



SUMMARY REPORT

Workshop on
"Urban Earthquake Risk Management"
4 Mar to 8 Mar 07
Kerman, Iran



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1. Title of the Workshop

Name: Workshop on “Urban Earthquake Risk Management”

2. Organization of the Workshop

Organizers:

1. United Nation Development Program, Iran
2. Management and Planning Organization of Iran
3. Kerman Province-Governor Office, Strengthening Capacities for Disaster Risk Management in Iran

Technical Assistant provided by:

1. Asian Disaster Preparedness Center (ADPC)

Contact persons:

N.M.S.I. Arambepola (UDRM Director). E-mail: arambepola@adpc.net

Sara Ahrari (Project Manager). Email: sahrari@adpc.net

Established in 1986, ADPC is a leading regional resource center dedicated to disaster reduction. ADPC works with governments, NGOs and communities of the Asia and Pacific regions to strengthen their capacities in disaster preparedness, mitigation and response through training, technical assistance, regional program management, country project demonstration, information sharing and research.

2. National Society for Earthquake Technology-Nepal

Contact person:

Ramesh Guragain (Director of Earthquake Engineering and Research Division): Email:

rguragain@nset.org.np

Programme Development & Supervision by:

United Nation Development Programme

Dr. Victoria Kianpour Atabaki (Program Analyst)

Energy, Environment and Disaster Management Cluster

Email: Victoria.kianpour@undp.org

3. Location of the Workshop

Pars Hotel, Kerman, Iran

4. Starting date and duration of the Workshop

The period of the training course was from Mar 04 to 08 Mar 2007.

5. Workshop participants

The total number of the participants in the course was 35. There were 6 female participants and 29 male participants.

The training course participants were from different government organizations, involve in earthquake risk management in Kerman city. The representatives of the “International Institute of Earthquake Engineering and Seismology (IIEES)”, “Natural Disaster Research Center” and “Hamyanan NGO” were also present. The list of Participants is provided in the Annex III of this report.

6. Workshop Introduction

In the aftermath of the Bam earthquake, there has been a renewed commitment on behalf of various Government and UN agencies in Iran to intensify efforts towards securing Iran against future disaster risks. The Government-UNDP Five-year National Joint Programme is the flag-ship programme of UN/UNDP in Iran for reducing disaster risks. The programme objectives are aligned with the broad outcomes identified by the UNDAF/UNDP Country Programme for the Islamic Republic of Iran (2005-2009) in the area of disaster risk management. The latter’s emphasis on building strong disaster risk management capacities, especially through garnering community awareness and participation; enhancing coordination mechanisms amongst stakeholders at the local and national levels; and developing systems for effective disaster risk management at all levels to develop a strategy for reducing disaster risk in Iran.

Effective and efficient disaster risk management needs multi-disciplinary and multi-sectorial approaches which are not only limited to ensuring structures, but approaches, in which effective, efficient and result-oriented integration; cooperation and coordination with wide range of actors and stakeholders are prerequisites.

To support achieving the programme outcomes, UNDP has contracted the Asian Disaster Preparedness Center (ADPC) to develop and conduct the workshops to strengthen National and Regional Capacities and to improve the knowledge networking in the area of Urban Earthquake Disaster Risk Management in the Central and Southwest Asian region, as well as developing in participants advanced skills in facilitation, communication and networking for integrated and participatory disaster risk management with actors, partners, clients, stakeholders and beneficiaries.

The “Urban Earthquake Risk Management” was developed as part of these series of workshops and conducted in Gourgan and Kerman, selected as two demonstrated cities, known as two most disaster prone cities of Iran.

7. Implementation of the Workshop

7.1 Conduct of the Workshop

Four different Modules have been considered for this workshop:

- Module 1: Overview*
- Session 1: Disaster Risk Management Terminology
- Session 2: Urbanization and Governance
- Session 3: Earthquake Basic Hazard
- Session 4: Vulnerability and Impacts
- Module 2: Risk Assessment & Scenario Development*
- Session 5: Exposed Vulnerability
- Session 6: Tools (Radius)
- Session 7: Practical Session
- Session 8: Inventory and Fragility
- Session 9: Microzonation
- Session 10: Assessment of Physical damage and loss estimation
- Session 11: Existing Capacity Assessment
- Session 12: Scenario building practical
- Module 3: Action Plan*
- Session 13: Stake Holder and Stake analysis, Action Planning Process
- Session 14: Activities to cover all phases and components of the plan (Actions, roles, resources), Prioritization (Short/Medium/long term)
- Session 15: Practical on Action Plan
- Module 4: Implementation of Earthquake Vulnerability Reduction (EVR) Program in Cities*
- Session 16: EVR Options (general)
- Session 17: Structural (by laws, building code implementation, guidelines for non-engineered buildings, model construction)
- Session 18: on-structural measures (Policy, training, awareness)
- Session 19: Institutionalization EVR and developing Emergency response capacity in the city
- Session 20: Case Studies

Annex I contains descriptions of all the Modules and their objectives (as planned). Annex II contains the Workshop schedule as planned. In summary, the Workshop was implemented as follows:

04/03/07 – First day of the Workshop: Opening Ceremony and Overview

The opening ceremony featured speaker from Kerman Province Governor Office. The National



Project Director, Mr. Hashemi, also spoke about the current status of the project and its objectives.

The participants were provided by an overview of the workshop. The participants were divided into four groups. The groups created, were given the responsibility to take charge of administrative part of the program in the following days.

Fig 1. Inauguration ceremony

The participants then got to sharpen their knowledge about the terminology of Disaster Management in their groups. The day went on providing an overview on the matter to the participants.



Fig 2. Expectation Check

05/03/07 – Second day of the Workshop: Risk Assessment

The day started by Group One review of the previous day.

The day went on as scheduled and the participants were provided with more information on vulnerability and risk. They also got to know how to work with Radius tool and had a practical session on it. The participants had fruitful discussions among during the practical session and seemed to get a clear understanding from the Radius Tool.

06/03/07 –Third day of the Workshop: Scenario Development

Kerman Disaster Management Center of Municipality of Kerman (KDMC), created after Bam earthquake, has done extensive work in developing a “Search & Rescue Software”, microzonation of Kerman city and risk assessment. To share their experiences with the rest of the participants, the plan of the day was rescheduled to accommodate the presentations on “Introduction to Search & Rescue Software” and “Microzonation of the Kerman City”, after review of the previous day by the second group.



Fig 3. Group work

The rest of the day was focused on the process of developing a scenario. The subjects presented were: Microzonation, Assessment of Physical damage & loss estimation, existing capacity assessment & Scenario Building. After the capacity assessment session the participants were divided into four groups to do a SWOT analysis for two of five priority actions of HFA 2005-2015, for one of the organizations in Kerman city. The organizations selected by the participants were: i) Kerman Governor Office, ii) Kerman Municipality iii) Engineering Association of Kerman and iv) Kerman Ministry of Education .

In the afternoon, after a short presentation of scenario building the participants were asked to answer, in their groups, three main questions which are needed to develop a scenario for earthquake in Kerman City: a) which information/maps need to be translated into the scenario, b) who can be an appropriate representative of Kerman City; c) For how long after an earthquake the scenario should be developed.

The majority believed that information regarding after disaster “where to go places (safe places)” should be provided to public. Two of the groups suggested that “Agha Mashallah”, a comic character from a show currently broadcasted in Kerman to pass disaster related



Fig 4. Participants working with RADIUS

messages to public in a humorous way should be selected for the scenario.

Based on the experience from Bam, the majority believed minimum three years should be considered for the duration of the scenario. More in depth consultation, involving more people, should be carried out to get more specific results to be used in the scenario.



Fig 5. Facilitators' Presentation

07/03/07 –Fourth day of the Workshop: Action Plan

After the review of the previous day by the third group, the representative of KDMC presented the results of risk assessment of Kerman City. The rest of the fourth day was intended to give participants a perspective on different steps of action planning. Since the return tickets of the facilitators were purchased for Thursday noon, the plan of the last two days were revised to accommodate more sessions in the 4th day and finish the 5th day by noon. The presentations included “Stake Holder and Stake Holder Analysis, Action Planning Process”, “activities to cover all phases, components of the plan (Actions, roles, resources) and Prioritization (short/medium/long term)”. For the practical part of the action planning the participants were divided into three groups. A list of actions which can be carried out during: i) Mitigation and Preparedness, ii) Emergency Response and Relief and iii) Rehabilitation and Reconstruction; were given to these groups and they were asked to identify who the responsible organization is, what is the status of Program and Activities and Time Frame of the activity (short/Medium and Long Term). They were also asked to identify three most crucial activities which needs to be carried out in Kerman City and prioritize those three actions. After each group presented the results of their consultations, the participants were asked to prioritize individually the total nine priorities of action presented by each group. The results of this exercise led to the following priorities for action plan in Kerman city:

1. Develop a comprehensive Plan for Disaster Management Plan in Kerman City (including training of the stakeholders, creating a culture of disaster preparedness and public awareness)
2. Planning for “Search & Rescue” activities and training of the fire fighting teams for the emergency
3. Evaluation of all the structures and infrastructures in the Kerman city
4. Provision of the Medical facilities for the emergency response
5. Emergency Response activities
6. Ensuring the security
7. Removing the rubbles
8. Planning for rehabilitation, reconstruction and retrofitting of the structures
9. Reconstruction of city infrastructures and access ways

In the afternoon, one of the participants from Jihad Agricultural Organization shared their experience on the concept of “Safe Bed”. The concept of “Safe Room” has been introduced recently in Iran to be considered for the old houses in Iran where the possibility of the retrofitting the entire house is low. The “Safe Bed” follows the same concept and it can be used to reduce the vulnerability of the household with regard to earthquake. Discussions on structural and non-structural measures to be taken to reduce vulnerability in the cities, ended the fourth day of the workshop.

08/03/07 –Fifth day of the Workshop: Implementation of EVR program in cities



Fig 6. Participants' discussion

The last day of workshop started with the review of the previous day by the fourth group. Presentations on Institutionalization EVR and developing Emergency Response capacity in the city were also provided. The workshop was ended by presenting case studies from Nepal and India. An evaluation also was done by the project staffs in Kerman.

A detailed version of the program can be found in the Annex II.

7.2 Daily schedule

The workshop was schedule from 09:00hrs to 17:00hr with morning and afternoon coffee breaks of 30 minutes. Based on the participants request as of the 2nd day it was conducted from 08:00 to 16:00hr.

7.3 Resource persons

From ADPC

Ms. Sara Ahrari

Project Manager

Urban Disaster Risk Management (UDRM)

Sara joined ADPC in January 2007. She is managing Iran project in partnership with UNDP, intended to strengthen capacities for Disaster Risk Management (DRM) in Iran. Before joining ADPC, Sara worked for different INGOs and UN organizations in their emergency response programs and rehabilitation/reconstruction projects after major natural disasters (earthquake and Tsunami) in Iran, Pakistan and Indonesia. She has also led several Civil Engineering projects in different consultant companies in Iran. She has obtained her master degree from Carleton University, Ottawa/Canada. In her master's thesis she focused on studying the significance of using uniform hazard spectra (UHS) in the design of bridges, and in particular the soil amplification effects and the ductility demand of bridges.

Mr. Anup Karanth

Program Coordinator (PROMISE)

UDRM

Anup joined ADPC in January 2007 and is currently involved in the PROMISE Programme.

Before joining ADPC, Anup worked with UNDP India for 46 months in the capacity of Project Officer (Urban Earthquake Vulnerability Reduction Project) and later as Project Coordinator (UEVR Project, a sub-comonenet of the Govt of India-UNDP Didaster Risk management Programme). The UEVR Project is currently in the fourth year of

implementation in 38 urban centres falling in medium to high risk seismic zones of India. He provided technical support to a team of 32 UN Volunteers and supported the city administration in the programme implementation. He addressed very specific aspects such as development of training modules and background materials for training and capacity building programmes for professionals and construction artisans, development of background materials and strategy for awareness generation programmes, development of techno-legal framework for Urban Local bodies and advocacy on various structural and non-structural seismic risk mitigation measures for various identified sectors in the GoI-UNDP DRM programme. He was also a member of the Technical Advisory Group and facilitated in the development of hazard specific strategies/guidelines /documents/manuals, provide support for developing the concept and draw up implementation mechanism for mainstreaming drr activities for the national/state/local/partner agencies. He has also contributed for the launch of the School Safety Programme (a subcomponent of the GoI-UNDP Programme) and in the development of the frontline curriculum on Disaster Management in Class VIII, IX, X for the Central Board for Secondary Education.

Prior to UNDP Anup worked with the Environment Management Division (Confederation of Indian Industry) and also on major construction projects in India. He was involved in the voluntary work post Gujarat Earthquake in 2001 and was involved in the post-damage survey/grading/assessment of the buildings. Anup has Masters Degree in Environmental Planning from School of Planning CEPT University and Bachelors Degree in Construction Technology from School of Building Science and Technology, CEPT University, Ahmedabad India.

Dr. Maksud Kamal

Consultant

UDRM

Dr. Maqsud is associate professor in the department of Geology, University of Daka. He has his doctorate degree from theTokyo Institute of Technology (TIT), Tokyo, Japan. He has done extensive research on Earthquake & Tsunami Vulnerability Reduction focusing on the use of spatial geodata (EVRC) as well as Community Based Risk Reduction activities. Dr. Maqsud also has close collaboration with “Asian Disaster Preparedness Center” (ADPC), on offering different capacity building trainings.

From NSET

Mr. Ramesh Guragain

Director, Earthquake Engineering, Research and Training Division

Mr. Ramesh Guragain, a Nepalese national is graduated from the University of Tokyo, Japan on earthquake engineering. He has been working in the field of earthquake risk management for the last eight years. He is working as Director, Earthquake Engineering, Research and Training Division of National Society for Earthquake Technology-Nepal (NSET). He is an author of about 30 papers in international conferences and journals. He has an intensive experience in the field of earthquake risk assessment of medical infrastructures. A publication of Mr. Guragain on Seismic Vulnerability Assessment of Hospitals has been published by World Health Organization, the South East Asia Regional Office (WHO/SEARO) as a regional publication and is being used in the region. Mr. Guragain is one of the facilitator in the medical infrastructure safety workshop.

Mr. Narayan Prasad Marasini

Civil engineer

Mr. Narayan Marasini a Nepalese citizen is a graduate in civil engineering. He is working as civil engineer at National Society for Earthquake Technology-Nepal (NSET). He has been involved in community based development programs in Nepal. He had worked in several projects as a project coordinator to mobilize the community in the development programs. His main field of interest is community mobilization for earthquake risk management activities. He has involved in the Trainings on Reconstruction of Earthquake affected areas on Kashmir and NWFP since the immediate aftermath of Kashmir Earthquake 2005. The training activities in Pakistan is being implemented by NSET with UN- HABITAT Pakistan and Earthquake Rehabilitation and Reconstruction Authority (ERRA) of government of Pakistan.

He is a certified instructor on Hospital Emergency Preparedness (HOPE) course under the Programme for Enhancement on Emergency Response (PEER), which is being implemented in 5 Asian countries Nepal, India, Bangladesh, Philippines and Indonesia by National Society for Earthquake Technology-Nepal (NSET).

7.4 The purpose of the workshop

The purpose of the workshop was to provide training and guidance on:

- How to manage earthquake risk management programs to ensure optimum involvement of various actors
- How to develop earthquakes scenarios for two selected (Kerman/Gorgan) cities in Iran written in easily understandable format
- Methodology for understanding Urban Earthquake risk management assessment and mitigation measures in Iranian cities

- How to conduct a risk analysis of key public utilities and prioritization of the same in terms of need for retrofitting and resource work plan
- Introduce tools like RADIUS for earthquake risk assessment in urban areas
- How to develop earthquake risk management action plans
- How to set up community Information Centers in two cities (Kerman/Gorgan) that will serve as clearing house of information on different aspects of earthquake risk reduction
- Assess capacity building needs of strategic actors (across horizontal and vertical levels) for earthquake risk management in two cities
- Risk analysis of key public utilities and prioritization of the same in terms of need for retrofitting and resource need plan
- Advise on Public education and awareness generation campaigns in selected cities, which are combination of information outreach (dissemination) and in-reach
- Advise on development of a model action plan for enhancing public awareness of earthquake to be replicable throughout the country

7.5 The learning objectives of the workshop

The following learning objectives were considered for this workshop:

- To design projects for earthquake risk management
- To develop and conduct Risk Assessment
- To prepare Earthquake scenarios for their city
- To prepare Action Plan for their city
- To use RADIUS tool for earthquake Risk Assessment in the Urban Areas

8. Evaluation of the course

- In order to assess the impact of the training workshop an evaluation was conducted by staff of “Strengthening Capacities for Disaster Risk Management (DRM) Project in Kerman Province” (by asking the course participants to fill in a questionnaire). Although no narrative comment has been received, from the statistical report it is noticed that the participants found the workshop a useful one.

Annex IV contains the breakdown of responses per item of the evaluation questionnaire.

9. Conclusions and recommendations

This workshop was part two of the third activity considered in the contract between UNDP Iran and ADPC and the second one to be conducted in the demonstrated cities. Although the overall the workshop had a good impact, there is still room for much improvement. The following recommendation could be considered for future workshops:

- Having a professional translator, (capable of translating from English to Farsi and vice-versa), and preferably capable of simultaneous translation and familiar with the theme of the workshop is of crucial importance. Although the situation in Kerman was better than

Gourgan with regard to translation, but still it is highly recommended that the translators selected for this purpose be professional translators, who are familiar with simultaneous translation and can quickly familiarize themselves with the accents of different facilitators. The workshop materials also need to be provided in advanced to be translated and handed over to the participants.

- The workshop venue also needs to be selected more carefully, allowing space for more interactive activities with the participants.
- Some of the presentations should be revised to be more interactive and less lecture type presentations.
- Although the participants were trained on the steps to develop the earthquake scenario and action planning, follow up meetings need to be held to get more in depth inputs to develop the scenario and make an action plan for Kerman city.
- Since the series of the workshops considered in the in between contract is co-related, it is preferable if the same representative(s) from each organization would have attended all the workshops.
- A workshop leader or coordinator should be assigned to properly manage all workshop activities and summarize all discussions at the end of each day.
- Overall the workshop in Kerman seemed to have a better flow. Participation of the representative of technical institutions and NGO from Tehran also had a positive affect on the workshop.

Annex I: Workshop Topics and Objectives

Module 1 Overview

This module consisted of the following sessions:

1. DRM terminology
2. Urbanization and governance
3. Eq Basics (Hazard)
4. Vulnerability and Impacts

Learning Objectives Session 1

After this session, the participants were expected to be able to:

- Define the common terms used in Disaster Risk Management
- Able to understand the meaning of the terminology used in DRM

Learning Objectives Session 2

After this session, the participants were expected to be able to:

- Discriminate between city and urban area
- Discover the subjective nature of the definition for term urban
- Describe the undesirable effects of uncontrolled increase in urban population
- List the positive aspects and negative spill-over of urbanization
- Discuss urban poverty and how it can create unsafe communities
- Give examples of global initiatives to create safer urban communities

Learning Objectives Session 3

After this session, the participants were expected to be able to:

- Distinguish between the concepts of earthquake hazards, secondary hazards, multiple hazards and disaster
- Explain hazard characteristics such as magnitude, frequency, intensity and rate of onset and their importance
- Conduct hazard identification, hazard assessment and hazard mapping and explain their functional value
- Distinguish between primary and secondary hazards of earthquake
- List types of data used in earthquake hazards

Learning Objectives Session 4

After this session, the participants were expected to be able to:

- Define what is meant by vulnerability
- List and describe criteria that add to the vulnerability of a community for earthquake hazard
- List and describe criteria that reduce the vulnerability

Module 2 Risk Assessment and Scenario Development

This module consisted of the following sessions:

5. Exposed Vulnerability (where is Risk and how it is created)
6. Tools (RADIUS)

7. Practical Session
8. Inventory & Fragility
9. Microzonation
10. Assessment of Physical damage and loss estimation
11. Existing Capacity Assessment
12. Scenario building practical

Learning Objectives session 5

After this session, the participants were expected to be able to:

- Distinguish between the concept of vulnerability and risk
- Name and explain components in quantification of risk
- Give a break down of elements at risk
- Construct a risk matrix
- Explain Risk as a function of hazard, loss and preparedness
- List components of earthquake risk and discuss them

Learning Objectives session 6

After this session, the participants were expected to be able to:

- List the objectives of RADIUS method for earthquake risk assessment
- List the target audience segments of RADIUS exercise
- Describe guidelines for implementation of Risk Management Projects and discuss the advantages of this new method
- List the steps for data input/analysis for the damage assessment of the targeted city using RADIUS tool

Learning Objectives session 7

After this session, the participants were expected to be able to:

- Get hands on experience of using RADIUS tool
- List proper steps for analysis of city's earthquake risk using RADIUS tool
- List the necessary information required for the assessment of city's risk against earthquake using RADIUS tool
- Able to use RADIUS tool to assess earthquake risk in their cities

Learning Objectives session 8

After this session, the participants were expected to be able to:

- List shortcomings \ limitations of RADIUS tool
- List the possible options for modifying/localizing the RADIUS tool to meet the local conditions
- Describe the relation of building \ infrastructure inventory and their fragility for the proper risk assessment of the city

Learning Objectives session 9

After this session, the participants were expected to be able to:

- List the importance of seismic microzonation for earthquake risk reduction, preparedness and effective response
- Describe the different methods of seismic microzonation
- Describe the use of seismic microzonation for development planning of the city

Learning Objectives session 10

After this session, the participants were expected to be able to:

- Analyze the physical damage and loss due to scenario earthquake based upon the output from RADIUS
- Compare the risk with different physical environment
- Describe the change in overall loss if the physical environment is improved

Learning Objectives session 11

After this session, the participants were expected to be able to:

- Describe the participatory approaches for the existing capacity assessment of the city
- Identify local resources for implementation of earthquake risk management activities in the city
- Describe the process of gap analysis

Learning Objectives session 12

After this session, the participants were expected to be able to:

- List the steps of earthquake scenario development
- Describe the different use of earthquake scenario and required accuracy
- Describe the importance of translating scientific information to common people language
- Describe the process of scenario writing

Module 3 Action Plan

This module consisted of the following sessions:

13. Stakeholder and stake analysis, Action planning process
14. Activities to cover all phases, components of the plan (Actions, roles, resources), Prioritization (short/medium/long term)
15. Practical on Action Plan

Learning Objectives session 13

After this session, the participants were expected to be able to:

- Identify the stakeholders in their cities, who need to be involve in action planning process
- Describe the characteristics of a good plan
- Establishing Selection Criteria
- Distinguish different types of planning
- Describe the process of action planning

Learning Objectives session 14 & 15

After this session, the participants were expected to be able to:

- Develop a process for Earthquake Vulnerability Risk Reduction action plan for their city
- Recognize factors that contribute to the successful implementation of their plan
- Identify strategies for implementation
- Put in place a mechanism for tracking implementation process

Module 4 Implementation of EVR Program in Cities

This module consisted of the following sessions:

16. EVR options (general)
17. Structural (by laws, building code implementation, guidelines for non-engineered buildings, model construction)
18. Non-structural measures (Policy, training, awareness)
19. Institutionalization EVR and developing Emergency response capacity in the city
20. Case Studies

Learning Objectives session 16

After this session, the participants were expected to be able to:

- List and describe the categories of earthquake vulnerability reduction methods
- Compare and contrast the two EVR approaches
- Distinguish between structural and non structural vulnerabilities of physical structures
- Give the characteristics of earthquake resistant communities
- List vulnerable elements in the built environment
- Outline vulnerability at household, community and national level
- List options available for vulnerability reduction
- Understand the principles and basic concepts of planning EVR programs and their implementation
- Recognize planning techniques and methods for implementing EVR programs
- Recognize basic approaches and key success factors in implementing EVR programs
- Describe constraints and roadblocks to EVR implementation and methods to overcome them

Learning Objectives session 17

After this session, the participants were expected to be able to:

- Analyze existing construction mechanisms
- Analyze the need for improvement of construction process (by law, compliance to building codes, guidelines for non-engineered construction)
- Identify methods to ensure/improve earthquake resistance of new constructions
- Identify methods to decrease unacceptable risks of existing structures
- Develop strategies to increase public awareness on proper construction methods

Learning Objectives session 18

After this session, the participants were expected to be able to:

- Describe the governing policies affecting the earthquake vulnerability
- Ways of policy improvement and building institutionalizing mechanism
- Explain the necessity of a need assessment of target groups for training

- Appreciate the need to set goals and objectives for training based on the need assessment
- List the activities needed for the formulation of a curriculum outline
- Discuss the process of material development
- List and describe things to do during training implementation

Learning Objectives session 19

After this session, the participants were expected to be able to:

- Discuss the legal options available in reducing the earthquake vulnerability of a community
- Discuss the organization models that can be adopted by cities to reduce vulnerability against the seismic risks
- Recognize the importance of institutionalizing EVR
- Develop Emergency response capacity in their city

Learning Objectives sessions 20

After this session, the participants were expected to be able to:

- Case studies on best practices and lessons learnt
- Different legal instruments that are employed to reduce the earthquake vulnerability of a community by some Asian countries or cities
- Organizational approaches that is resorted to by some cities in carrying out disaster reduction measures

Annex II: Workshop Schedule
Urban Earthquake Risk Management Workshop, Kerman
 4 Mar 2007 to 8 Mar 2007

<u>Day 1</u>		
Time	Description	Responsibility
Module 1	Overview	
0900-0930	Opening Ceremony	Government Officials/MPO
0930-0945	Workshop Overview	Ramesh, Sara- NSET/ADPC
0930-1030	DRM Terminology	Sara-ADPC
1030-1100	Tea Break	
1100-1230	Urbanization and governance	Anup - ADPC
1230-1330	Lunch Break	
1330-1500	Basics Earthquake hazard	Dr.Maksud- ADPC
1500-1530	Tea Break	
1530-1700	Vulnerability and Impacts	Dr.Maksud- ADPC
<u>Day 2</u>		
Module 2	Risk assessment and Scenario development	
0900-1030	Exposed vulnerability (Where is risk and how it is created)	Narayan -NSET
1030-1100	Tea Break	
1100-1230	Tools (RADIUS)	Ramesh -NSET
1230-1330	Lunch Break	
1330-1500	-Do practical-	Ramesh+ Narayan-NSET
1500-1530	Tea Break	
1530-1700	Inventory & Fragility	Ramesh-NSET

<u>Day 3</u>		
0900-1030	Microzonation	Dr.Maksud
1030-1100	Tea Break	
1100-1230	Assessment of Physical damage & loss estimation	Ramesh-NSET
1230-1330	Lunch Break	
1330-1500	Existing capacity assessment	Ramesh-NSET
1500-1530	Tea Break	
1530-1700	Scenario building practical	Narayan+Ramesh-NSET
<u>Day 4</u>		
Module 3 Action plan		
0900-1030	Stakeholder and stake holder analysis, Action planning process	Anup- ADPC
1030-1100	Tea Break	
1100-1230	Activities to cover all phases, components of the plan (Actions, roles, resources), Prioritization (short/medium/long term)	Anup- ADPC
1230-1330	Lunch Break	
1330-1500	Practical on Action Plan	Ramesh+ Narayan-NSET
<u>Day 5</u>		
Module 4 Implementation of EVR program in cities		
0900-1000	EVR options (general)	Dr.Maksud- ADPC
1000-1030	Tea Break	
1030-1130	Structural (by laws, building code implementation, guidelines for non-engineered buildings, model construction)	Narayan-NSET

1130-1230	Non-structural measures (Policy, training, awareness)	Ramesh-NSET
1230-1330	Lunch Break	
1330-1500	Institutionalization EVR and developing Emergency response capacity in the city	Anup- ADPC
1500-1530	Tea Break	
15.30-17.00	Case studies	ADPC & NSET

Annex III: List of Participants

Urban Earthquake Risk Management Workshop, Kerman (waiting to be received)

	Name of the Participant	Organization
1	Mr. Ghobad Izadi	Agricultural Jihad Organization
2	Dr. Jila Poyan	IIEES
3.	Mr. Shahram Davarnia	Natural Disaster Research center
4.	Mr. Hesam' u' lldin Naraghi	Hamyaran NGO
5.	Mr. Ali Asgar zadeh	Basij
6.	Mr. Reza Rasoli	Housing Foundation
7.	Mr. Seyed Mohammad Ali Mirzaday Gohari	Transportation Department
8.	Ms. Fatemeh Saeedian	Commerce Organization
9.	Ms. Sara Asgari	Oil Company
10.	Mr. Ali Abazari	Kerman Telecommunication Company
11.	Mr. Sohrab Karimzadeh	Ministry of Education
12.	Ms. Leila Araghi pour	Kerman Municipality Disaster Management Center (KDMC)
13.	Ms. Mohadase Lori pour	KDMC
14.	Mr. Reza Hassanzadeh	KDMC
15.	Mr. Iman Seif' u' llahi	KDMC
16.	Dr. Ahmad Soltani	Kerman Red Crescent
17.	Dr. Gholamreza Hosseini far	Social Welfare Organization (SWO)
18.	Dr. Massoud Moghadari	Kerman Medical University
19.	Dr. Iraj Karamnejad	Kerman Medical University
20.	Mr. Mohamadreza Rahmani	SWO
21.	Mr. Ali Fakhruldini	Kerman Water and Wastewater Company (WWC)
22.	Mr. Akbar Alavi	KDMC
23.	Mr. Seyed Mohamadreza Moinzadeh Mirhosseini	(WWC)
24.	Mr. Azari Moghadam	Kerman military forces
25.	Mr. Hamidreza Zare	Kerman Gas Company
26.	Mr. Hassan Asgarizadeh	Kerman Gas Company
27.	Ms. Mahtab Abdulrahmani	Kerman Electrical Company
28.	Mr. Hamid Esmailian	Kerman Engineering Association
29.	Ms. Mahdiyeh Sharifi	KDMC
30.	Mr. Bijan Ani	Project Secretariat
31.	Mr. Mohsen Salehi	Governor Office
32.	Mr. Ehsan Khojastehfar	Project Office
33.	Mr. Sajed Usefullahi	Project Office
34.	Mr. Rabi narayan Gouda	IUNV-UNDP
35.	Mr. Ardeshir Sayah	UNDP

Annex IV: Participant Workshop Evaluation Report

1. Overall, how do you evaluate this Workshop ?
 - a. Very Useful : **30.77%**
 - b.** Useful : **69.23%**
 - c. Not Useful : **0%**
2. How do you evaluate this workshop with regard to be innovative and presenting new material ?
 - a. Very good : **14.81%**
 - b. Good : **62.96%**
 - c. Average : **22.22%**
 - d. Bad : **0%**
3. How do you evaluate the objective considered for each session ?
 - a. Relevant : **48.15%**
 - b. Clear : **51.85%**
 - c. Not realistic : **0%**
4. How successful do you evaluate the workshop in being able to achieve these objectives ?
 - a. Very successful : **7.41%**
 - b. Successful : **51.85**
 - c. Somehow successful : **40.74%**
 - d. Not successful : **0%**
5. How successful were the presenters in presenting different sessions :
 - a. Very successful : **14.81%**
 - b. Successful : **70.37%**
 - c. Somehow successful : **14.81%**
 - d. Not successful :
6. What were the strong points of the workshop in your opinion ?
 -
7. What were the weak points of the workshop in your opinion ?
 -
8. Which of the presented topics were more attractive for you ?
 -
9. Which of the presented topics were less attractive for you and needs modification in your opinion?
 -
10. Other suggestions ?
 -