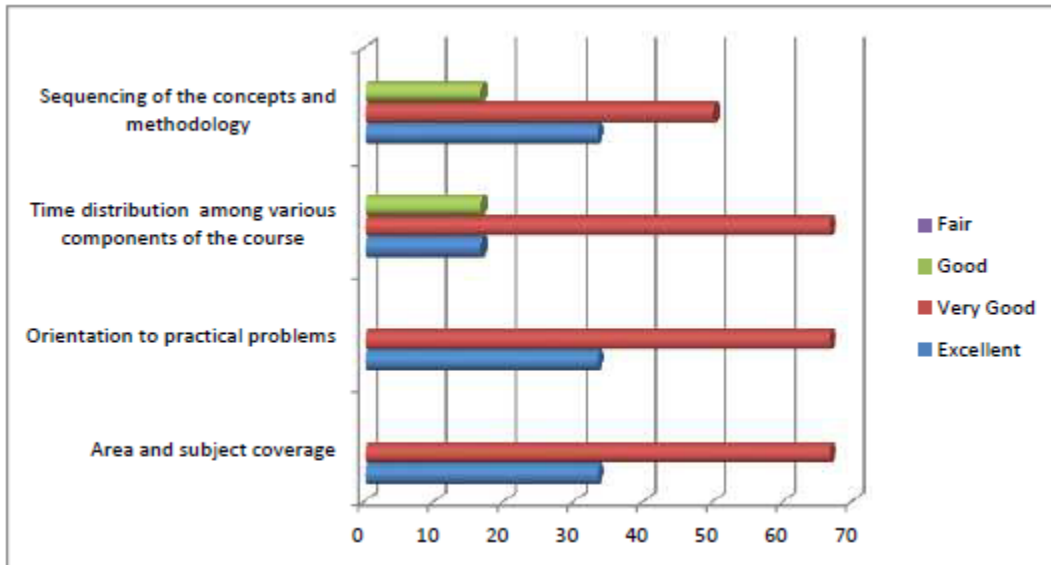


Figure: 4.15 Training Designs

4.2.10 Training Methods

As shown in figure 4.16 50% of the participants of Manipur and Tripura SDMA felt that the discussions, lectures and presentations of the training was excellent and 50% felt that the *on-site* survey exercises, training manual and filed exercises were very good.

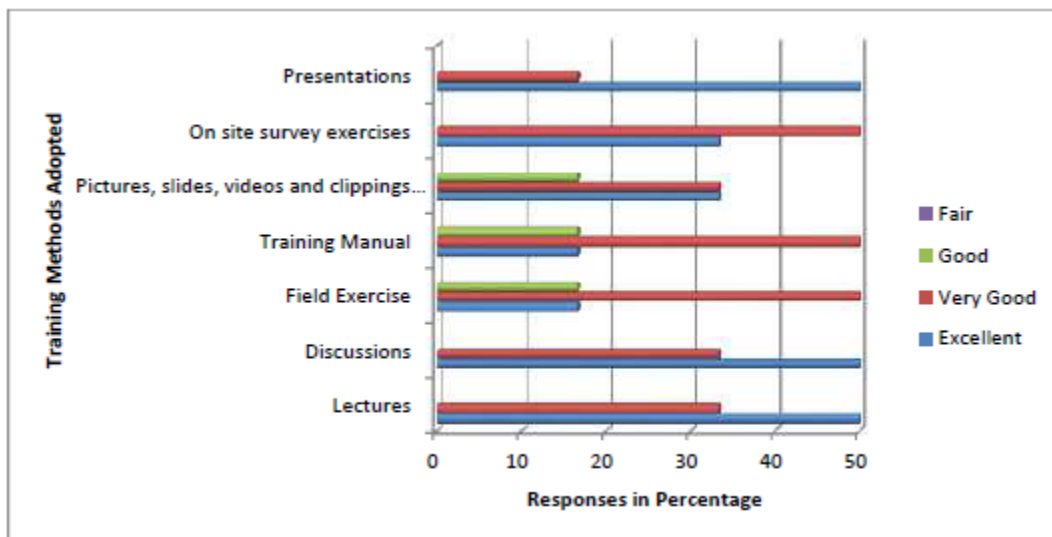


Figure: 4.16 Training Methods

CONCLUSION AND WAY FORWARD

It is beyond doubt that the project is one of the most dynamic initiative taken up by NDMA to develop an earthquake disaster scenario. The collaboration of NDMA with CSIR NEIST is *akin* to cherry on the cake. The project catered to the eight NE states. The intensity of \geq IX shall be felt over Meghalaya, intensity of IX-VIII will be felt over Sikkim and most parts of Tripura whereas intensity of VIII-VII to be felt in Arunachal Pradesh, Nagaland and Mizoram.

The project has enthused a lot of hope and expectation as this was placed in the hands of experts of a premier institution of the country. The objective of the project was very ambitious. The evaluation and analysis of the findings marked as outcome of the project is just an inception in a long journey which should be pursued till the end and in the process filling up all the gaps and loopholes.

The activities carried out in the course of project duration of 18 months are evolved on *real time* basis and most of them were very significant such as Capacity Development Programs, Mass Media Campaigns, Rapid Visual Surveys, School Children Sensitization, Table Top Exercise and Mega Mock Exercise. The project was very successful as it looped in all major stakeholders, although due to paucity of time, delays in release of funds there are a few gaps which should be plugged-in in future ventures.

The project was able to sensitize the concerned states and district administrators. However still a lot of capacity development need has to be catered to. The IIPA team in its interaction with the project investigation team at CSIR-NEIST found that there were a few gaps which are mentioned below:

Grooming states as Future ambassadors

It is beyond doubt that NDMA has conducted the Mega Mock Exercises successfully .IIPA's study team interaction found that all the activities related to Mega Mock Exercises were conducted by NDMA. It is to be emphasized that states are also made a party in conducting these exercises both administratively and financially this would lead to prepare a strengthened state. Such state capacitate would pay way and the state may have the potential to pose as a future ambassador.

Capacitating and disseminating scientific knowledge generated by CSIR-NEIST: It was also observed that the capacity building should have been two -pronged .One, capacitate NEIST and the second prong should have been disseminating scientific knowledge to NDMA for all awareness generation activities. The real-time earthquake prediction scenario and the mirror image generated by CSIR-NEIST should have been shared with the concerned states as discussed in the consultative meet held at ASDMA.

Institutional understanding between NDMA and CSIR- NEIST: The release of funds was a constraint .The closing of Police modernization scheme led to unattended residual liabilities under the ODMP. As a result the timely release of funds were hampered.

Funds utilisation by states: On discussion it was found that there was overspending of funds in Tripura during the pre –preparatory activities of mega mock exercise .It was also elucidated by TSDMA that the escalated amount was settled by the state. Discussions with IIPA study team also brought to light that there were some delays in submitting the Utilisation Certificate. It was observed by IIPA’s study team on discussion with the project investigator that states of Meghalaya, Assam, Sikkim were compliant and submitted the Utilisation certificate and other related documents on time.

Handholding and Sustainability efforts: Throwing a glance at affirmatives, this project has generated a lot of mass awareness and sensitization amongst the masses. The technicalities such as micro-zonation of seismic activities have also been brought forward. Several new programs such as “*GyanJyoti*” program an initiative of Assam Government, and “Science Motivation Programme”, a CSIR initiative have been started as an inspiration from this mega project. The discussion and consultative meeting of IIPA study team brought to light the sound coordination between the SEOC and DEOC. There was a general enthusiasm and willingness to learn despite the State and General Elections in a few states. The overall coordination between different line departments was at its best during the mega mock exercises. It is thus strongly recommended that mock drills must be conducted on a routine basis and the states should be so well equipped that they may perform it on their own without the financial support of the centre. The most appropriate example to quote for this is the case of Sikkim and Tripura where such mock drills take place as a routine activity.

Regular re-visits of Disaster management Plans: It was observed after discussion that there was an urgent need for trained police personnel in Disaster Management. Disaster Management Plans are obsolete and there is need to revisit them and remove the redundancy from them. The inventory of resources was also a major issue as it was not complete in most cases. Disaster Management Plans should be regularly updated with resource/inventories mapping. IRS guidelines should also

be a part and parcel of the plans. There should be a provision to place Web based DSS.

Provisioning for Procurement of updated DM Equipment: There is a lack of Disaster Management equipment with different line departments such as foam tenders, mist technology, wood driller, inflators lighting covers, high rise ladders, air lifting bags, pumping set, these equipment should be procured at the earliest. Moreover apart from procuring and maintaining the DM equipment there should be proper training of the manpower to operate them.

Wider outreach of Scientific Findings: State governments and related agencies must make the relevant data accessible to the teams engaged in developing such hypothetical scenarios. The project would be extremely beneficial in generating awareness amongst the stakeholders about an earthquake of high magnitude in all the eight NE states. The loss to life and property can be minimized by incorporating the knowledge developed in this project in the relevant disaster management prepared plans of the states. All major stakeholder groups, leaders and policy makers, engineers and architects, disaster management professionals, and people at large will benefit from the knowledge developed during the project.

The outputs from the project will be useful for NDMA, NIDM, several Committees working on earthquake mitigation, architects and engineers, insurance agencies, people involved in land use planning, and in various aspects of public and financial policies dealing with multi state earthquake disaster preparedness and emergency planning and management.

Ease of availability of Building Code: The building codes must be available in public domain. Census report must also incorporate building roof walls, number of storey as this will equip in better understanding of the vulnerability and will further enhance the dimensions of RVS. The RVS of all critical life line buildings followed by other government and private buildings should be taken up as an urgent step.

Need to enhance Medical capacity and capability As far as medical capacity is concerned despite the fact which came out after discussion with CMO, Guwahati that a lot of activities are conducted to make the medical and paramedical fully equipped during emergency situations. Still there is need to enhance medical capacity and capability. The emergency plans of the hospitals must be in place. On the basis of information provided by CSIR-NEIST project investigator, IIPA study team felt that for given deliverables funds allocated in the project were adequate and utilized in a prudent manner under well-structured heads.

Special strengthening in the following realms is required in the following sections.

- i) Effective pre-planning between the sponsoring agency and host agency
- ii) More involvement of private and other educational institutes in the activities on a regular basis.

- iii) Adoption of bottom up approach in planning all activities and exercises to ensure maximum participation and full coordination for best possible results
- iv) To conduct a full scale city wise analysis of all NE states. Nagaland and Meghalaya have already approved CSIR-NEIST for a full scan to be better prepared.

State governments and related agencies must make the relevant data accessible to the teams engaged in developing such hypothetical scenarios. The project would be extremely beneficial in generating awareness amongst the stakeholders about an earthquake of high magnitude in all the eight NE states. The loss to life and property can be minimized by incorporating the knowledge developed in this project in the relevant disaster management prepared plans of the states. All major stakeholder groups, leaders and policy makers, engineers and architects, disaster management professionals, and people at large will benefit from the knowledge developed during the project.

The outputs from the project will be useful for NDMA, NIDM, several Committees working on earthquake mitigation, architects and engineers, insurance agencies, people involved in land use planning, and in various aspects of public and financial policies dealing with multi state earthquake disaster preparedness and emergency planning and management.

ANNEXURES

ANNEXURE 1: GOGGLE FORM

EVALUATION OF M8.7 SHILLONG 1897 EARTHQUAKE

Evaluation of the project

* Required

1. Name *

2. Designation *

3. Mobile *

4. Landline

5. Email *

E. 1. Indicate to what extent you feel you have been able to achieve the objectives of the programme *

Mark only one oval per row.

	To a good extent	To some extent with some doubts	Partly with lot of doubts	Hardly at all
To understand the direct and direct consequences of high intensity Earth quakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To assess the the multi-state earthquake preparedness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To evaluate the State/District Disaster Management Plans and Identify Gaps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To identify and generate the greater level of awareness in community about the vulnerability of the region to high magnitude earthquake for risk reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To generate awareness amongst the stakeholders and community about an earthquake of high magnitude to see the functioning of SDMAs and allied agencies during the disastrous situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To facilitate inter-department and inter-state coordination in order to ensure organized and structured mechanism during the time of disaster	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Updating Response Plans at Various levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mass Casualty Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To develop Coordination between SDMAs, CSIR-NEIST and NDMA and all other stakeholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To Generate greater Awareness in the region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. 2. Were the programme objectives related to and relevant for : **Mark only one oval per row.*

	Extremely relevant	Very relevant	Somewhat relevant	Not relevant
Your present work on Earthquake preparedness and mitigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your overall knowledge and awareness about Earthquakes and its impact in NE region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your future work on Earth quake related issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. 3. Has the program increased your knowledge about : **Mark only one oval per row.*

	To a good extent	To some extent with some doubts	Partly with lot of doubts	Hardly at all
The impact and consequence of Earthquakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding the Disaster Management Plan your your state	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The functioning of the SDMA and the allied agencies during disastrous situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the dos and donts during the earthquakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the dos and donts during the earthquakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Programme Design**9. 4. (a) How would you rate the following ****Mark only one oval per row.*

	Excellent	Very Good	Good	Fair
Area and subject coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Orientation to practical problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distribution of time among various components of the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program Sequencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Capacity Development Programs(CDP) SDMA Authorities /officials of NDMA/State deppt.,NGOs

10. 5. a) How effective were the Capacity Development Program (IRS/TTX/Pre-MMEx) conducted by NDMA : *

Mark only one oval per row.

	To a good extent	To some extent with some doubts	Partly with lot of doubts	Hardly at all
To review and evaluate Emergency Response plan and Standard Operating Procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To review and evaluate the roles and responsibilities of the concerned stakeholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the need for Coordinated effort of various Emergency support services in the NE state	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the gaps in resources, manpower and equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To empower the vulnerable groups to fight against disaster	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To incorporate the concept of IRS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. 5. b. Were the programme objectives related to and relevant for: *

Mark only one oval per row.

	Extremely relevant	very relevant	somewhat relevant	not relevant at all
Your present work on Earthquake preparedness and mitigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your overall knowledge and awareness about Earthquakes and its impact in NE region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your future work on Earth quake related issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Publicity and Advertisement -News paper

12. 6. (a) Did you publish the awareness generation documents on Earth quake in your News paper

Mark only one oval.

- Yes
 NO
 Dont Know

13. 6. (b) In which page and column was it published *

Mark only one oval.

- First Page
- Other Pages
- Editors column

14. 6. (c) Do you think it helped to generate awareness amongst the public *

Mark only one oval.

- To great extent
- To some extent with doubts
- Partly with lot of doubts
- Hardly at all

15. 6. (d) How did the people react to it *

Mark only one oval.

- They wrote reviews about the materials published
- More programs-worshops,seminars,rallies conducted
- No reaction
- Not aware

7. Training on Rapid Visual Screening

16. 7. (a) In what extent do you think you have been benefited from the RVS Training

Mark only one oval.

- In what extent do you think you have been benefited from the RVS Training
- To a significant extent
- Somewhat
- Not at all

17. 7. (b). Indicate to what extent you feel you have been able to achieve the objectives of the programme

Mark only one oval per row.

	To a good extent	To some extent with some doubts	Partly with lot of doubts	Hardly at all
To use the damage grading system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To identify old structures and life line building for repair and renovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To strengthen the structures to prevent it from further damage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To judge the buildings for foundation type	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To infer a grade of probable damage ability based on RVS criteria	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the behaviour of load bearing and RC frame building during earthquakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the damage patterns due to engineering faults	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vulnerability assessment of buildings in advance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To Understand the damage pattern of the earth quakes based building structures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concept and use of IS codes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methods of categorizing damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To use RVS surey formats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. 7. (c). Were the programme objectives related to and relevant for:

Mark only one oval per row.

	Extremely relevant	Very relevant	Somewhat relevant	Not relevant
Your present work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your overall development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your future work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7 (d) Training Design

19. How would you rate the following

Mark only one oval per row.

	Excellent	Very Good	Good	Fair
Area and subject coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Orientation to practical problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distribution of time among various components of the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sequencing of the concepts and methodology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. 7(e) How do you rate the following training methods

Mark only one oval per row.

	Excellent	Very Good	Good	Fair
Lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Field Exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training Manual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pictures, slides, videos and clippings shown	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On site survey exercises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. 7. (f) How do you evaluate your overall experience at RVS Training

Mark only one oval per row.

	Highly valuable	Valuable	Fair	Not worthwhile
Rating of experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. School Sensitization Workshops

22. 8. (a) Indicate to what extent you feel the sensitization workshop has full filled the objectives *

Mark only one oval per row.

	To a good extent	To some extent with some doubts	Partly with lot of doubts	Hardly at all
Educate them about basic mitigation and preparedness measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To provide information and knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To inculcate the habit of earthquake safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. 8 (b) To what extent are you satisfied with the following? *

Mark only one oval per row.

	Satisfied fully	Satisfied to a large extent	Satisfied to a limited extent	Not satisfied at all
Lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Films and clippings shown	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstration of rescue operations & equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The resource documents and IEC materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The arrangement of the Venue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. 8. (c) Has there been any impact of the sensitization workshop? *

Mark only one oval.

- Yes
 No
 Dont Know

25. 8 (d) Do you think the workshop has enhanced the awareness and knowledge of the children wrt: *

Mark only one oval.

- Basics of Earth quakes and its impact
 First Aid Techniques to be followed for earthquake victims
 The prevention and safety measures to be adopted
 Dos and Dents
 Rescue and search methods adopted by personnel
 Fire Safety norms adopted

ANNEXURE II: FINANCIAL DETAILS OF STATES

NORTH-EAST INSTITUTE OF SCIENCE AND TECHNOLOGY
 (Formerly Regional Research Laboratory)
 (Council of Scientific & Industrial Research)
JORHAT - 785 006, ASSAM, INDIA
 Phone : 0376-239216/239217/239218
 SPARK : 239213, 239214, 239215
 Fax : 0376-239211/239212
 E-mail : neist@neist.res.in
 Website : www.neist.res.in



উত্তর-পূর্ব বিজ্ঞান ও প্রযুক্তি ইনস্টিটিউট
 (পূর্বে অঞ্চল গবেষণা ল্যাবরেটরি)
 (কৌশলিক গবেষণা ও প্রযুক্তি কাউন্সিল)
 জর্হাট-৭৮৫০০৬, অসম, ভারত
 ফোন - ০৩৭৬ ২৩৯২১৬/২৩৯২১৭/২৩৯২১৮
 ফ্যাক্স - ০৩৭৬ ২৩৯২১১/২৩৯২১২
 ই-মেইল - neist@neist.res.in
 ওয়েবসাইট - <http://www.neist.res.in>

Dr. R Duarah
 Chief Scientist & Area Coordinator
 No. NEIST.GS/Seismo/DM

30/10/2014

(Speed Post)

To

The Deputy Commissioner & Chairman
 District Disaster Management Authority,
 West Garo Hills,
 P.O. Tura, Meghalaya, Pin: 794001

Sub: Expenditure incurred during Mega Mock Exercise on 10th March 2014 at West Garo Hills, Tura (Meghalaya).

Ref: 1) Letter No. DM-DDMA/WGH/IRS/61/2014/683 of 22nd Oct 2014
 2) Letter No. RDG.123/2013/377 of 13th May 2014

Dear Sir,

This has a reference to your letter regarding reimbursement of expenditures incurred during the Mega Mock Exercise of 10th March 2014, under the NDMA sponsored project "M8.7 Shillong 1897 Earthquake Scenario Development: NE Multi-State Awareness Campaign". The sponsoring Authority NDMA allocates the budget for conduct of various CDP, RVS, SCS, MMEx and Awareness Generation activities by the State Disaster Management Authorities under this program. As per the MOU signed with NDMA, the prime responsibility of CSIR NEIST Jorhat is to create a Scientific Scenario for a repeat of the M8.7 Shillong Earthquake, and regulate fund for the conduct of Awareness generation programs by the SDMA's.

We confirm the receipt of the Utilization certificate (GFR-19A) and Expenditure Statement for an amount of Rs.9,18,584/- incurred by the DDMA - West Garo Hills, Tura, and the matter was referred to NDMA seeking necessary fund provision for reimbursement. Hope, you may kindly send me copies of NDMA/MSDMA letters relating to MMEx expenditures to strengthen my claim for reimbursement.

Best regards,
 Sincerely

R Duarah

SPEED POST
 30/10/2014
 North East Institute of Science and Technology
 Jorhat, Assam
 31.10.14

Encl: NDMA directives toward MMEx

Copy to: 1. The Deputy Secretary to the Government of Meghalaya, Shillong
 2. The Executive Officer, State Disaster Management Authority, Shillong



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 An ISO 9001:2000 Certified Organization



ofc.

NORTH-EAST INSTITUTE OF SCIENCE AND TECHNOLOGY
(Formerly Regional Research Laboratory)
(Council of Scientific & Industrial Research)
JORHAT - 785 006, ASSAM, INDIA
Phone: 0376-257011, 257012, 257013
FAX: 257011, 257012, 257013
E-mail: neist@neist.ernet.in
Website: www.neist.ernet.in



তেজ-গুণ বিজ্ঞান আৰু প্ৰযুক্তি ইন্সটিটিউট
গুৱাহাটী অঞ্চলীয় গৱেষণালয়
(কৌশলীয় আৰু শিল্প গৱেষণা কাউন্সিল)
জোৰহাট-৭৮৫০০৬, অসম, ভাৰত
ফোন: ০৩৭৬-২৫৭০১১, ২৫৭০১২, ২৫৭০১৩
ফেক্স: ২৫৭০১১, ২৫৭০১২, ২৫৭০১৩
ই-মেইল: neist@neist.ernet.in
ৱেবছাইট: <http://www.neist.ernet.in>

Dr. R Duarah
Chief Scientist & Area Coordinator

No. NEIST.GS/Seismo/DM (Speed Post)

25/11/2014

To

M G Kharkongor
Deputy Secretary to the Govt of Meghalaya
Revenue and Disaster Management
Main Secretariat Building
Shillong - 793 001 (Meghalaya)

Sub: Expenditure incurred towards MMEx, and reimbursement claim
Ref: Letter No. RDG.123/401 of 13th Nov 2014

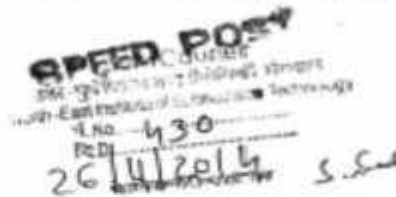
Dear Madam,

This has a reference to your letter regarding reimbursement of expenditures incurred during the Mega Mock Exercise of 10th March 2014 under the NDMA sponsored project "M8.7 Shillong 1897 Earthquake Scenario Development; NE Multi-State Awareness Campaign". Following the guidelines of the sponsoring authority, an amount of Rs. 2,00,00,000 (Rupees Two lakh) only was released to the Department of Revenue & Disaster Management, Govt of Meghalaya as-on for the conduct of MMEx in the State. However, to reimburse additional expenses as claimed the matter needs prior approval of NDMA, and this was intimated to you vide our letter of 30/10/2014.

Hope you may kindly write to NDMA, and obtain necessary clarification in this regard.

Best regards,
Sincerely

R Duarah



- Copy to: 1. The Deputy Secretary to the Govt of Meghalaya, R & DM Shillong
2. The Executive Officer, State Disaster Management Authority, Shillong
3. The Principal Secretary (Rev & DM and Education), Govt of Meghalaya
4. Mr. R S Saxena, Team Coordinator, Scenario Project, NDMA New Delhi.
5. Shri A K Jain, Under Secretary (Mitigation), NDMA New Delhi
6. The Joint Secretary (Mitigation), NDMA New Delhi



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of. letter may please be sent through speed post

ANNEXURE III: FINANCIAL EXPENDITURE STATEMENT

Expenditure Statement

GFR- 19A (Till 31st January, 2016)

Project: M 8.7 Shillong 1897 Earthquake Scenario Development
NE Multi State Awareness Campaign.

Grant No. NDMA 5-36/2013-Mit-1 dt 21/11/2013

Start date: 21 st November, 2013	Completion: Feb 2016	
Estimated Project Cost: Rs. 451.32 lac,	Received: Rs. 410,20600 lac + 1,26,000/-	
Amount Received Details		
Date of Receipt	Amount Received (Rupees in lakh)	Remarks
09/12/2013	27079200.00	Transfer from 31454767006 on 29/11/2013
22/01/2015	317800.00	EFT on 10/01/2015
31/03/2015	6500000.00	EFT on 31/03/2015
29/10/2015	7123600.00	EFT on 23/10/2015
Total	41020600.00	+ 1,26,000/-


Sl. No.	Item (s) (Budget Head)	Allocation (Rupees in lakh)	Expenditure (Rupees in lakh)
1.1	Support & accessories	4.00	5.00
1.2	Manpower (Hiring Coordinating Officer on contract)	56.16	47.00
1.3	Coordination & Office setup at Guwahati	6.96	Nil
1.4	Orientation & Capacity Building of Coordinating Officers	4.00	2.50
1.5	Coordination activity (Regional & State to Centre on Actuals)- and meeting of coordinating officers on actual.	13.24	2.00
1.6	Scenario Development (NEIST Jorhat) - Travel costs on Actuals	20.00	5.00
1.7	Data Analysis	27.00	6.00
1.8	Contingency & other miscellaneous cost for NEIST	3.50	3.00
1.9	CSIR-NEIST overhead @15 percent on Scenario Development study	20.26	10.58
Sub total for Scenario Development & Coordination		155.12	81.08
2	Rapid Visual Screening (RVS) - Six workshops	25.00	21.11
3	School Children sensitization (SCN) - Eight workshops	40.00	32.00
4	Awareness generation (AG)	130.00	130.00
5	Capacity Development Program (30 IRS, 19ITX & MDs) & Hiring of Faculty	69.00	36.33
6	Mega Mock Exercise (MMEX) - Tag 2014	2.00	15.80
7	CSIR-NEIST overhead cost for above activities listed 2 - 6	13.178	17.64
Sub - total (Items 2 - 7)		299.178	252.90
Total allocation (CSIR-NEIST Jorhat)		454.298	333.98

Total Amount Receive	Rs. 41020600.00
Total Expenditure	Rs. 33398000.00
Balance	Rs. 7622600.00 + 1,26,000/-


 Signature 26/01/2016
 Principal Investigator
 Date:


 DIRECTOR
 CSIR-NEIST, Jorhat
 Date: 26/01/2016
 Head/DIRECTOR

 CSIR North East Institute of Science & Technology
 Dispur-781008 (Assam) India. NEIST, Assam. NEIST


 Signature
 Finance & Accounts Officer
 Date: 26/01/2016
 Head and Accounts officer
 CSIR North East Institute of Science & Technology
 Dispur (Assam) India. NEIST, Assam



Dr. Shyamli Singh <shyamli.env@gmail.com>

EVALUATION_ IIPA

r duarah <RDuarah@hotmail.com>
To: "Dr. Shyamli Singh" <shyamli.env@gmail.com>

Thu, Apr 7, 2016 at 8:38 PM

Dear Dr Shyamli Singh,

The project "M8.7 Shillong 1897 Earthquake Scenario: NE Multi State Preparedness Campaign"

sponsored by NDMA has 2(two) major components - i) Public Awareness generation and ii)

developing a scientific scenario of loss and damage for a repeat of M 8.7 Earthquake in the region.

Hope, you have a copy of the project proposal. As per the MOU, the main responsibility of CSIR

NEIST Jorhat lies with the creation of a Scientific Scenario for a repeat of M 8.7 Earthquake. Also,

the institute takes the responsibility to regulate fund to State Disaster Management Authorities for

the conduct of Awareness generation and Capacity Development programs (IRS/TTx/MMEEx), and

all such programs were performed directly by NDMA without involving/consulting CSIR NEIST.

Further, the organizational activities - meetings/workshops (preparatory) for implementing Public

Awareness (including Media Plan) throughout NER were organized directly by NDMA with assistance

from ASDMA Guwahati. We received such information from NDMA for inclusion in the report. The

status of information available with us is given below:

1). List of the participants list along with their contact details (designation, email IDs, Phone number and address)

who participated in the coordination meeting of 27th January, 2014 held at Omio Kumar Das Institute of Social

Change and Development Guwahati: [List available with CSIR NEIST Jorhat](#)

2. The participant list along with their contact details (designation, email IDs, Phone number and address) who participated

in Capacity Development Programs (IRS/TTx/Pre-MMEx) being organized in two district head quarters of the capital city of

the eight NE states from September 2013- February 2014. ([Officials from NDMA, SDMA, Fire & Emergency Service, Police,](#)

[Medical practitioners, Civil Defense & Home Guards, SDRF and NDRF](#), details may be obtained from NDMA)

3. Participants list along with their contact details (designation, email IDs, Phone number and address) of the Media sensitization

workshop held on February 11th 2014 at NIRD campus, Guwahati. ([Representatives from NE States, Mr T Nandkumar, Media](#)

[Consultant, Ms Tripti Parule, Media Adviser and others from NDMA](#))

4. List of the News papers, channels where the awareness generation materials were publicized

[Local/regional News Papers \(English\) The Assam Tribune, The Telegraph, Morung Express, Valgani, Janera, Mawphor, The](#)

[Meghalaya Times, The Shillong times, NE Today, The Meghalaya Gurdian, The Arunachal Times, and in many other News Papers](#)

[in Local languages.](#)

5. Participants list along with their contact details (designation, email IDs, Phone number and address) of the preparatory

Mock Exercise conducted in 21-25th February, 2014 ([State Departments, Civil Defense, Paramilitary forces and SDRF](#)

- [details may be obtained from SDMA/NDMA](#))

6. List of Engineers and Architects along with their contact details(designation, email IDs, Phone number and address)

who participated in Raid Visual Screening (RVS) Trainings conducted in the capital cities of the NE states.

(List available with CSIR NEIST)

7. List of the medical professional and other stakeholders (designation, email IDs, Phone number and address) who participated

in Hospital safety and mass casualty Management workshops ([NDMA may be approached for details](#)).

8. List of schools along with the contact details (designation, email IDs, Phone number and address) of the Principal/Head

School who participated in School evacuation drill and sensitization workshop on Seismic Hazards. ([list of schools available](#))

9. List of Participants and resource persons along with contact details (designation, email IDs, Phone number and address)

of the Mock drill exercises conducted in State capitals and HQ towns on 10th March and 13th March, 2014 ([list available](#)).

All available information ([sl. No. 1, 4, 5, 6, 8 and 9](#)) will be communicated to you after my return from

Kohima on 10th April 2016.

Assamese New Year Greetings & Hearty welcome to Jorhat

Sincerely

Duarah

From: Dr. Shyamli Singh <shyamli.env@gmail.com>

Sent: Thursday, April 7, 2016 7:42 AM

To: rduarah@hotmail.com

Cc: Prof. Vinod Sharma

Subject: EVALUATION_ IIPA

[Quoted text hidden]

ANNEXURE V: REMINDERS FOR FILLING UP GOOGLE FORMS

School sensitization workshop, Manan Kendra, Secretariat Building, Gangtok, 12th September, 2014

Name and Designation of the Participant	Mobile Number	Email	Follow up
Ms. Durga Thapa, Teacher, Holy Cross Mont. School	9434631762	deethapa@yahoo.co.in	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Ms Keshwa Gautam , Teacher,	9434174675	Keshva.gtm@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Mr. Sharad Paudyal, PGT teacher	98325058950	sharad7822@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Mr. Chandra B. Manger, Teacher	9735099595	yashu37@hotmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Mr Bhim Raj Rai, Teacher	7872894483	bhimrajrai77@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Ms Sonam G. Bhutia , Teacher	9733077394	NA	Phone call on 26 th April ,2016
Mr. Sharad Tamar	9475711590	NA	Phone call on 26 th April ,2016 No response
Mr. Bikash Sonar, Teacher	9733042318	bikashsonar01@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Mr. Aswin Oberoi, officer, civil defense	9434022313	aswinigantok@yahoo.co.in	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Mr. Ramesh Periwal, Senior Officer	9832092092	periwalramesh95@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016
Mr. Ritam Biswakarma, Teacher	9832033308	ritambiswakarma@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10 th May, 2016

MsRashmi Rai, GT	9641734672	rashmiraitropa@yahoo.com	Phone call & Email sent on 26 th April ,2016 Phone call 10th May, 2016
Ms. ArchaLepha,Teacher	9832613380	urshalasingnu@yahoo.co.in	Phone call & Email sent on 26 th April ,2016 Phone call 10th May, 2016
Mr. Ezaz Ahmed, Teacher	8906639840	ezazahmed@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10th May, 2016
Mr. ChukeBhutia, Teacher	9609875813	bchukey@gmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10th May, 2016
Ms. Rajiv Ranjan Sinha, TGT	9800016403	rr5012@gmail.com	Email sent on 26 th April ,2016
MrMilliLiber,Teacher	8145+41448	millimohori@gmail.com	Email sent on 26 th April ,2016
Dr. Anne Deborah Rai	9833-70350	dr_anne_in@yahoo.com	Email sent on 26 th ,2016
MsSonamWogyal	9434216641	sonamwongyal@hotmail.com	Phone call & Email sent on 26 th April ,2016 Phone call 10th May, 2016

Participants in RVS - Sikkim

Name and Designation of the Participant	Mobile Number	Email	Follow up
MrLopsang P. Bhutia, Junior Engineer, HRDD	9734119961	l-penjo@yahoo.com	Phone call on 25 th April , 2016 email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrTsetenBhutia Junior Engineer HRDD	8159078523	NA	Phone call on 25 th April ,
Mr B.B. Khan ,Junior Engineer,Gangtok Municipal Corporation	9434103345	bbkhan@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrBinodAdhikari, Divisional Engineer, UD&HD	9832090900	binodkarigtk@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016

MsYeshayChokkiBh utia,Junior Engineer ,HRDD	9735986177	Yeshayb90@yahoo.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr R. Tamang,Asst Engineer ,PHED	9475065462	Tamangraju007@yahoo.in	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsPuspa L Gurung, Divisional Engineer, Irrigation & FC	9609980873	NA	Phone call on 25 th April ,
Mr Karma PuntsoTsheringBhuti a, Additional Chief Engineer, WS & PHED	9593261675	kptsher@hotmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsChodenPhalungth arpa,Divisional Engineer RM&DD	9434447918	chodenpt@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsLawangNedup,As st.,Engineer, Irrigation & FC	9733111897	Lhawang_kc@yahoo.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr D C Khatiwara, Divisional Engineer WS & PHED	9434153057	dekhatiwara@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrBasantPoudyel, Divisional Engineer HC,HS & FW	9434126940	Basantp79@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsMamtaDeokota Junior Engineer RM&DD	8900667220	deokotamamta@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrSurendra Kr Singh, Junior Engineer, RM&DD	7384805365	Cret_1982@yahoo.co.in	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrBikashChettri Asst. Engineer RM&DD	9474528801	bikaskchettri36@yahoo.in	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrHishey N Bhutia Junior Engineer, East DistZilla Perished	7797630907	angenpa1990@yahoo.in	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016

MrSushantaRuchal Junior Engineer, East DistZilla Perished	8906553073	sushdaz@yahoo.in	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsKessangDomaBh utia, Junior Engineer ,East DistZilla Perished	9609857432	kessangbhutia23@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016April
MsPrabina Pradhan Junior Engineer, RM&DD	7602634885	pdpradhan1@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsTresa Rai ,Asst Engineer ,B&HD	9474530890	NA	Phone call on 25 th April ,
MrKunzanZigdelAss t Engineer Health & FW	9434204050	NA	Phone call on 25 th April ,
MrMohd. Amanullah,Asst Engineer ,CWC	9474694594	amancwc@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrSanjibMisra Junior Engineer, CWC	9674060038	sanjib.misra@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsRaksha Nepal Asst Engineer B&HD	9800110776	rakshanepal@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsPunam Pradhan Asst Engineer, Irrigation &FC	9434143792	saipunam07@yahoo.co.in	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr K C Sharma Senior Engineer B & HD	9434061727	adhikarisuman@yahoo.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MrNima Sherpa Joint Director/ Geologist, DMME	9434137219	NA	Phone call on 25 th April ,
MrTakendraSharma, Asst Geologist ,DMMG	9734547103	tikendra123@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
MsPrakriti Pradhan Asst Geologist, DMMG	8016210096	prakritipradhan88@yahoo.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016

Mr T. Longchari Geologist, GSI	9436602719	-NA	Phone call on 25 th April ,
Mr Sanjay Wahi, Supdt Geologist ,GIS	9474108809	NA	Phone call on 25 th April , ,2016
Mr Keshar Kr. Luitel, Asst Geologist, DMMG	9474982284	keshar.luitel@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr Dinker Gurung, SCTP, UD&HD	9933032718	gurungdinker@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr Honey Lamichaney, ATP, UD&HD	9832504995	honeylamichaney@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr Obed Rai, ATP (S/W), UD&HD	9933443442	obedbhokim@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Ms Yogeeta Rai, Joint C Architect, B&HD	9434110063	yogeeta_p@rediff.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr Sameer Rai Asst Architect B&HD	9593386399	plasmid86@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016
Mr G Chopel Senior Architect, B & HD	9434143943	gasychopel@gmail.com	Phone call on 25 th April , email mail sent Follow up call on 9 th May, reminder mail sent on 10 th May,2016

Participants: RVS, AGARTALA

Sl No	Name and Designation of the Participant	Mobile Number	Email	Follow up
1	Jhuma Rani Das, AE, PWD (R & B)	09436460369	erjhumadas@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
2	Sima Das, AE, PWD (R & B)	09436463366	Sima.agartala@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
3	Surjalal Das, PWD (R & B)	09402141252	Ssantrat.debnath@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016

4	DebopamDebnath,JE PWD (R & B)	09485141656	Satyadas74@rediffmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
5	Satyabrata Das PWD (R & B)	09436590252	NA	Phone call on 26 th Apr., 2016
6	Jagannath Chakraborty JE PWD (R & B)	09436516409	NA	Phone call on 26 th Apr., 2016
7	Rabindra Kr Das JE PWD (R & B)	09436134153	NA	Phone call on 26 th Apr., 2016
8	SubirAcharjee PWD (R & B)	09436496649	subiracharjee@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
9	Sujit Ghosh PWD (R & B)	09436169719	NA	Phone call on 26 th Apr., 2016
10	NimaiChBhowmik JE PWD (R & B)	09436129306	debopam_debnath@yahoo.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
11	Pannalal Chakraborty AE DWS	09436471898	NA	Phone call on 26 th Apr., 2016
12	Chayna Roy AE DWS	09436461336	NA	Phone call on 26 th Apr., 2016
13	MintuDebbarma THCB	09774427302	NA	Phone call on 26 th Apr., 2016
14	Dipankar Sarkar JE PWD (R & B)	09856750807	dipsi2002@gmail.com	Phone call on 26 th Apr., 2016
15	SubrataDey JE AMC	09774214003	NA	Phone call on 26 th Apr., 2016
16	SutapaJamatia, JE AMC	08413993124	sitajmt@gmail.com	Phone call on 26 th Apr., 2016
17	Saikat Das JE AMC	09863178705	Saikatd17@gmail.com	Phone call on 26 th Apr., 2016
18	Victor Choudhury, JE, AMC	09774133372	enggvictor@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
19	ShubhankarDebbarma,As st Prof, TIT	09612207360	shubhankardebbarma@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
20	Subbiar Kr Jamatia,Asst Prof TIT	09612461607	subirkumarjamatia@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
21	MoutoshiSaha,Asst Prof, TIT	08575148021	moutoshinita@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
22	Shubhra Das, Asst Prof , NIT	09612013369	suvranil@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
23	SajalLaskar, JE, PWD (R & B)	09336456270	NA	Phone call on 26 th Apr., 2016
24	Pradyot Das, JE,	09402151700	NA	Phone call on 26 th Apr., 2016
25	NiranjanMajumder, PWD (R & B)	09436122623	pradyotdas73@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
26	TapanCh Pal, JE DWS	09436481325	NA	Phone call on 26 th Apr., 2016

27	MausumiPurkayastha, WR (PWD)	09436456055	NA	Phone call on 26 th Apr., 2016
28	BikramjitSengupta, JE,	09774926365	biks.wolverint@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
29	Rupa Sarkar, WR (PWD)	09436578831	NA	Phone call on 26 th Apr., 2016
30	Debasis Das, JE, WR (PWD)	09436473860	debasis1969@yahoo.in	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
31	Sudip Das THCB	09436454248	sudipdasac@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
32	Goutam Roy JE, PWD (R & B)	09436132560	goutamroy0@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
33	Tanmoy Das	09436138183	NA	Phone call on 26 th Apr., 2016
34	JoyramBhowmik JE, Education	09774555887	Joyram88@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
35	Sukanta Paul	09862086098	NA	Phone call on 26 th Apr., 2016
36	AbhijitSaha JE	09436377620	erabhijit.saha77@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
37	Suman Das RD	09436188544	d-suman@yahoo.co.in	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016
38	UttamkrBanik JE	09862558936	NA	Phone call on 26 th Apr., 2016
39	DebosmitaBhowmik	09612730662	Debosmita512@gmail.com	Phone call on 26 th Apr., 2016 Email sent on 27 th May, 2016

List of Participants in RVS – Meghalaya

NAME & DESIGNATION	MOBILE NUMBER	EMAIL	FOLLOW UP
SmtMarkordorLyngdoh , Executive Engineer Design Division, Megh Power Generation CO.LTD	9856024921	eedesignumiam@gmail.com	Phone call and email 27th Apr, 2016,
SmtBalarisha N Khyriem, Executive Engineer IDSHP, Megh Power Generation CO.LTD	9863038490	bala- khyriem@yahoo.co.in	Phone call and email 27th Apr
Shri R M Kyndiah Assistant Engineer Urban Affairs	9436307426	ralph.1129@yahoo.com	Phone call and email 27th Apr

Shri N Hussain, Urban Affairs, Assistant Engineer	9436119683	hussainnazumoni@gmail.com	Phone call and email 27th Apr
SMT B Surong, Urban Affairs, Assistant Architect	9862096896	Surongb@gmail.com	Phone call and email 27th Apr
Shri ElangmikIShullai, Assistant Architect Urban Affairs	8575786161	elangshullai@yahoo.com	Phone call and email 27th Apr
Shri RajoySohkhlet, Executive Engineer & Town planning officer MUDA	9436112689	rajsohk@gmail.com	Phone call and email 27th Apr
Shri DapbiangLathongMuda Assistant Engineer	9863290850	daplathong@gmail.com	Phone call and email 27th Apr
Shri lasmedyRymbui, Assistant Architect Muda	9856028674	lasmedy@rediffmail.com	Phone call and email 27th Apr
Shri Lamborlang K Jyrwa, Assistant Architect Muda	9856500316	lamborlang.kj@gmail.com	Phone call and email 27th Apr
ShriHiambokSBasaiaw moiT Executive Engineer PWD (R), Shillong Central Division, Shillong	9436119557	eescd72@gmail.com	Phone call and email 27th Apr
Shri K KMawa Executive Engineer PWD (R), Ranikor division, Ranikor	9436335534	mawakk@gmail.com	Phone call and email 27th Apr
Shri James N S Lakiang Executive Engineer, MUDA	9436302887	jaminlak@yahoo.co.in	Phone call and email 27th Apr
SmtiOdelia K Marak Executive Engineer PWD (R), Tura North division, TURA	9436114458/9862564401/ 03651222327	marakok@gmail.com	Phone call and email 27th Apr
SHRI Chonseng N Sangma executive engineer pwd (R), Baringapara	9436112302	cnsangma@rediffmail.com/ 9862580800	Phone call and email 27th Apr
Shri Beda Thongni Executive Engineer,	9436111309	bthongni55@gmail.com	Phone call and email 27th Apr
Shri B S Thangkhiew Senior Architect PWD (BLDGS), Shillong	9436304342	bansansingh@yahoo.co.in	Phone call and email 27th Apr
Shri Dolreich J Diengdoh Assistant Executive Engineer PWD (R),	9863062460	dolzmail@gmail.com	Phone call and email 27th Apr

Shillong "B" SUB Division, Shillong			
Shri Hopeful Syiemiong Asst Engineer , PWD (buildings), Megh, Shillong	9089077776	lsyiemiong@gmail.com	Phone call and email 27th Apr
Shri V S SadavisaRoa Technical officer, Commander Works engineer, Shillong	9436587920	roavss@gmail.com	Phone call and email 27th Apr
Shri chayandhar, SDO, PHE	9436110851	chayan_dhar@redioffmail.com	Phone call and email 27th Apr
MD Hafeezuddin, ASST ENGINEER, PHE	9863063116	mdhafeez66@rediffmail.com	Phone call and email 27th Apr
MR S W nongbri, Asst Executive Engineer BLDGS, PWD (B) Shillong Building Division	9436100101	swnongbri@gmail.com	Phone call and email 27th Apr
SHRI KerdalangSiej, SDO, PHE, Pyrursla sub division	9615018500	kerdalangsiej@yahoo.com	Phone call and email 27th Apr
Shri JameS M kharkongor, SDO (TC) ,PHE	8575703802	jmkkor21@gmail.com	Phone call and email 27th Apr
Shri Deibormi TOI SDO, PHE, Sohra Sub div	9863423037	derbormia@gmail.com	Phone call and email 27th Apr
Shri R RLYngskor SDO, Water RESOURCES	9856127482	lyngskorr@gmail.com	Phone call and email 27th Apr
Shri Tatal K Marak Asst Engineer, PHE	8794353959	tatalmarak1@gmail.com	Phone call and email 27th Apr
Shri Kiki Pakma, Asst Executive Engineer, PWD Jowai Buildings Division	9856125807	ki.pakma7@yahoo.com	Phone call and email 27th Apr
Shri Dilip Kumar Borah, SDO, PHE	9436108409	borahdk@gmail.com	Phone call and email 27th Apr

List of Participants in RVS – Nagaland

sr. no.	Name of the trainee		Email	Follow up
1	KeviyenuoLinyü, junior engineer	9774416156	NA	Phone call 28 th April,2016

2	KhesiZhasa, junior engineer	9863026151	NA	Phone call 28 th April,2016
3	KevisinoAngami, asst. architect	8974003731	kevisino10@gmail.com	Phone call and email sent on 28 th Apr, 2016
4	Lhoqheto Sumi, junior engineer	9436618596	NA	Phone call 28 th Apr,
5	RuchusengTep, junior engineer	9436200720	NA	Phone call 28 th Apr
6	VenutaKezo, junior engineer	9612184409	NA	Phone call 28 th Apr
7	Theluo-o Rutsa, draftman-ii architect	9615453211	theluurutsa@rocketmail.com	Phone call 28 th Apr
8	AlemsunepOzukum, .o ii civil	9089822934	NA	Phone call 28 th Apr
9	W.imlikokba, junior engineer	9089103524	imlikokbow@gmail.com	Phone call 28 th Apr
10	Takamerenjamir , junior engineer	9615670763	jamirt@rocketmail.com	Phone call 28 th Apr
11	ChangsangJum, junior engineer	8415830775	NA	Phone call 28 th Apr
12	Vizodelkhatso, executive engineer	9436831109	khatsovizodel83@gmail.com	Phone call 28 th Apr
13	ToluhoKiba , m.o mech. oversear	8974085678	kibat@gmail.com	Phone call 28 th Apr
14	Chanbemolotha ,chief engineer (housing)	9612169906	NA	Phone call 28 th Apr
15	Keviwhelie chase, junior engineer	8731934601	chasek@gmail.com	Phone call 28 th Apr
16	Longchundilongchar, junior engineer	9856556801	NA	Phone call 28 th Apr
17	Bendanginba,, junior engineer	9856546064	NA	Phone call 28 th Apr
18	MhasivilieSavino, junior engineer	9436405518	NA	Phone call 28 th Apr
19	Jenithungkikon, sdo	9615342638	NA	Phone call 28 th Apr
20	Moanungsangpongener, junior engineer	9436011290	Implitemjenjamir887@gmail.com	Phone call 28 th Apr
21	Imsulemba , junior engineer	9856864948		Phone call 28 th Apr
22	Kusalohé, junior engineer	9862262534		

Phone call 28th Apr

Participant RVS training at Assam

Sr No	Name Of Officers	Contact No	Email ID	
	KOKRAJHAR			
1	Ajit Kr Bora, JE, PD,DRDA	9435027107	ajitbera.phed@gmail.com	Phone call and Email 29 th Apr
2	KarunaSagar Das JE, DRDA	7399032214	Sagarika1968@gmail.com	Phone call and Email 29 th Apr

7	Rajiv Das	9707374940	mailto:rajb_das@rediffmail.com	Phone call and Email 29 th Apr
8	PrabirNath DHUBRI	9859970080	NA	Phone call 29 th Apr
2	Jagadish Das	9954237472	NA	Phone call 29 th Apr
3	Somarivoti Das	9854641128	NA	Phone call 29 th Apr
4	Arjun Kalita LAKHIMPUR	9435129323	NA	Phone call 29 th Apr
1	BhagyaDeuri	9401021963	deurib@gmail.com	Phone call and Email 29 th Apr
2	Simanta Prakash Neog	9435085926	sarojstyle@gmail.com	Phone call and Email 29 th Apr
3	Babul Dutta BONGAIGAON	7896147184	Duttab03@gmail.com	
1	Gautam Das	9435634021	NA	Phone call 29 th Apr
2	Ajit Kumar Das	9435640045	NA	Phone call 29 th Apr
3	Wazed Ali Ahmed	9435124920	NA	Phone call 29 th Apr
4	RustamAali Khan	9957105760	NA	Phone call 29 th Apr
1	ShailenKhaklary	9435479510	sailenkhaklary@rocketmail.com	Phone call and Email 29 th Apr
2	BidulBaruah	9435166307	bidulborruah@yahoo.com	Phone call and Email 29 th Apr
3	SatyanEngti	8486973627	NA	
4	RinkuTeron	9613960438	rinkuteron@gmail.com	
5	Haren Hanse	9435956727	harenh@gmail.com	Phone call and Email 29 th Apr
6	ProbinTerang DIBRUGARH	8822795351	terean_p@gmail.com	Phone call and Email 29 th Apr
1	Bhabananda Das GOLAGHAT	9957862270	NA	Phone call 29 th Apr
1	Dinesh Das BARPETA	9957588045	dasd02@gmail.com	Phone call and Email 29 th Apr
1	Naba Kumar Sarma JORHAT	94355-61505	sarmank@gmail.com	Phone call and Email 29 th Apr
1	DhrubaJyotiGogoi	9954304965	NA	
2	Deepak Narzary			
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2	SahidulRehman	9435313552		
3	Kalyan Paul	9435074593	sreelaxmitraderskj@rediffmail.com	Phone call and Email 29 th Apr
Sr No	Name Of Officers	Contact No	Email ID	
	MORIGAON			
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	CHIRANG			
1	Gobardhan Das	9854364762	gobardhandaas@gmail.com	Phone call and Email 29 th Apr
	CACHAR			
1	Ashok Kumar Das	9435079019	NA	
2	Abu BakkarMazumder	9435945233	abubakkarmazumder@gmail.com	Phone call and Email 29 th Apr
	BAKSA			
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1	DhenuramPayun	9435681092	NA	Phone call 29 th Apr
	GUWAHATI			
1	GolapCh Borah	9864324724	NA	Phone call 29 th Apr
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3	Rajib Dutta	9957215665	Dharanidhardeka25@gmail.com	Phone call and Email 29 th Apr
4	HariDeka	9864145201	hriishi.deka@gmail.com	Phone call and Email 29 th Apr
5	Sirajjudin Ahmed	9864080102	NA	Phone call 29 th Apr
6	Anil Talukdar	9864037494	NA	Phone call 29 th Apr
7	PranabJvoti Dutta	9864010501	NA	Phone call 29 th Apr
8	Birendra Kumar Patowary	9957249894	NA	Phone call 29 th Apr
9	DhirNath Brahma	9954024500	NA	Phone call 29 th Apr
10	Diganta Das	9854388843	NA	Phone call 29 th Apr
11	DulalCh Das	9401021963	NA	Phone call 29 th Apr
	SONITPUR			
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3	Dwijen Borah	9435248337	NA	
	DARRANG			
1	JyotishDeka	9854424782	rmsadarrang@gmail.com	Phone call and Email 29 th Apr
	NAGAON			
1	SankarDebroy	9435362172	NA	
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1	Sumanta Borah	8486175408	NA	
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1	Chandra H Mahanta	9954019365	NA	

Participant List of CDP training Gangtok, Is January, 2014

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7	Mr B.K Rai	9434213921	NA	Phone call 7 th May,2016
8	Mr B.K Rai	9635288860	NA	Phone call 7 th May,2016
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20	Mr. S.KTanmay	9734927489	tanmabysk@gmail.com	Phone call and email 7 th May

CDP from 17th -19th ,October 2013 at Mini Auditorium, Rongkhon

sr. no.	Name of the trainee	ph	Email	Follow up
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3	Dr. June Shira	9862313094	June2007@yahoo.com	Phone call and email 11 th May
4	Mr. MarkoraSangma	9856248003		Phone call and email 11 th May
5	Mr.Manntpandey	94101347307	pandeym@gmail.com	Phone call and email 11 th May
6	Mr. PatrikMarak	9436113163	Sephe_tura@yahoo.com	Phone call and email 11 th May
7	CDP Program at Amvassa, Tripura on 27 th Dec,2013			
8	Mr. Nandlal Das, Station Officer, Fire services	9436482085	Nandalaldas37@gmail.com	Phone call and email 12 ^h May ,2016
9	Mr. AjitchLodha,SE	9436496600	Se3rdpwd@gmail.com	Phone call and email 12 ^h May
10	MrTamalMajumdar	9436129055	Majumdart3@gmail.co	Phone call and email 12 ^h May
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19	Mr. Maniklal Das	9436120504	dasmaniklal@gmail.com	Phone call and email 12 ^h May

20	Mr.SBhattaharya,civil defense	9436537114	bhattacharyas@gmail.com	Phone call and email 12 th May
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PARTICIPANTS OF THE CONSULTATIVE AT ASDMA, DISPUR, ASSAM,27thAPRIL,2016

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