

**Japan International Cooperation Agency**

**People's Republic of Bangladesh,  
Federal Democratic Republic of Nepal, and  
Islamic Republic of Pakistan**

**Project Formulation Study on  
Disaster Prevention Measures by  
Community Participation in  
South Asian Region**

**Final Report  
Summary**

**September 2008**

**OYO International Corporation**

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## **Composition of Final Report**

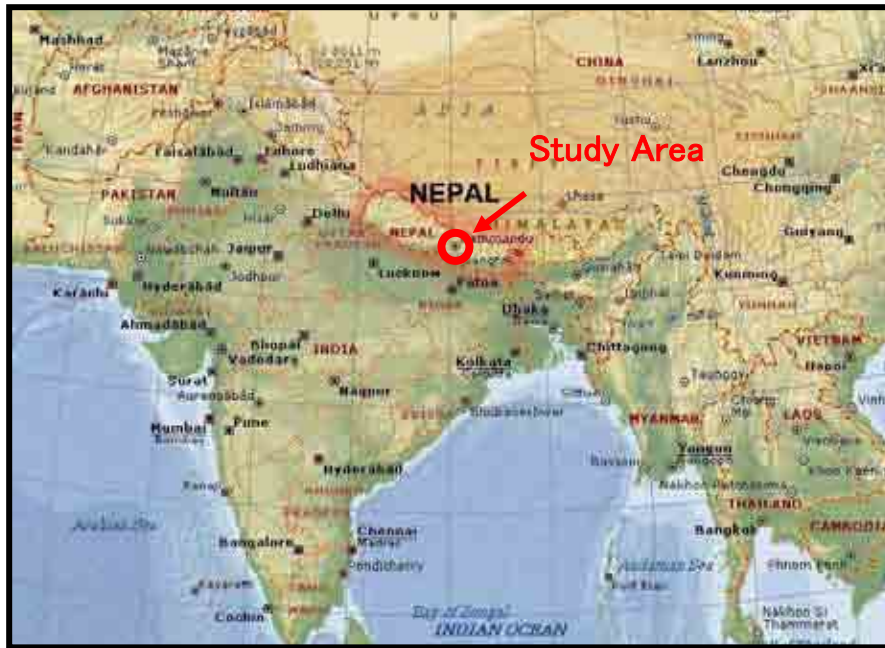
- 1. Main Report (Japanese)            1 Volume**
- 2. Summary (English)                1 Volume**

### **Exchange Rate**

**NRs 1.0 = JP Yen 1.556**  
**US\$ 1.0 = JP Yen 105.1**

**As of July, 2008**

## Location Maps



(a) Guide Map



(b) Study Area (Communities Visited Are Shown in Red)

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### List of Abbreviations

|            |  |
|------------|--|
| 9/11       | September 11, 2001 Attacks   |
| ADB        | Asian Development Bank   |
| ADPC       | Asia Disaster Preparedness Centre  |
| ADRC       | Asian Disaster Reduction Centre  |
| CASP       | Community-based Alternative Schooling Project                                |
| CBDRM      | Community Based Disaster Risk Management                                     |
| CDPM       | The Comprehensive Disaster Management Program                                |
| DDC        | District Development Committee   |
| DHM        | Department of Hydrology and Meteorology                                      |
| DMSP       | Disaster Mitigation Support Program  |
| DOE        | Department of Education  |
| DOI        | Department of Irrigation   |
| DPNET      | Disaster Preparedness Network - Nepal  |
| DPTC       | Disaster Prevention Technical Centre   |
| DRM        | Disaster Risk Management   |
| DRRS       | Disaster Risk Reduction Strategy   |
| DUDBC      | Department of Urban Development and Building Construction                    |
| DWIDP      | Department of Water Induced Disaster Prevention                              |
| EM-DAT     | Emergency Events Database (CRED-EMDAT)                                       |
| ERRP       | Earthquake Risk Reduction Program  |
| GDP        | Gross Domestic Products  |
| GNI        | Gross National Income  |
| HFA        | Hyogo Framework for Action   |
| ICIMOD     | International Centre of Integrated Mountain Development                      |
| IDNDR      | International Decade for Natural Disaster Reduction                          |
| INGO       | International Non-Government Organization                                    |
| ISDR       | International Strategy for Disaster Reduction                                |
| JICA       | Japan International Cooperation Agency                                       |
| JOCV       | Japan Overseas Cooperation Volunteers  |
| KMC        | Kathmandu Metropolitan City  |
| KVERMP     | Kathmandu Valley Earthquake Risk Management Action Plan                      |
| LSMC       | Lalitpur Sub-Metropolitan City   |
| LWF        | Lutheran World Federation  |
| MOES       | Ministry of Education & Sports   |
| MOHA       | Ministry of Home Affairs   |
| MOLD       | Ministry of Local Development  |
| MOPPW      | Ministry of Physical Planning and Works                                      |
| NBC        | National Building Code   |
| NDRA       | National Disaster Relief Act   |
| NGO        | Non-Government Organization  |
| NSC        | National Seismic Centre  |
| NSET       | National Society for Earthquake Technology-Nepal                             |
| OFDA       | Office of US Foreign Disaster Assistance                                     |
| PEER       | Program for Enhancement of Emergency Response                                |
| RADIUS     | Risk Assessment Tools for Diagnosis of Urban Areas Against Seismic Disasters |
| RRN        | Rural Reconstruction Nepal   |
| RRRSDP     | Rural Reconstruction and Rehabilitation Sector Development Program           |
| SESP       | School Earthquake Safety Program   |
| SV         | Senior Volunteers  |
| TUERMP     | Thimphu Valley Earthquake Risk Management Project                            |
| UNDP       | United Nations Development Program   |
| UN-HABITAT | United Nations Human Settlements Programme                                   |
| UNICEF     | United Nations Children's Fund   |
| UNOCHA     | Office for Coordination of Humanitarian Affairs                              |
| USAID      | United States Agency for International Development                           |
| USGS       | United States Geological Survey  |
| VDC        | Village Development Committees   |
| WHO        | World Health Organization  |

**People's Republic of Bangladesh, Federal Democratic Republic of Nepal, and  
Islamic Republic of Pakistan**

**Project Formulation Study on  
Disaster Prevention Measures by Community Participation in  
South Asian Region**

**Summary of the Study**

**1. Background and Objective of the Study**

Countries in South Asia, namely Bangladesh, Nepal and Pakistan, have been suffered from natural disasters, such as earthquake, tsunami, cyclone, flood, landslide and so on. The countries have accumulated experiences of response and relief after disasters, and hard measures such as construction of dikes and shelters. However, soft measures, including preparation of legislation and plans for disaster management, and education for disaster management, are still lacking in the region. As the agencies of the central governments and local governments have limited budget and human resource, their roles for the disaster management are also limited. Consequently, capacity of the country as a whole should be enhances, especially, among those, approaches by participation of community, local authority and national NGO are crucially important, namely the community based disaster risk management (CBDRM).

Japan International Cooperation Agency (JICA) is considering introduction of CBDRM in the future projects as much as possible. In order to explore effective approaches for integrating CBDRM into the projects, JICA has carried out "Project Formulation Study on Disaster Prevention Measures by Community Participation in South Asian Region". This study focused on the earthquake disasters in Nepal, which would cause devastating impact to the country.

**2. Outline of the Study**

A team of three consultants visited Nepal during July 30 and August 13 of 2008 and carried out field study. The team visited agencies of the national government, local administrations, communities, national NGOs and donors to learn their past and current activities, future plans and issues to be improved for CBDRM. The team also visited representative communities within and vicinity of Kathmandu Valley to learn their activities of CBDRM. A workshop, with participants from organizations where the team had visited, was carried out at the end of the visit to wrap up the current status of CBDRM in Nepal and to discuss solutions for the issues that had been raised during the visits.

List of study team members, study schedule and details of study schedule in Nepal are given in Appendix 1. Major interviewees who provided valuable opinions, suggestions and experiences of

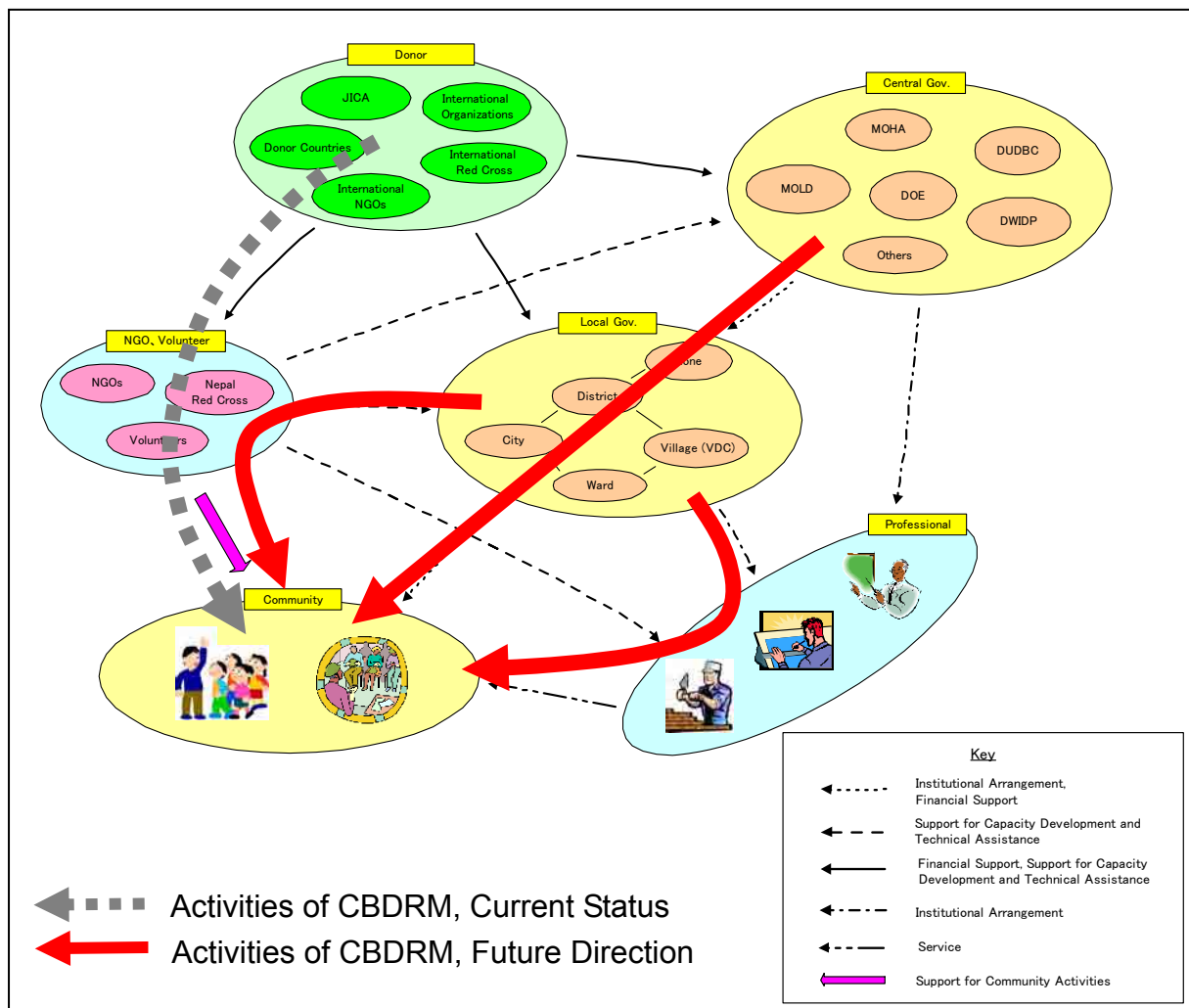


CBDRM are listed in Appendix 2. The results of the workshop that was held on August 11, 2008 are presented in Appendix 3.

After reviewing the results obtained during the visit, and through discussion among the team and consultation with JICA, the team proposed the future direction of CBDRM in Nepal, actions to be taken by the stakeholders of CBDRM, the future direction of foreign support, outline of future programs and application of the experiences of Nepal to the other countries of South Asian Region.

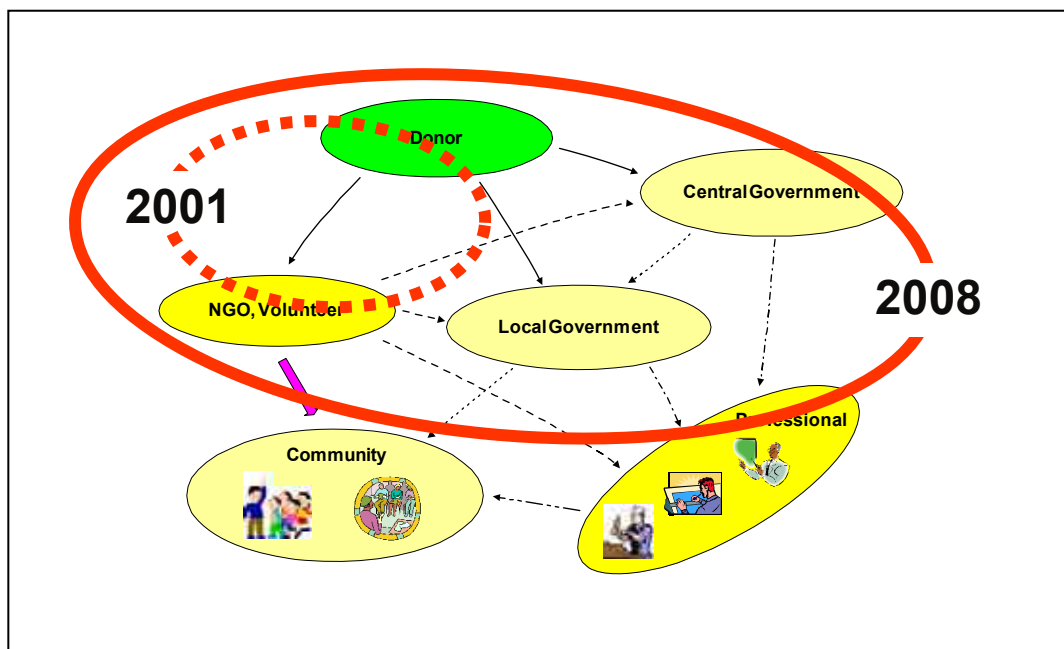
### 3. Current Status of CBDRM and Issues to be Solved in Nepal

The stakeholders involved in CBDRM for earthquake disasters in Nepal could be grouped as shown in Figure 3.1. These are community, local governments, agencies of the national government, specialists, national NGO and volunteer and donors.



**Figure 3.1 Current Status and Future Direction of CBDRM (Earthquake Disaster in Nepal)**

Currently, since around 1999, a variety of CBDRM activities have been carried out mainly by the national NGOs with funding from the donors, as show by a dotted and gray arrow in the figure. The activities include CBDRM activities targeting communities, schools, local governments and central government, improvement of seismic response of buildings, retrofitting of school buildings, retrofitting of hospital buildings, securing drinking water after an earthquake event, provision of evacuation routes and others. It can be said that Nepal has well established and accumulated methodologies and tools of CBDRM. Comparing the conditions of 2001 and 2008, mutual understanding of the importance of CBDRM for Nepal have been widen among the stakeholders as schematically shown in Figure 3.2.



**Figure 3.2 Dissemintation of CBDRM into Stakeholders in Nepal (Earthquake Disaster)**

During implementation of a project or a program, normally during a period of several months to several years, activities of CBDRM are actively carried out. However, after the completion of the project / program and termination of financial support and human resources, it is common that the activities of CBDRM are also ceased. To sustain CBDRM activities is difficult in many cases. This is also true to scale up geographically CBDRM activities to the regional and national level.

In addition to the problems of sustainability and geographical scale up, issues to be solved for the future CBDRM in Nepal can be summarized as follows. These issues are common for all the countries in South Asian Region, and also common for any types of natural disaster.

- Sustainability of CBDRM activities should be maintained,
- Geographical scale up of CBDRM is required,

- Institutionalization of CBDRM is required and
- Multi-hazard should be handled in CBDRM.

The issues were discussed in the workshop, and record of the discussion is given in Appendix 3.

Table 3.1 summarizes opinions and suggestions from participants of the workshop on actions which have been already taken and future needs to solve the above listed issues. The table also includes good practices of CBDRM in Nepal.

**Table 3.1 Actions and Needs for CBDRM from Participants of the Workshop**

| <u>Challenges</u>           | <u>Action / Need</u><br><i>Figures in blankets are qty of cards submitted</i> | <u>Opinions</u><br><i>Figures in blankets are qty of similar opinions<br/>(One card can be classified into two or more opinions)</i>  |
|-----------------------------|---|---|
| <b>Best Practices</b>       | (35)  | <i>The following activities were cited.</i><br>Community (13), School Safety (4), Mason Training (4), DPRF-Lalitpur (3), NBC (3), others (9)  |
| <b>Sustainability</b>       | <b>Action</b> (6)<br><i>What has been done</i>                                | <i>Five examples were cited as follows.</i><br>1 DM programs such as mason training conducted by Govt.<br>2 Retrofitting of public structures in annual plans and budgets<br>3 Training on community organizations<br>4 Integration of DM in development programs<br>5 Consciousness of disasters everywhere<br>(6 Maintenance fund raised govt. is not sufficient)   |
|                             | <b>Need</b> (15)<br><i>What should be done</i>                                | <i>Opinions can be classified into six as follows.</i><br>1 Include DRM in govt. plans programs with budgetary allocation (4)<br>2 Support communities through CD and funding (3)<br>3 Awareness and Preparedness in schools (3)<br>4 Integrate DRM intervention into regular development programs (2)<br>5 Multi-stakeholder dialogue (2)<br>6 Practice of hazard mapping (2)                              |
| <b>Scale Up</b>             | <b>Action</b> (6)<br><i>What has been done</i>                                | <i>Five examples were cited as follows</i><br>1 Technical Trainings conducted by DUDBC & NSET<br>2 Shake-table demos<br>3 Earthquake Safety Day<br>4 NSET's activities in several municipalities<br>5 ERRP on six municipalities  |
|                             | <b>Need</b> (16)<br><i>What should be done</i>                                | <i>Opinions can be classified into seven as follows.</i><br>1 Conducting mass awareness program at community level & schools (5)<br>2 Training in large scale through out the country (3)<br>3 Safety of newly constructed schools (2)<br>4 Expand DRM in all KTM Valley municipalities (2)<br>5 Joint effort of stakeholders (1)<br>6 Use mass media<br>7 Expand safe drinking water provision (1)         |
| <b>Institutionalization</b> | <b>Action</b> (3)<br><i>What has been done</i>                                | <i>Three examples were cited as follows</i><br>1 Construction and retrofitting works on some schools & hospitals in KTMV<br>2 Shelter Cluster Contingency Plan prepared by DUDBC & IFRC/UNOCHA<br>3 Establishment of focal desks in the ministries, DDCs and Municipalities.  |
|                             | <b>Need</b> (25)<br><i>What should be done</i>                                | <i>Opinions can be classified into six as follows.</i><br>1 Enhance disaster awareness and education for communities (6)<br>2 Strengthening of capacity building and responsibility of schools (6)<br>3 Integrate DRM into development activities (4)<br>4 Joint effort of stakeholders (2)<br>5 Support municipalities (2)<br>6 Establishment of disaster management training center in national level (1) |

#### 4. Future Direction of CBDRM in Nepal

CBDRM is one of the most important approaches in Nepal to reduce risk of earthquake disaster. To expand the approach nation wide and to ensure its sustainability, it is required to strengthen a system shown in red arrows in Figure 3.1. This includes, as shown in Figure 4.1, voluntary fund raising and activities of CBDRM by the communities, institutional and financial supports for activities of the community by the local and central governments, institutional arrangement and capacity development for specialists, and bringing up of national NGOs who support implementation of CBDRM.

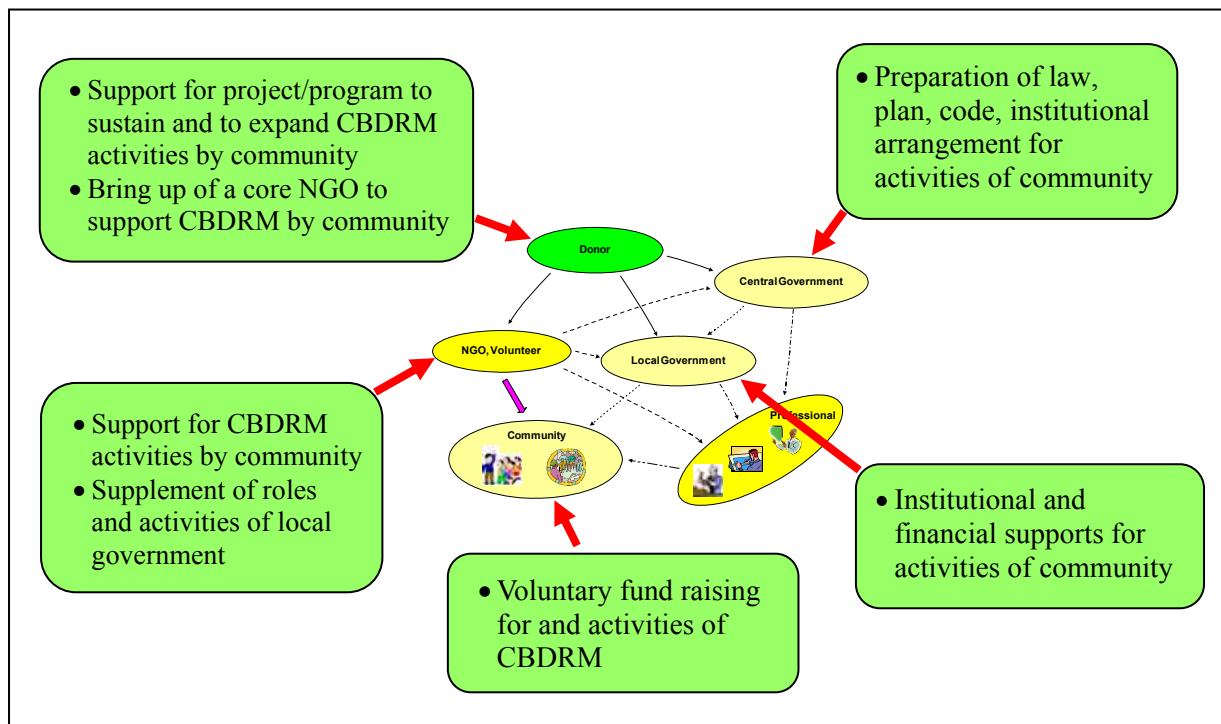


Figure 4.1 Dissemination of CBDRM into Stakeholders in Nepal (Earthquake Disaster)

#### 5. Actions to be Taken by Stakeholders

Roles of stakeholders in implementing CBDRM in the future direction, or in other words, actions to be taken by the stakeholders in the medium and long terms, are summarized in Table 5.1.

**Table 5.1 Actions of Stakeholders in Medium and Long Term (Nepal, Earthquake Disaster)**

| Stakeholder        | Actions in Medium and Long Term  |
|--------------------|--|
| Community          | <ul style="list-style-type: none"> <li>■ Formation of an autonomous disaster management committee by community</li> <li>■ Autonomous fundraising and disaster management activities by community</li> <li>■ Integration of activities of school and community</li> </ul>   |
| Local Government   | <ul style="list-style-type: none"> <li>■ Institutional arrangement to promote autonomous disaster management activities by community</li> <li>■ Provision of methodology, tool and know-how for autonomous disaster management activities by community</li> <li>■ Provision of fund to promote autonomous disaster management activities by community</li> <li>■ Support for capacity development of engineer, architect and mason</li> <li>■ Preparation of hazard and risk maps of region as basic information for autonomous disaster management activities by community</li> <li>■ Preparation of regional disaster management plan as basic information for autonomous disaster management activities by community</li> <li>■ Designation of high risk areas</li> <li>■ Preparation of evacuation facilities and evacuation routes</li> </ul>   |
| Central Government | <ul style="list-style-type: none"> <li>■ Preparation of law, plan, code, institutional arrangement to promote autonomous disaster management activities by community</li> <li>■ Provision of fund to promote autonomous disaster management activities by community</li> </ul>   |
| Professional       | <ul style="list-style-type: none"> <li>■ Promotion of research for earthquake resistant design and retrofitting of buildings, and cooperation with foreign research institutions</li> <li>■ Promotion of knowledge of earthquake resistant design and retrofitting through professional societies</li> </ul>   |
| NGO, Volunteer     | <ul style="list-style-type: none"> <li>■ Support for autonomous disaster management activities by community</li> <li>■ Supplement of roles and activities of local government</li> <li>■ Support for capacity development of local government</li> </ul>   |
| Donor              | <ul style="list-style-type: none"> <li>■ Bring up of a core NGO to conduct autonomous disaster management activities by community</li> <li>■ Support for preparation of institutional arrangement to promote autonomous disaster management activities by community</li> <li>■ Support for development of methodology, tool, and know-how for autonomous disaster management activities by community</li> <li>■ Support for preparation of law, plan, institutional arrangement, code by central government</li> <li>■ Support for preparation of hazard and risk maps by local government</li> <li>■ Support for preparation of regional disaster management plan by local government</li> <li>■ Support for research for disaster risk reduction and for cooperation with foreign research institutions</li> <li>■ Support for project/program to sustain and to expand geographically autonomous disaster management activities by community</li> </ul> |

## 6. Future Direction of Foreign Support

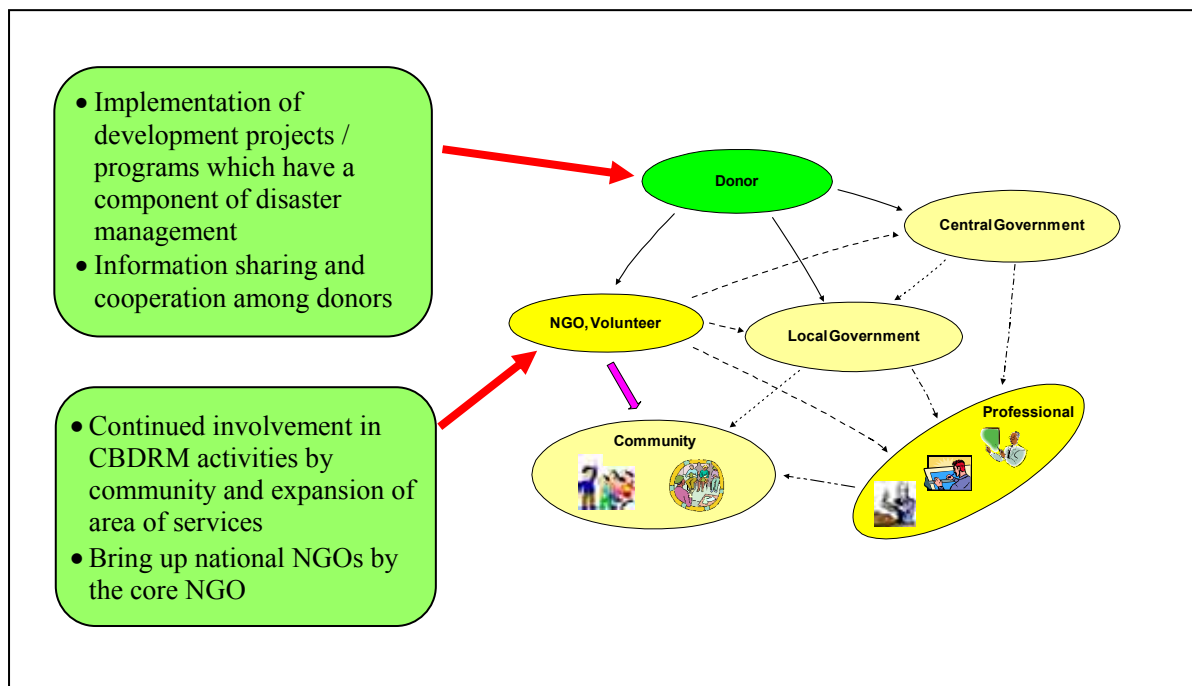
In the short term, national NGOs and donors are major stakeholders to implement CBDRM activities. Their roles or actions in the short term are summarized in Table 6.1.

**Table 6.1 Required Actions of Stakeholders in Short Term (Nepal, Earthquake Disaster)**

| Stakeholder    | Required Actions in Short Term   |
|----------------|--|
| NGO, Volunteer | <ul style="list-style-type: none"> <li>■ Continued involvement in disaster management activities by community and expansion of area of services</li> <li>■ Improvement of methodology and tool for disaster management activities by community</li> <li>■ Promotion of approaches for disaster management activities by community for multi-hazards</li> <li>■ Development of methodology and tool for disaster management activities by community for multi-hazards</li> <li>■ Sharing of methodology, tool and experience developed by the core NGO for disaster management activities by community</li> <li>■ Bring up national NGOs by the core NGO</li> </ul> |
| Donor          | <ul style="list-style-type: none"> <li>■ Implementation of development projects/programs which have a component of disaster management</li> <li>■ Bring up national NGOs through carrying out projects/programs</li> <li>■ Information sharing and cooperation among donors</li> </ul>   |

The roles of national NGOs are fulfilled during implementing projects / programs, which are normally planned and funded by foreign donors. So, the donors should act actively to support for mainstreaming CBDRM in the earthquake disaster risk reduction of Nepal. One of the solutions for tackling the problems of sustainability and geographical scale up of CBDRM activities would be integration of components of disaster management, especially CBDRM, into conventional development projects / programs, which are aimed for poverty alleviation as well as social and economic infrastructure development (Figure 6.1).

Bring up and capacity development of national NGOs should be continued through participation in the projects / programs that are designed in medium and long term view. Capacity for handling multi-hazards by the national NGOs is also required for Nepal.



**Figure 6.1 Roles of Donors and National NGOs**

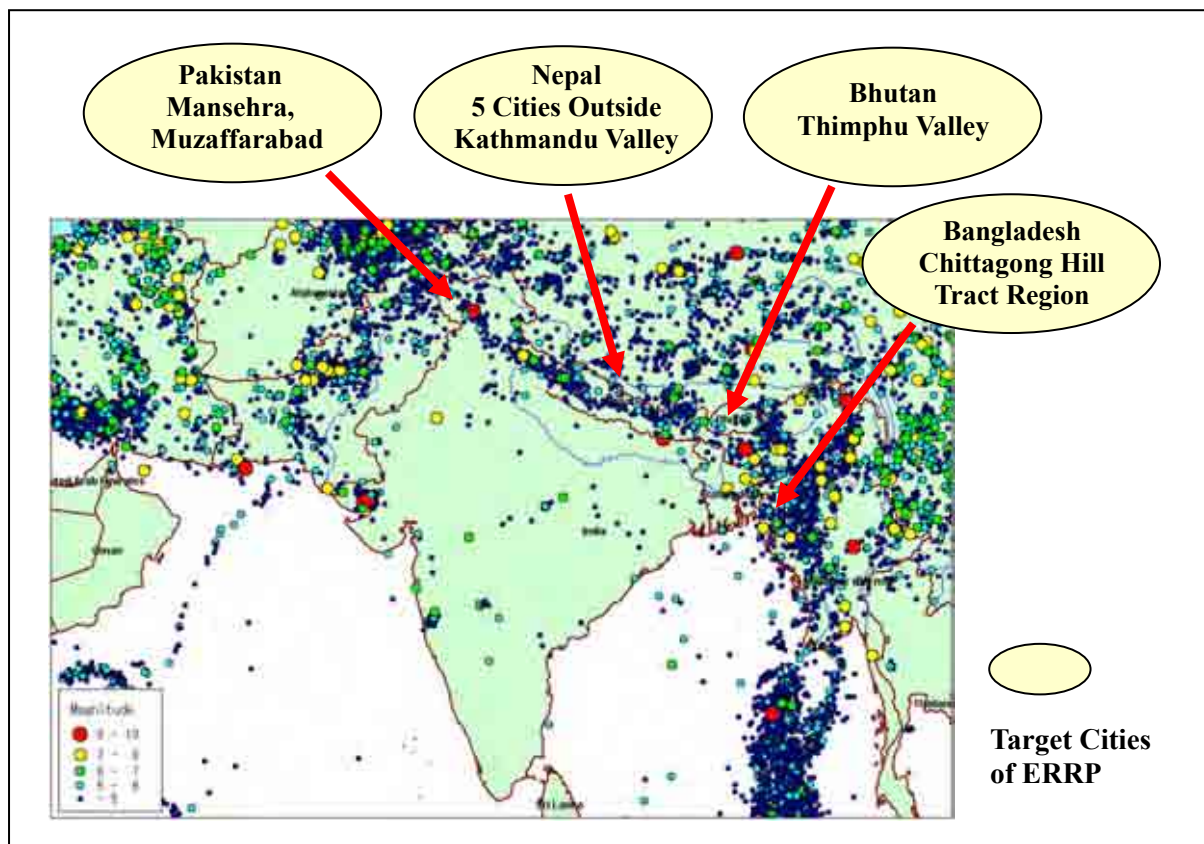
## 7. Approach to Other Countries in South Asian Region

As shown in Figure 7.1, countries of South Asian Region are prone to the earthquake disaster. The approaches taken by Nepal are common for all the countries, and as for Nepal, the integrated and continuous efforts are required in the long run to enhance the capacity of the countries for reducing the risks of earthquake disaster.

Regarding the community based approaches for earthquake disaster risk reduction, it can be said that Pakistan, Bangladesh and Bhutan are behind to Nepal around 10 years. Also, in those countries more time is required to have core national NGOs to pull the movement of CBDRM activities. On the other hand, they have an advantage that they will be able to utilize the experiences, knowledge, tools which have been accumulated for 10 years in Nepal.

With a funding from the Japanese Government, UNDP has launched a program, “Earthquake Risk Reduction and Recovery Preparedness Program for South Asian Region (ERRP)” for five countries in South Asian Region. The program is considered, actually, as the first step for Pakistan, Bangladesh, and Bhutan to tackle for the earthquake disaster risk reduction. As the program is expected to complete by May of 2010, it is necessary, during the implementation of the program, to study and to formulate projects or programs for continuation of their efforts in order to attain the goals of three countries.

Approaches for Pakistan, Bangladesh and Bhutan are proposed in Table 7.1.



**Figure 7.1** Epicenters of Past Earthquakes in South Asia (USGS Database)

**Table 7.1** Proposed Approaches for Pakistan, Bangladesh and Bhutan

| Country  | Approaches   |
|----------|--|
| Pakistan | <ul style="list-style-type: none"> <li>■ Scope of ERRP includes risk assessment, earthquake risk management action plans, guidelines for earthquake safe construction and municipality capacity development for Mansehra and Muzaffarabad in the northern territory where the 2005 Earthquake struck.</li> <li>■ In order to avoid completion of ERRP as a pilot program, it is necessary to conduct continuously projects/programs which include formulation of concrete plans and measures for earthquake disaster risk reduction including CBDRM.</li> <li>■ These should target not only earthquake, but landslide, flush flood, flood and others (multi-hazards).</li> <li>■ In addition to the northern territory, large cities such as Islamabad and Rawalpindi, Quetta, Lahore, Hyderabad and Karachi require actions for earthquake disaster risk reduction. Karachi will be affected by Tsunami as well.</li> <li>■ These cities need hazard and risk assessment, disaster management plans and implementation of measures including CBDRM. Capacity of local resources should be enhanced and mobilized to conduct these works.</li> <li>■ Development of institution for CBDRM to secure its sustainability and geographical scale up is essential for Pakistan as the country has large population and a vast territory.</li> </ul> |



| Country    | Approaches  |
|------------|---|
| Bangladesh | <ul style="list-style-type: none"> <li>■ UNDP with EC funding is now carrying out a program “The Comprehensive Disaster Management Programme (CDMP)” for Dacca Chittagong and Sylhet. The program has a component of hazard and vulnerability mapping. EC has a plan to carry out similar work for other 4 cities in Bangladesh.</li> <li>■ ERRP has also components of hazard and vulnerability mapping, earthquake resistant building construction, and awareness rising and capacity development of community.</li> <li>■ Both CDMP and EERP focus on hazard and vulnerability assessment of typical cities. They will not step in preparation of concrete disaster management plan and implementation of concrete measures including CBDRM.</li> <li>■ As a next step of CDPM and ERRP, a project for a typical city, such as Dacca and Chittagong, is required to prepare a disaster management plan which leads to actual implementation of risk reduction measures including CBDRM. Chittagong requires measures for Tsunami.</li> <li>■ Development of institution for CBDRM to secure its sustainability and geographical scale up is essential for Bangladesh as the country has large population and a vast territory. An approach of stacking pilot projects should be avoided.</li> </ul>                                |
| Bhutan     | <ul style="list-style-type: none"> <li>■ Under the support of UNDP, a project, “Thimphu Valley Earthquake Risk Management Project (TVERMP)” and its follow up were carried out. The project included seismic assessment of building by visual inspection, earthquake scenario preparation by RADIUS method, retrofitting of typical buildings, and awareness rising program.</li> <li>■ Although ERRP is an extension of TVERMP, there are some limitations, such as capacity of Bhutan, accuracy of available hazard map, lack of basic information, and time constrain of the project.</li> <li>■ On the other hand, Disaster Management Department (DMD) of Ministry of Home &amp; Cultural Affairs is drafting National Disaster Management Bill, and has prepared National Disaster Risk Management Framework. Nest step should be concrete actions.</li> <li>■ An integral approach, targeting multi-hazards, is required for Thimphu Valley. The program should include scientific hazard and risk assessment, preparation of disaster management plan, implementation of concrete measures, and capacity development of stakeholders.</li> <li>■ One of the key measures is CBDRM. An approach, which is based on experience of Nepal, should be employed by considering sustainability and geographical scale up.</li> </ul> |

## **Appendix**

- 1. Study Team and Study Schedule**
- 2. List of Main Interviewees**
- 3. Record of Workshop**

## **1. Study Team and Study Schedule**

**Table A.1 Team Member**

| Name                        | Position   | Organization                     |
|-----------------------------|--|----------------------------------|
| TAKAHASHI<br>Masakazu (Dr.) | Leader / Community Based<br>Disaster Risk Management 1 | OYO International<br>Corporation |
| SHAW<br>Tomoko (Ms.)        | Participatory Activity Planning                        |                                  |
| YOKOO<br>Fumihiko (Mr.)     | Community Based Disaster<br>Risk Management 2          |                                  |

**Table A.2 Study Schedule**

| Time          | 2008 |                        |            |                        |      |           |    |
|---------------|------|------------------------|------------|------------------------|------|-----------|----|
|               | July |                        | August     |                        |      | September |    |
| Work in Nepal |      |                        | ██████████ |                        |      |           |    |
| Work in Japan |      | 7/30<br>██████<br>7/22 |            | 8/13<br>██████<br>8/20 |      |           |    |
| Report        |      | IC/R                   |            |                        | DF/R |           | FR |

Key IC/R: Inception Report  
 DF/R: Draft Final Report  
 FR: Final Report

**Table A.3 Schedule of Study in Nepal**

| Date (Day)      | Days | Activities   | Stay      |
|-----------------|------|--|-----------|
| 2008/7/30 (Wed) | 1    | Travel (Narita→Bangkok)  | Bangkok   |
| 2008/7/31 (Thu) | 2    | Travel (Bangkok→Kathmandu) , Arrive Kathmandu at 12 : 45<br>15:00 : JICA Nepal Office (Mr. Niwa, Mr. Fukuda, Mr.Sourab)<br>15:45 : JICA Safety Briefing<br>16:30 : NSET (Mr.Amod, Mr.Ram, Mr. Koori)<br>19:00 : CASP (Ms. Oda)   | Kathmandu |
| 2008/8/1 (Fri)  | 3    | 10:30 : UNDP (Mr.Vijaya)<br>11:30 : Lalitpur M. (Mr. Yamamoto)<br>14:00 : USAID (Ms.Rogers)<br>16:00 : NSET Preparation of Workshop<br>17:30 : Sindhuli Road Construction Project (Mr. Katagiri)   | Kathmandu |
| 2008/8/2 (Sat)  | 4    | Preparation of interview records   | Kathmandu |
| 2008/8/3 (Sun)  | 5    | 10:00 : MOLD (Mr.Sanduraj, Mr.Resmiray)<br>13:20 : DUDBC (Ms.Shrestha)<br>15:30 : DOE (Mr.Mahashram, Mr.Shambhu)   | Kathmandu |
| 2008/8/4 (Mon)  | 6    | 09:30 : UNICEF (Mr.Madhav)<br>Preparation of interview records   | Kathmandu |
| 2008/8/5 (Tue)  | 7    | 10:30 : Nepal Red Cross Society (Mr.Umesh, Mr.Sanjeev)<br>11:30 : Chet Paty 17 Ward DM Committee (Mr.Bibhuti, Mr.Onta)<br>14:00 : Kathmandu M. (Mr.Dimesh, Mr.Bimal)<br>16:00 : Lalitpur M. (Mr.Krishna, Mr.Sainik, Mr. Yamamoto)<br>17:15 : UNDP (Mr.Khan)<br>17:15 : UN OCHA (Ms.Cue, Mr.Tamrakar) | Kathmandu |
| 2008/8/6 (Wed)  | 8    | 09:00 : NSET, Preparation of Workshop<br>11:35 : OXFAM (Mr.Gum)<br>14:30 : JICA Nepal Office (Mr. Tsumori)   | Kathmandu |
| 2008/8/7 (Thu)  | 9    | 10:00 : ICIMOD (Ms.Dekens)<br>11:30 : Kirtipur M. (Mr.Bal)<br>14:00 : Action Aid (Mr.Basanta, Mr.Shejam)<br>14:00 : Shapla Neer (Ms. fujisaki)<br>15:30 : DWIDP (Mr. Sato)   | Kathmandu |
| 2008/8/8 (Fri)  | 10   | Panauti Municipality (Mr.Prem), Site Visit   | Kathmandu |
| 2008/8/9 (Sat)  | 11   | Preparation of Report  | Kathmandu |
| 2008/8/10 (Sun) | 12   | 08:30 : Alapot, Site Visit (Mr. Yokoo, Ms. Shaw)<br>08:30 : Attend ERRP Workshop (Dr. Takahashi)<br>Preparation of Workshop  | Kathmandu |
| 2008/8/11 (Mon) | 13   | Preparation of Workshop<br>13:30 : Workshop  | Kathmandu |
| 2008/8/12 (Tue) | 14   | 09:30 : JICA Nepal Office (Mr. Niwa, Mr. Fukuda, Mr.Tsumori)<br>11:00 : Japanese Embassy (Mr. Yoshino)<br>13:50 : Travel (Kathmandu→Bangkok)   | Bangkok   |
| 2008/8/13 (Wed) | 15   | Travel (Bangkok→Narita)  | -         |

**Key**

- CASP: Community-based Alternative Schooling Project
- DOE: Department of Education
- DUDBC: Department of Urban Development and Building Construction
- DWIDP: Department of Water Induced Disaster Prevention
- MOLD: Ministry of Local Development (Contact ministry for all municipalities of Nepal)
- NSET: National Society for Earthquake Technology – Nepal

## **2. List of Main Interviewees**

## **Table A.4 List of Main Interviewees**

### **Donor**

#### **UNDP**

Mr. Sohel Khan; Regional Programme Coordinator, ERRP  
Mr. Vijaya P. Singh; Assistant Resident Representative, Environment, Energy &  
Disaster Prevention Unit  
Mr. Man B. Thapa; Disaster Risk Reduction Advisor

#### **UNICEF**

Mr. Madhav Pahan

#### **UN OCHA**

Ms. Wendy Cue; Head of Office  
Mr. Nirajan Tamrakar; National Natural Disaster Response Preparedness Advisor

#### **ICIMOD**

Ms. Julie Dekens; Institutional Specialist,  
Integrated Water and Hazard Management

#### **USAID**

Ms. Mariza A. Rogers; Acting Regional Advisor,  
Office of US Foreign Disaster Assistance (OFDA)

### **Central Government**

#### **MOLD (Ministry of Local Development)**

Mr. Bishnu Nath Sharma; Joint Secretary, Municipality Management Division  
Mr. Sanduraj Ghinire; Under-Secretary  
Mr. Resmiray Panday; Under-Secretary

#### **DUDBC (Department of Urban Development & Building Construction)**

Mr. Om D. Rajopadhyaya; Deputy Director General  
Mr. Shrestha; National Program Coordinator

#### **DOE (Department of Education)**

Mr. Mahasharam Sharma; Director  
Mr. Shambhu Prasad Uprety; Deputy Director

#### **DWIDP (Department of Water Induced Disaster Prevention)**

Mr. Hitoshi Kato; JICA Expert

### **Local Government**

#### **KATHMANDU METROPOLITAN CITY**

Mr. Dinesh Kumar Thapaliya; Joint Secretary, MOLD

#### **LALITPUR SUB-METROPOLITAN CITY**

Mr. Krishna Prasad Devkota; Chief & Executive Officer  
Mr. Sainik Raj Singh; Civil Engineer  
Mr. Mikio Yamamoto; JICA Senior Volunteer

**KIRTIPUR MUNICIPALITY**

Mr. Bal Krishna Maharjan  
Ms. Mai Ogawa); JICA Japan Overseas Cooperation Volunteers

**PANAUTY MUNICIPALITY**

Mr. Prem Sonam; Chief Engineer

**Community**

**CHHETRAPATI Ward 17, Kathmandu**

Mr. T. R. Onta; Executive Member  
Mr. Bibhuti Man Singh; Chief Architect, Technical Interface

**ALAPOT**

Mr. Jagannath Kakr; Chaiman, Bal Bikas Secondary School  
Mr. Ramhari Sharma; Principle, Bal Bikas Secondary School  
Mr. Ramchandra Rauti; Teacher, Bal Bikas Secondary Schoo

**NGO, INGO**

**NEPAL RED CROSS SOCIETY**

Mr. Umesh Prasad Dhakal; Executive Director

**OXFAM**

Mr. Wayne Gum; Country Representative

**ACTION AID**

Mr. Basanta K. Pokharel; Team Leader, Social Inclusion  
Mr. Shejam Jnavaly; Program Officer, Social Inclusion

**SHAPLANEER**

Ms. Yukiko Fujisaki); Representative, Kathmandu Office

**NSET**

Mr. Amod M. Dixit; General Secretary & Executive Director  
Mr. Ram Chandra Kandel; Director, School Earthquake Safety Program  
Mr. Ramesh Guragain; Director, Earthquake  
Mr. Yoshihiko Koori; JICA Senior Volunteer

**Embassy, JICA**

**Japanese Embassy**

Mr. Makoto Yoshino; First Secretary

**JICA Nepal Office**

Mr. Noriaki Niwa; Resident Representative  
Mr. Yoshio Fukuda; Deputy Resident Representative  
Mr. Yusuke Tsumori; Assistant Resident Representative

**Others**

Mr. Hideo Katagiri; Project Manager, JICA Sindhuli Road Construction Project  
Mr. Koji Terakawa; Chief Adviser,  
JICA Agricultural Training and Extension Improvement Project  
Ms. Ysuko Oda); JICA Expert, CASP



### **3. Record of Workshop**

## Workshop Program

### Workshop on Community Based Disaster Risk Management

**Venue: Yak Palace**

**Date & Time: 11<sup>th</sup> August, 2008 (Monday)**

**■Registration**

13:30-14:00

**■Opening**

14:00-14:05

Mr. Kenichiro KOBAYASHI, JICA South Asia Division

**■Mission Statement**

14:05-14:15

Dr. Masakazu TAKAHASHI  
Leader / Community Based Disaster Risk Management 1

**■Existing Disasters and Current Endeavour**

14:15-14:30

Mr. Fumihiko YOKOO  
Community Based Disaster Risk Management 2,

**■JICA's Capacity Development Strategy and Japanese Experience**

14:30-14:45

Ms. Tomoko SHAW  
Participatory Planning

**■Discussion**

14:45-15:00

Issues on Community Based Disaster Risk Management in Nepal  
*Introductory to Discussion*  
Mr. Ram C. Kandel, Director, SESP  
National Society for Earthquake Technology-Nepal (NSET)

15:00-16:40

Facilitator: Mr. Bijay Krishna Upadhyay (NSET)  
Rapporter: Ms. Nisha Shrestha (NSET)

16:40-16:55

Wrap-Up: Mr. Amod Mani DIXIT, General Secretary & Executive  
Director, National Society for Earthquake Technology-Nepal (NSET)

**■Closing**

16:55-17:00

Dr. Masakazu TAKAHASHI  
Leader / Community Based Disaster Risk Management 1

Project formulation study on

**DISASTER PREVENTION MEASURES BY COMMUNITY PARTICIPATION IN  
SOUTH ASIA REGION**

Report on

**WORKSHOP ON DISASTER RISK MANAGEMENT MEASURES WITH  
COMMUNITY PARTICIPATION**

Submitted to:

**JICA Study Mission  
Kathmandu  
Nepal**

Submitted by:



**National Society for Earthquake Technology – Nepal (NSET)**

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September 2008, Kathmandu

## **1. Introduction**

### **1.1. The JICA Study Team**

Considering the fact that South Asia is a region prone to a multitude of disasters, and there is a need to enhance capacities of all stakeholders in these countries by integrating disaster risk management activities into development sectors and also to engage communities, local and central government as well as NGO institutions in this quest, JICA commissioned a Team for a Project Formulation Study on Disaster Prevention Measures by Community Participation in South Asia Region for a period of July-September 2008. The Study selected Nepal as a model target country and earthquake as a target hazard. The Study Team consisted of three senior professionals, specialists in Community Based Disaster Risk Management and Participatory Activity Planning.

The Study Team visited Nepal during 31 July to 11 August 2008. The objective of the Study Team was to initiate a wide discussion with the stakeholders to make recommendations on:

- How to harmonize disaster management activities with existing community activities, and
- What measures/efforts should be taken by stakeholders involved in community based disaster risk management.

### **1.2. Involvement of NSET**

The Study Team, based on a long term experience of the National Society for Earthquake Technology – Nepal (NSET) in earthquake risk management in Nepal and the Region, and also NSET's extensive experiences in working with Japanese institutions including the organizations involvement in past JICA study, commissioned to a) appraise the Team with initiatives implemented in Nepal since the previous earthquake disaster study by JICA and Home Ministry of Nepal, a) provide assistance to the team in meeting related central government, local government, donor and regional organizations based in Kathmandu who are contributing to Disaster Risk Management efforts in the country, and b) facilitation of a Workshop on Disaster Risk Management Measures with Community Participation on 11 August 2008. NSET also organized a field trip for the visiting Japanese team for appraisal of activities being implemented in the field.

This report covers only the workshop proceedings including discussions and conclusions arrived at.

## **2. The Workshop**

### **2.1. Organizer of the Workshop**

The workshop was organized by JICA Study Team at Yak Palace, Narayani Complex, Pulchowk, Lalitpur, Kathmandu, Nepal during 2-5 pm on 11 August 2008.



## 2.2. Workshop Attendees

A total of 25 representatives of different related organizations attended the workshop. A list of participants appears in Annex 1. The workshop was organized by Study Team at Yak Palace, Narayani Complex, Pulchowk, Lalitpur, Kathmandu, Nepal during 2-5 pm on 11 August 2008.

## 2.3. Workshop Objectives and Expected Outputs

The main objective of the workshop was to:

- 1) Share preliminary finding of the Study Team after conducting interviews with stakeholders – central and local government institutions, NGO/INGOs implementing DRM initiatives, UN System and donors supporting such initiatives, and communities that are being supported by the initiatives,
- 2) Get feedback on the findings from stakeholders, i.e. the workshop attendees, and
- 3) Discuss challenges and opportunities for going ahead in this quest, including CBDRM implementation. The challenges to be discussed, based on analysis of identified good practices, were:
  - a. Sustainability of efforts and results
  - b. Scaling up of initiatives throughout the country
  - c. Institutionalization of the lessons and results of the best practices, and
  - d. Discussion on other issues

## 2.4. Workshop Agenda

The agenda included opening remarks by Mr. Kenichiro Kobayashi, Chief of the JICA South Asia Division.

The JICA Study Team made three presentations on a) Mission Statement of the Study Team, b) Existing Disasters and Current Endeavour, and c) JICA's Capacity Development Strategy and Japanese Experience. These presentations set the scene for an elaborate discussion subsequently.

In order to meet the stated objectives of the workshop, the workshop allowed participants to a) present good practices in earthquake risk management in Nepal, b) identified suitable approaches that have worked successfully, c) and the challenges faced.

A guideline for discussion urged participants to identify good practices and involvement of community in the initiatives, urgent needs for effective DRM in the country, and ways for achieving sustainability, scaling up and institutionalization.

## 2.5. Workshop Proceedings

### Mr. Kenichiro Kobayashi, Chief of the JICA South Asia Division

Delivering his opening remarks, Mr. Kenichiro Kobayashi, Chief of the JICA South Asia Division, welcomed the participants and expressed sincere gratitude to NSET and JICA study team for organizing the workshop. He recalled that JICA since a long time has been a development partner of Nepal providing support and assistance of diverse range. Realizing the need to strengthen capacity of disaster risk management in responsible agencies, JICA



has so far dispatched many experts to Nepal and supported Earthquake Disaster Mitigation Study in Kathmandu Valley in 2001. Currently, two JICA experts are working very hard in two agencies – Mr. Yamamoto in Lalitpur Municipality, and Mr Koori working with NSET. Even though in Nepal we support by our experts, unfortunately every year Nepal faces big damage due to flood and landslide disasters and Nepal loses significant number of precious human lives. In addition, Nepal may have big earthquake any time. Then the question is what we should do? Nepal has many problems demanding immediate solution, for example, there are political problems every day, poverty alleviation challenges, gender and social inclusion challenges, provision of basic needs to the population such as health, drinking water, education etc. These challenges make everybody very busy thinking about tomorrow, not about the future. So it's not easy to take necessary measures for disaster risk management. Therefore it is necessary to act step by step, slowly by slowly – changing community's ways of thinking towards disaster preparedness and mitigation. This is the most important approach.

The purpose of the JICA Study Team is to learn Nepal's experiences in community based disaster risk management (CBDRM) from completed and on ongoing projects, and share lessons learned with colleagues working in this areas. Today's workshop is a good opportunity to exchange our views and opinion.

Based on the discussions outcome of the workshop, JICA will prepare a report reflecting the lessons learned in Nepal into JICA projects not only in Nepal but in the South Asia region. The discussions and lessons learned will also be useful for the Nepalese officials for considering reflecting the lessons in policy making.

Thank you for your time, wish you proactive and enthusiastic engagement in this workshop.

#### **Dr. Takahashi,**

DR Takahashi welcomed all participants, who have been engaged in promoting community based disaster risk management, and observed that CBDRM implementation is good in Nepal. He explained mission of this study.

For studying CBDRM in Nepal, the JICA Study Team visited community, heard from stakeholders, and this workshop. Obviously South Asia, including Nepal, is prone to a variety of hazards. In order to meet the challenges, capacity should be enhanced, especially by government, local government and participation of communities and NGOs should be encouraged.

JICA should introduce CBDRM in future projects as much as possible.

He also explained the objective and expected outcome of the mission. He said that the Study Team had a chance to select country in the region, and they selected Nepal as a model country, and earthquake as the target hazard. He was convinced that the experience of approach and lessons of Nepal can be applied in for example Bhutan, Pak, Bangladesh.

But the Team is also bearing in mind other hazards such as landslide and flood are equally important, especially in Nepal.

The team wants to increase understanding of stakeholders in Nepal: community, central government, local government, communities, NGOs and donor agencies – he said. He made the observation that most of the community based disaster risk management



(CBDRM) initiatives are being implemented by NGO with support by donor agencies. This is a new phenomenon, and the challenge for JICA is to sit this side of concepts.

He gave the details of the Teams activities in Nepal and stressed on the importance of the workshop.

**Mr. Fumihiko Yokoo, Community Based Disaster Risk Management 2, OYO International Corporation, Japan**

Mr. Yokoo stated that the visits to different organization revealed much on current and previous CBDRM endeavours, future plan and planning for improving the effectiveness of activities. He listed the range of organizations visited.

He referred to the JICA Study on Earthquake Disaster Mitigation Study for Kathmandu Valley in 2001, and said that after this particular project many things changed in Nepal.

He summarised the changes as:

- 1) Significant expansion of activities in DRM. Several important works were done. A lot of organizations say they are doing these activities. In 2001/32002 we didn't find such activities in Nepal. He listed major milestones.
- 2) Development of common language regarding disaster management such as Mitigation, preparedness and contingency plan. Earlier central government and also local governments did not understand simple words such as mitigation, preparedness and contingency plan etc. Now everybody talks about Hyogo FA 2005-2015 and how CBDRM based on HFA has been realized. Link between Poverty alleviation and DRM realized. Gender and children considered
- 3) Establishment of Networks by various stakeholders
- 4) Inclusion of DRM into development programs - earlier development was development – nobody talked about mitigation. Now more development programs include DRM e.g. Water storage in Lalitpur retrofitted water tank.
- 5) Expanding of activities from capacity development of individual and individual institutions to socialize and institutionalize
  - a. Initially, activity were undertaken mainly by NGO/volunteer – then gradually local governments got involved, and central government is also is involved in several activities, for example implementation of Building code.
- 6) Autonomous Activities of Communities: example Kshetrapaty DMC ward 17
  - a. First stage \_ awareness by community watching
  - b. Present: store emergency equipment, Retrofitting community hospital
- 7) There are good activities, but not enough activities, to mitigate earthquake disaster. So we have to consider and discuss and come back to this points:

**Ms. Tomoko Shaw, Participatory Planning, OYO International Corporation, Japan**

Ms. Shaw started with Japanese experiences in DRM. She informed the house that JICA has a guideline on CBDRM, and explained the main gist of the guidelines



She referred to Inamura no hi – how villagers evacuated the village after tsunami. She explained that usually there is always something related with community people with disaster mitigation; for example, she explained that the shrine along the Inamura No hi embankment is placed so that people come there every morning and pray by doing that they compact the soil making it stronger

She talked about the Kobe Earthquake which struck during the time when IDNDR was a global campaign, and showed video on Kobe earthquake, M7.2.

The Kobe earthquake triggered concept of CBDRM, and the 1<sup>st</sup> CBDRM project was initiated by the UNCRD, Kobe.

After IDNDR came ISDR, under ISDR CBDRM has been stressed – living with risk was published – then Kobe world conference was organized and since then, a lot of guidelines on CBDRM were published after 2006

JICA strategy about capacity development is not only transferring knowledge and technology, models and processes, but it is a process enhancing capacity of recipient countries to identify their own issues, setting targets, and solving the issues.

Research institutes, like DUDBC are also the key players. Local governments are also key players of CBDRM. The Ministries provide policies, and NGOs are the collaborating partners together with community organizations. As per the new policy, JICA will support all actors, not only community

This is a comprehensive capacity building program in 3 tiers

- 1) Individual – such as tech, knowledge, at organizational level, sharing, or equipment, all activities
- 2) Social level: integration of CDRM into policies, partnership of community and government, very important. It will lead to sustainability

Earlier only individual and organizations were targeted! Currently, social aspects are also considered!

She presented the standard flow of community plan and planning steps

- 1) Database, Risk assessment, and ranking
  - a. damage assessment and ranking
  - b. diagnosis date base; vulnerability, basic data such as building and results of social structure, level of awareness etc
  - c. awareness of citizen
  - d. suggestion by citizens – community people opinion – local government ask citizens to form a working group, advisory
- 2) Planning stage
- 3) Inclusion of citizen
- 4) Compiling issues of disaster management – city government dispatched experts to provide tech. assistance
- 5) Finally disaster management planning will be prepared

She described the case of Tokyo with explanation of damage estimation, including technical details such as liquefaction, fire, and other collateral hazards. In her presentation,





she several times referred to some similar works of CBDRM such as community watching, a Japanese methodology, and the publication of the Japanese folklore "Inamura no hi", both by NSET, as good examples of replication being successfully implemented in Nepal.

She showed movies and photographs on several Japanese experiences in disaster mitigation.

**Mr. Ram Chandra Kandel, Director SESP/NSET** facilitated the discussion that followed. He invited participants to comment, suggest, express opinion on the messages in the presentations, issues raised and, if they want, to raise further issues. He requested the participants to focus on ways to go ahead considering the challenges of replicating and scaling up the best practices, how to achieve sustainability of community-based DRR efforts, and the ways to institutionalization of best practices.

**Mr. Bijay Upadhyay** then continued facilitating the workshop. He asked participants to write in meta-cards good practices (projects/initiatives, implementing agency, and other details) implemented by different organizations in aspects of disaster risk management in Nepal.

After the good practices were expressed, Mr. Upadhyay picked up the issue of Sustainability and asked participants to write down in meta-cards what should be done for ensuring sustainability of the initiatives and also to write what has already been done in this endeavour. He repeated the same procedures for the issues of scaling up or replication and institutionalization of the best practices in terms of what should be done and what efforts have already been made in meeting these challenges.

The participants used meta-cards of different colours for writing their opinion on the various issues – all the meta-cards, of different colours for different issues were stuck into the pin-board for collective observation. The cards were reorganized into different issues on the pin-board.

Annex 2 provides a copy of the meta-cards organized into the "Good Practices", 'Issues of Sustainability', 'Scale up / Replication', and 'Institutionalization'. The challenges on these issues were further subdivided into "What should be done" and what has been done".

Then discussion followed on what should be done on good practices, sustainability. The following paragraphs provide the expressions by the participants on the issues of good practices and challenges.

#### **Julie Dickens, ICIMOD**

Although the International Centre for Integrated Mountain Development (ICIMOD) is not specifically working on earthquake risk management (ERM), but approaches and methodologies that ICIMOD is employing for other hazards can be useful in terms of sharing experiences and lessons learned. ICIMOD is working on aspects of disaster risk management (DRM) on several hazards.

In hydrological disasters we have a project for Himalaya – Hindukush region covering Nepal, Pakistan, Bangladesh and India. Part of this project that could be of interest to this



workshop is our efforts on **documentation of local knowledge in disaster risk management, mainly** in flood preparedness in eastern Nepal and Pakistan. This is a best practice. We think that unless we take into account the existing local knowledge on disaster preparedness it will be difficult to implement DRM. Actually, there have been several case studies highlighting importance of local knowledge on disaster preparedness (DP) even in 70s-80s, but this consideration of local knowledge is still not implemented in field. As part of this project we have developed very simple framework on how on the use of local knowledge on DP, which can be replicated in any country for any type of disaster. We think that local knowledge should be combined with scientific knowledge. For this, we are developing model on how to integrate local knowledge with scientific knowledge.

For institutionalization, it is necessary to include such local knowledge into school curricula. Then generation of communities will realize that the knowledge available with them is important and can be employed for making them safe from disasters.

We are implementing another project **too much and too little of water** that focuses on understanding how implementation and non-implementation of policies affect community's capacities in adapting to climate change — draughts or floods, how communities adapt to climate change in the region. Expected outcome will be clear policy guidelines for policymakers.

Here I want to tell also about the role of regional organizations in documenting in key role and disseminating practices, because local NGOs have lots of experiences and information, but they don't have time and capacities in documentation. It is the responsibility of regional organizations such as ICIMOD to help local NGOs in such documentation of does it themselves.

**Mr. Madhav Pahari, UNCEF:**

I work in the area of Water & sanitation, so I will be confined to the issues of wat/san for now. Since we are one of the lead agencies to work with the government for water & sanitation and nutrition, advising the government on this issue, the experience and lessons learned are good for any kind of disaster.

First, let me tell you about our earthquake-related project for ensuring continued water supply in Lalitpur of Kathmandu Valley. The project is call Disaster Preparedness and Response Framework (DPRF). We learned lessons from the good research and findings of the JICA study of 2001 as the starting point. JICA report forecasts that there will be heavy damage to water supply system of Kathmandu Valley and that 90% of the system will not work after a scenario earthquake. So how to secure water during a disaster? There could be two options: either treat the water from the river which is heavily polluted and hardly possible. The other option is to draw groundwater in the valley. UNICEF, Lalitpur Municipality, and NSET, in collaboration with ECHO implemented this project. It consisted of three components: a) preparing local government's capacity to provide water – they are responsible for any kind of disaster and the municipality can use the documents prepared to seek funding from donors, b) create alternate mechanism for ensuring safety of affected/displaced population by identifying and planning the possible evacuation places. We worked closely with the local municipal residents, municipal council, district disaster relief committee (DDRC), and the district development committee (DDC), and c) installed



earthquake-resistant infrastructure including two treatment plants and other infrastructure so that we can provide uninterrupted water supply to the evacuation sites. We have invited other critical facilities such as schools, electricity, health facilities to be a part of this DPRF and we would like to continue these efforts in other municipalities of Kathmandu Valley (KV).

Apart from earthquake, UNICEF obviously does work in areas of flood disaster management. We are working with Ministry of Physical Planning and works (MPPW), and the department of water supplies and sewerage - to help them integrate disaster component into their regular programs, prepare programs in wat/san sector. Many times projects are implemented but not followed up, so we want to build this component into regular program of the government to achieve sustainability. Another area is landslide disaster management. We have contingency plan to supply water in the areas affected by heavy flood and landslide in Nepal. In education sector, we are investing in securing earthquake-resistant school buildings. I can not say much on this effort on education because colleagues from the department of education, with whom we work, are better placed to talk about it.

**Mr. Shambhu Prasad Uprety, Senior Engineer, Department of Education (DOE)**

DOE is constructing 12,000 classrooms per year investing about 3 billion Nepali Rupees (NR) per year. These constructions consider disaster risk management. DOE has prepared alternative type designs for school buildings considering environmental, earthquake and other aspects. The designs are different for different physiological regions: terai, hill and mountain regions. Within every region, there are different type designs for different construction materials making 4-5 designs available for each physiographic region. The designs are circulated to all regions and made mandatory for construction of school buildings. However, if schools want to prepare their own design based on their location, and resources availability, their design should be approved by DOE prior to start of construction. These provisions are made to ensure that the school buildings incorporate earthquake-resistant elements making them save. One of the main donors in our effort is Japan – several thousand of schools are being constructed with support from Japan Government. Other donors are the World Bank (WB), Asian Development Bank (ADB), DANIDA, FINNIDA, NORAD, EC, and DFID –almost all donors working in Nepal help in school construction and education sector.

While implementing this, DOE is not much working in software part: for the last two years, we have developed new modalities for school construction. This modality consists in working closely with NGOs and INGOs for construction management. Currently, in 41 districts, INGOs are implementing construction management. The benefit derived is that they task social mobilizers for awareness raising for regular maintenance successfully.

However, challenges are still there – technical as well as social mobilization for safe schools and maintenance is still not happening as per the plan. The main reason is that both the government and INGOs are not strong enough to take up the tasks fully. So, what we should do is to make joint efforts of government, national and local NGOs and INGOs so that ownership is taken by communities. In this endeavour, we get reliable and sound support from NSET.



**Mr. Sanjeev Kaphle, Nepal Red Cross Society (NRCS)**

NRCS is engaged in community based disaster preparedness (CBDP) since 1997. At present, our coverage is 35 districts particularly in community based disaster risk reduction (CBDRR). We have developed a small database system by which we monitor hazard profile of all 75 districts to know the potential hazards in all districts.

In Kathmandu Valley (KV), we did response preparedness initiative since 2003 and recently we have finalized contingency plan focused for KV. The plan is available in [www.nrscs.org](http://www.nrscs.org).

Our lesson is that we should well understand the dynamics of potential hazards, it's possible progression and reach: how it moves from 0% to 100%

Besides, we have also to consider the actual conditions on grounds to match peoples' interest with the project objectives. The situation of political conflict and growing poverty are not very supportive for their effective participation in CBDRR. Further, lack of a system of DRM also effects adversely – uncoordinated pieces of works are being done by different organization. There are no standards to follow that should have been endorsed by the government.

Luckily, the National Strategy for DRM and commensurate policies and legislations have been drafted. Once endorsed by the government, these will greatly help us do things better in future.

Reaching communities is always an opportunity. Once we reach the community we see the possibility to understand the necessity to shift our efforts from single hazard approach to multi-hazard approaches because most communities are being affected by many hazards simultaneously: conflict, population movement, or natural hazards. So we have to look at the situation comprehensively, we have to categorize how we can adjust values and issues

For scaling up we have to categorize situations: in some areas of the country, the community is strong but lack presence of strong authority. There are places where the community is weak but there is a good presence of organizations and authorities. The third situation is where both authorities and communities are weak. So we have to understand the situations, and careful consideration should be made regarding which are is best suited approach and method for implementation of DRR or its replication and scaling up.

**Mr. Niranjan Tamrakar, UNOCHA**

UNOCHA's work is related to Humanitarian works, we don't have specific programs but work for national or international coordination of humanitarian affairs. We are now doing contingency planning for Nepal. We also do the annual CAP process. We also do emergency response coordination at international level. On national level, we are in the process of helping the government with the establishment of emergency operation (EOC) at the Home Ministry with whom we coordinated for this endeavour. This initiative includes provision of assistance to the Home Ministry in capacity enhancement of the national organization.

The UNOCHA Headquarters in Geneva is organizing disaster simulation in 2009 in Kathmandu. OCHA is also assessing capacities of national and NGO organizations in emergency preparedness and response.



### **Mr. BN Sharma, Ministry of Local Development (MOLD)**

There are 75 districts, 58 municipalities and 3915 VDCs in the country. That way MOLD has direct formal development relation up to community level, for DRR. MOLD has established DRM focal desks including designated personnel at Ministry, Municipality and DDC levels. They are working in collaboration and coordination with the municipalities and DDC. Currently, lack of elected bodies is a problem; all activities are coordinated by only bureaucrats deputed from the Ministry.

Because of resources, and appropriate capacities, these focal points the designated focal persons and supporting staff are unable to handle responsibilities efficiently. So we need to be supported by resources for strengthening capacities in terms of knowledge enhancement and equipment.

In many cases, local bodies are given responsibilities, and they try their best to discharge responsibilities. But they also need to be supported. Once strengthened, we can go to the communities and do DDR at grassroots level.

### **Amod Dixit, NSET**

Mr. Dixit thanked JICA and the Study Team for selecting Nepal as a model country and earthquake as a target disaster, and also for giving opportunity to NSET in providing assistance to the JICA team during the mission.

Mr. Dixit summarized the statements made by the participants, emphasizing on their recommendations on lessons, good approaches and ways to meet challenges. The following bullets capture some of the statements.

- While about a decade ago, there was not much awareness on DRM, but the international positive influence, including the Study by JICA in Kathmandu Valley, the IDNDR/ISDR process and a lot of efforts by local organizations in collaboration with international development partners, have tremendously enhanced awareness and knowledge, created a conditions of increased investment in DRM. This has resulted in development of methodologies suitable to Nepalese conditions, implementation of a host of DRM initiatives at various levels in Nepal. A lot of good practices have been created that have been found technically, socially, economically and culturally feasible in Nepal. Many of these initiatives have influenced similar process in neighbouring developing countries by way of replication and exchange.
- Some of the good practices recognized as important are:
  - Disaster Preparedness and Response Framework preparation in Lalitpur Municipality by UNICEF in collaboration with Lalitpur Sub-Metropolitan City (LSMC) with financial support from ECHO and technical support of NSET.
  - School Earthquake Safety Program that was started by NSET with support from USAID/OFDA, and now being implemented by NSET and host of different organizations.
  - Community based Disaster Prepared Programs in Lalitpur, Kshetrapaty Ward 17 by the Disaster Management Committee (DMC 17), in different



- districts including the flood –prone areas of Terai, etc. This type of projects is gradually shifting to multi-hazard approach.
- Building Code Implementation by LSMC which provided impetus to the government to make the Building Code mandatory for all municipalities and urbanising centres of Nepal.
  - Housing Earthquake Safety Initiative (HESI) implemented by the Department of Urban Development and Building Construction in collaboration with UNCRD, Hyogo Disaster management Planning Office (UNCRD) and NSET. This project focuses on creating suitable conditions for the implementation of Building Code in municipalities considering the engineering and social aspects. Creation of Model Buildings in each district headquarters by the government (DUDBC) emanated from this program
  - Retrofitting of Community Hospital by the DUDBC and DMC 17 and the Kshetrapaty Clinic. This will develop appropriate engineering norms for such retrofitting works by the government and other several institutions including professional engineering societies.
  - Mason and small contractors' training in earthquake-resistant method of construction by DUDBC and NSET
  - Prepositioning of community level emergency search and rescue equipment (NSET), relief supplies (NRCS, ARC and NSET; and also by NRCS \* Danish Red Cross) and propagation of household level emergency kit by Kshetrapaty Clinic and DMC17.
  - Capacity building and training programs in which several agencies have joined hands, with a series of target groups from housewives and children to adults and volunteers and policy makers.
  - Mobile Earthquake Safety Clinics by NSET
  - Inclusion of disaster prepared in rural development by NRCS
  - A host of earthquake awareness programs using FM radio stations, print/electronic media, including observing annual Earthquake Safety Day program under the leadership of Home Ministry, DUDBC and NSET, with close involvement and ownership by a host of organizations of Nepal including the UN system and international partners.
  - Regional programs on documentation of experiences, lessons learned, capture of local knowledge and incorporation of local knowledge into initiatives in western Nepal and Pakistan, and community capacity enhancement for climate change adaptation by ICIMOD
  - Formulation of National Strategy for Disaster Risk Management by Home Ministry with support from UNDP Nepal and NSET. Also development of compatible legislation draft by Oxfam Nepal
  - Immediate shelter response planning by DUDBC and IFRC with participation of several government and non-government agencies.



- Efforts towards development of school curricula for school to teach DRR and preparedness
- In terms of meeting the challenges, the following points were made:
  - Transition from single-hazard approach to multi-hazard approaches
  - Emphasis on actions, mainly by building upon what has been accomplished
  - Multi-stakeholders involvement, multi-hazard approach,
  - Building on what exists, revise modify approaches, methodologies to suit local physical, social and political conditions
  - Sustainability can be enhanced by:
    - integration of DRR into development program using CBDRM methods adds value
    - inclusion of DRR and DP into school curricula
    - document and integrated local knowledge and practice after validation with scientific and technical tests
    - joint efforts by central government, local government, national/local NGOs and communities enhance effectiveness and sustainability
    - Inter-sector understanding, and cooperation,
    - Funding for DRR is necessary for sustainability
    - Awareness and education is the key for sustainability.
    - Changing the hearts and minds in community is key to sustainability.
  - Scaling up
    - Several good practices that have been success and have generated valuable experiences and capacities should be expanded to other areas and municipalities in the country. Otherwise not only the need will not be covered, but also the valuable lessons will be lost.
    - Need funding support from Central Government, in collaboration with international partnering organization such as JICA to the efforts of scaling up good practices.
    - The National Strategy for Disaster Risk Management (NSDRM) should be endorsed and acted upon by the government including enactment of compatible to NSDRM legislation
    - CBDRM should be the central approach to be adopted for ensuring engagement of local communities, VDCs, and municipalities
    - Capacity development in VDCs and municipalities will be the key for their involvement and ownership of initiatives. It will help to capture available local and indigenous knowledge in implementing CBDRM replication projects. For this establishment of disaster management training centres will be a pre-requisite. Knowledge exist now, ten years ago it was not there. Knowledge available with national institutions and international practices should go to the communities – Nepal can't do DRRR without Community level organizations and



without CBDRM approaches. This requires intensive involvement of CBOs, NGOs and other non-formal organization is crucial.

**Mr. Masakazu Takahashi, Study Team Leader, Community Based Disaster Risk Management 1, OYO Corporation**

Mr. Takahashi thanked all participants for attending the workshop and for their contribution to the discussion.

In concluding, he observed that the workshop enlightened him about the variety of aspects of CBDRM, and that Nepal has accumulated so many knowledge and practices last ten years. He said – “we heard opinion from various agencies, learned much, these will be very important not only for Nepal but for the countries in the region”.

According to him, some activities that have been started obviously need continuation. It is also necessary to scale up and institutionalize the good practices.

He invited everybody to refreshments which followed after the closure.





**Annex 1: List of Workshop Participants**

The following list presents names, designation and contacts of the workshop attendees.

**Workshop on "Disaster Risk Management Measures with Community Participation"**

Organised by:

Japan International Cooperation Agency (JICA)

Date : 11 August, 2008

Time : 01:30 -5:00

Venue: Yak Palace, Pulchowk, Lalitpur

| S.No. | Name of Participant | Designation       | Name of Institution    | Off. Tel.No. | Off. Fax No. | E- mail of Participants | Signature   |
|-------|---------------------|-------------------|------------------------|--------------|--------------|-------------------------|-------------|
| 1     | Ram Hari            | Head master       | Prab Pokhara S. School | 4-450136     |              |                         | [Signature] |
| 2     | Uddhab Dhimel       | Teacher           | "                      | "            |              |                         | Uddhab      |
| 3     | Kenichiro Kobayashi | Chief             | JICA HQ                | 81-353125513 |              |                         | [Signature] |
| 4     | Yusuke Tsumori      | ARR               | JICA Nepal             | 97610713     |              |                         | [Signature] |
| 5     | Fumihiko Yokoo      | Study team member | OYO International      | 421-5181     |              |                         | [Signature] |
| 6     | Atmalam Nepal       | Nipponkwaio.      | Nippon Kwaio           | 4-253938     |              |                         | [Signature] |
| 7     | MIKIO YAMAMOTO      | JICA SV           | LSM                    | 98510-81427  |              |                         | [Signature] |
| 8     | Y. Koshi            | JICA SV           | NSET                   | 9850-35961   |              |                         | [Signature] |
| 9     | Bhuvan Nethan       | J.S.              | Mold                   | 985102628    |              | bn.stone@l.com.np       | [Signature] |
| 10    | Om B. Rajopadhyaya  | DDG               | DUBC                   | 984840093    |              | odhara@ntc.net.np       | [Signature] |
| 11    | R.K Dhakal          | J.E               | L.S.M.C                | 984128028    |              |                         | [Signature] |
| 12    | Gauri De Kerkis     |                   | ICAWAB                 | 5008222      |              |                         | [Signature] |
| 13    | Sanjeev Kofy        | Director          | Nepal Red Cross        | 4722261      |              | sanjeev@nrcs.org        | [Signature] |
| 14    | Brijay Upadhyay     |                   | NSET                   |              |              |                         | [Signature] |



Report on Workshop on Disaster Risk Management Measures with Community Participation

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|-------|-----------------------|-------------|---------------------|--------------|--------------|------------------------|--------------------|
| 15    | Niranjana Tamrakar    | NDRDA       | OCHA -Nepal         | 5548553      |              | ntamrakar@un.org       | <i>[Signature]</i> |
| 16    | Shamshul Upreti       | DOE         | DOE                 | 6633027      | 6633624      | shu@mai.com.np         | <i>[Signature]</i> |
| 17    | Jiro WATANABE         | PPPUE       | →                   |              |              | jiroh.wa@gmail.com     | <i>[Signature]</i> |
| 18    | Amit DIXIT            |             | NSET                |              |              |                        | <i>[Signature]</i> |
| 19    | Ramesh Guragain       |             | NSET                |              |              |                        | <i>[Signature]</i> |
| 20    | Madhav Pahari         |             | UNICEF              |              |              |                        | <i>[Signature]</i> |
| 21    | Surya Nandan Shrestha |             | NSET                |              |              |                        | <i>[Signature]</i> |
| 22    | Ram Chandra Kandel    |             | NSET                |              |              |                        | <i>[Signature]</i> |
| 23    | NIVA UPRETI           |             |                     |              |              |                        | <i>[Signature]</i> |
| 24    |                       |             |                     |              |              |                        |                    |
| 25    |                       |             |                     |              |              |                        |                    |
| 26    |                       |             |                     |              |              |                        |                    |
| 27    |                       |             |                     |              |              |                        |                    |
| 28    |                       |             |                     |              |              |                        |                    |



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Annex 2: Table with copy of Meta-cards Organized According to the Challenges

| Best Practices   | Sustainability   |   | Scale Up / Replication  |  | Institutionalization  |  |
|--|--|---|---|--|---|--|
|  | What Should be done (Need)   | What has been Done (Action)   | What Should be done (Need)  | What has been Done (Action)                        | What Should be done (Need)  | What has been Done (Action)  |
| Retrofitting Chhetrapati Community Shital                    | To be included in govt. plans programs with budgetary allocation         | GON started including programs such as mason training                     | Focus on developing trainees in large scale through out the country                               | Several TOTs have been conducted by DUBBC & NSET   | Need to build upon local knowledge of DP/DM/ incorporated in relative policies.                       | Some Schools and hospitals are really constructed and retrofitted in Kim Valley. |
| Community (User's Committee and DUBBC) Two Fiscal years      | Program based rather than project types activities                       | retrofitting of public structures etc. in annual plans and budgets        | insure safety of all newly constructed schools (Working in all districts)                         | Shake-table demos                                  | Institutionalization should be continued  | A shelter Cluster contingency plan is being prepared by DUBBC & IFRC/UNOCHA      |
| Community Based Hazards Risk Reduction Project               | Support local formal/informal organization through in Capacity Building  | Community organization Training DPP Linking with other senior authorities | Expand safe drinking water provision in other municipalities in the valley (Replicate LSMC Model) | E/Q Safety day                                     | Regular Simulation Drill in Each DMC  | Focal Desk Establishment in the ministry, DDC and Municipalities                 |
| Nepal Red Cross/Danish Red Cross 2005-2009                   | Budget from Municipality and Central Govt. on DRR (CBDRM)                | Integration of DM in Development program                                  | Conducting mass awareness program at Community level  | NSET has initiated works in several Municipalities | Include Earthquake Safety Technology into regular curricula eg building code in engineering education |  |
| Mason & Small Contractors Training by DUBBC and NSET         | Scientific and Local knowledge for hazard mapping, EWS etc.              | Consciousness should be created every where                               | DOE Through INGOs conducting such program, but coverage ~30%                                      | ERRPP has been initiated in six municipalities     | Integrate the activities through coordination between shelter cluster members                         |  |
| On-going (covering 30 masons in each district every year)    | Emergency funds  | Maintenance fund raised govt. support in some cases is not sufficient     | Joint effort of government line agencies, INGOs, professional org. ns                             |  | Establishment of Disaster Management Training Center in the National Level                            |  |
| School / Hospitals should be retrofitted                     | Practice of hazard mapping   |   | Expand DPRF in all KTM Valley municipalities  |  | Enhance Disaster Awareness and Education  |  |
| Design Code should be prevailed to all the City              | Drama and information program is being done in every school              |   | At least every 6 month's drill and event should be executed                                       |  | Formalization of Community Connecting with Community with emergency fund                              |  |
| Renovation and Rehabilitation of Emerg. Water points in LSMS | Awareness and Preparedness for children's education                      |   | Capacity building of CBOs and NGOs with pre-positioning of DM-Kits.                               |  | Operationalise DRM Strategy, Policy and Act and Implement Accordingly                                 |  |
| Committed formed and Training Conduct                        | Ownership by community should be done                                    |   | Coverage/extension of ward level disaster Management Committee                                    |  | Schools should be made responsible  |  |
| Capacity Building of Local Groups and School Children on DRM | Central local gov't. should provide program/budget endorse and encourage |   | Institutional Partnership   |  | Through school management committee being done but not enough   |  |



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|  |   |  |                                  |     |  |
|--|---|--|----------------------------------|-----|--|
| Construction of Eq. Resistant Primary School Bldg.                             | Multi-stakeholder dialogue  |  |                                  | TOT | Strong Monitoring Mechanism and capacity building of schools                     |
| Prepositioning of Life saving supplies (relief items)                          | Comprehensive DRM for all sectors and work in a coordinated fashion                       |  | Awareness                        |     | Mobilize Communities in All Aspects of DRM                                       |
| DMFW Prepared  | Awareness raising frequent monitoring by DEO's and DOE                                    |  | Raise awareness for preparedness |     | Know how exists, practice Negligible   |
| Training of Women on Eq preparedness and non-structural safety                 | Integrate DRM intervention into regular Development program and give continuous attention |  | Use mass media                   |     | Incorporation of Local Knowledge on DP/DM in School curricula                    |
| Training of Community Disaster Volunteers continued effort in many communities |   |  | Working to 58 Municipalities     |     | Need to Strengthen Desk (Unit) and Build the capacity of the focal persons       |
| Cheertrapti and Lalitpur   |   |  |                                  |     | Ward Level DMC should be institutionalized in Municipality Work Plan             |
| Mobile Earthquake Safety clinics continued endeavour of NSET                   |   |  |                                  |     | Need Support Municipalities for Disaster Safety Section                          |
| Mason Training on Eq Resistant Construction                                    |   |  |                                  |     | Integrate DRM into Development Activities at all levels                          |
| School Earthquake Safety Program   |   |  |                                  |     | Promote CEDRM with policies in Background  |
| Emergency Water pre-positioning for Lalitpur                                   |   |  |                                  |     | Work Closely with sector line ministries and harmonize intervention              |
| Building Code implementation by LSMC   |   |  |                                  |     | Linking DP Plan and Testing Practice   |
| Ward level Disaster Mgmt. Committee formed by NRCS                             |   |  |                                  |     | Identification of Vulnerability, Risk and Hazards                                |
| Construction of Eq. Resistant 3 storey RCC frame school buildings              |   |  |                                  |     | Move from Project to Program Approach  |
| Activities of Cheertrapti ward no. 17- Self supported                          |   |  |                                  |     | Institutional mapping of possible stakeholders and strengthening their capacity. |



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|               |   |   |                              |   |   |   |                                  |   |  |
|---------------|---|---|------------------------------|---|---|---|----------------------------------|---|--|
| DPRF- Lalipur | Disaster Mgmt. in Rural Dev<br>By Red Cross | School Based Disaster Risk<br>Reduction | * Too much, too little water | Knowledge sharing on<br>Disaster Preparedness | Moving from single hazard to<br>multihazard | Considering School also as<br>entry point | CBDRM in Chhetrapati, 17<br>ward | Earthquake Safety<br>Consciousness Programs | Community Based School<br>Retrofitting program |
|               |   |   |                              |   |   |   |                                  |   |  |
|               |   |   |                              |   |   |   |                                  |   |  |
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