

## 5-2. Capacity Building in Member Countries

### 5-2-1. Technical Cooperation Project in Nepal

#### (1) Background of the Project

Nepal is located in the area of collision between the Indian plate and the Eurasian plate, which has been hit by earthquakes frequently in the world. Kathmandu Valley, where the capital city of Nepal is located, has experienced several disastrous earthquakes, including the Bihar-Nepal earthquake of magnitude 8.4 which occurred in 1934, leading to collapse of approximately 20% of all buildings in Kathmandu Valley and 9,040 fatalities. Despite the high risk of a future earthquake in Kathmandu Valley, countermeasures such as retrofitting of buildings for seismic resistance, land use control and application of the National Building Code have not been sufficiently promoted so far. Further, due to the rapid increase of population of Kathmandu Valley, increasing number of population could face the risks caused by extensions work on existing buildings and non-engineered buildings that constructed without the participation of knowledgeable and skilled architects and engineers.

With this background, it has become an urgent need to update the risk assessment for the future development plans and raise policies concern on the disaster risk management. Under the request from the government of Nepal, JICA formulated the “Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley” and decided to start the project activities from the end of April 2015.

On April 25, 2015, just before the commencement of the project, the Gorkha earthquake of Mw7.8 (USGS) occurred at the boundary of the Indian Plate and the Eurasian Plate with its epicenter approximately 76 km west of Kathmandu. This earthquake brought heavy damages in a wide range of area; 8,790 people were killed and approximately 500,000 buildings were totally destroyed. Through a series of discussions with counterparts, the project component was partly modified in order to adapt to the changed post-earthquake situation and respond to the rehabilitation and recovery needs.

#### (2) Outline of the Project

The outline of the project is as shown in the below table.

<b>【Project Period】</b>	April 2015 – October 2016 (Term 1) October 2016 – April 2018 (Term 2) (Total 3 years)
<b>【Project Goal】</b>	To implement the earthquake risk assessment for future scenario earthquakes with considering the earthquake environment after the Gorkha Earthquake, and to develop the DM plan for concrete and effective promotion on disaster risk management for future earthquakes.
<b>【Project Target Areas】</b>	Kathmandu Valley (Targets for Pilot Activities: Budhanilkantha municipality, Bhaktapur municipality, and Lalitpur Metropolitan city)

<p><b>【Expected Outputs】</b></p>	<p>[Output 1]: To conduct seismic hazard analysis based on scenario earthquakes utilizing the latest knowledge and create detailed ground model for Kathmandu Valley.</p> <p>[Output 2]: To conduct seismic risk assessment based on the results of seismic hazard analysis (Output1), and summarize as damage estimation by considering several occurrence scenes (time, date, season, etc.)</p> <p>[Output 3]: To enhance skills for updating risk assessment results in accordance with the social environment change in the future.</p> <p>[Output 4]: To formulate BBB recovery and reconstruction plan utilizing the results of hazard analysis, and disaster management plan based on the results of seismic risk assessment for the pilot municipalities.</p>
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The ADRC has dispatched the experts on “Standard Operation Procedure Planning” and “Community Based Disaster Risk Management/ Community and Social Analysis” to conduct some activities related to formulation of disaster management plan, a part of the above-mentioned expected output 4 of the Project and completed all the planned activities in March 2018.

Main objective of the “Standard Operation Procedure (SOP) Planning” activities was to formulate SOP manual indicated step by step procedures of emergency response for the target three municipalities based on lessons learned through the experiences of the Gorkha earthquake which hit in Nepal 2015. In the fiscal year 2017, the draft SOP manual developed in the fiscal year 2016 was reviewed and finalized by the comments and suggestions gained through several meetings with the counterparts of MoHA and some workshops in the pilot municipalities.

1.	Preface
1-1.	Introduction
1-2.	Objectives
1-3.	Preparedness of Officials
1-4.	Duration of this SOP and Basic Flow
2.	Mobilization of officials
2-1.	Flow of Mobilization (On and Off-duty)
2-2.	Preparation for Mobilization
3.	Establishment of Emergency Response Head Quarter (ERHQ)
3-1.	Establishment of ERHQ
3-2.	Structure of ERHQ
3-3.	Function of ERHQ
3-4.	Relationship of ERHQ with other Organizations
3-5.	Role of Ward Office
4.	Preparedness and Response Activities against Earthquake
4-1.	Preparedness Activities
4-2.	Response Activities
[APPENDICES]	
Appendix A: Activity Flowchart	
Appendix B: Disaster Information Format	
Appendix C: List of Evacuee at Evacuation Shelter	
Appendix D: Personal Data of Officials	



Fig.5-2-2. Workshop for SOP Formulation

Fig.5-2-1. First Version of the SOP for Municipalities

(Source: JICA Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley in Nepal)

Figure 5-2-1 shows the table of contents of the finalized SOP manual. The manual attaches a) “Activity Flowchart” which shows specific activities to be followed in case of disaster, b) “Disaster Information Format” which standardized among three pilot municipalities, c) “List

of Evacuees at Evacuation Shelters” to facilitate easy management of the affected people, and d) “Personal Data of Officials” for contributing to prompt communication among municipality officials in case of a disaster.

As future endeavor, we expect local officials to: i) Update the SOP as per the latest government structure regularly, ii) Confirm the roles and responsibilities of each division/section for preparedness, and iii) Collect & share updated basic statistical information such as number of hospitals, students and teachers in each school, community disaster management system and structure, etc.

In the fiscal year 2017, the Community Based Disaster Risk Management (CBDRM) activities were conducted by the flow shown in the Fig. 5-2-3 targeting one selected ward in each pilot municipality with the view to enhancing capacities of the municipality officers. In the first workshop, the participants identified their disaster risks and current situation of their disaster management system through Hazard, Vulnerability and Capacity Assessment (HVCA) activities and interactive lectures and participatory discussion. In the second workshop, through field survey of their communities and DRR mapping activities, they discussed issues and challenges for DRR and DRM in their communities and developed draft ward-level DRM plans. In the third workshop, they finalized the ward-level DRM plans and “DRR Carte” which includes basic information for DRR and DRM in the communities. Also, they discussed priority activities in the DRM plans. As a final pilot activities, they prepared tools and equipment for emergency response as “Emergency Stockpiles,” one of the designated priority activities.

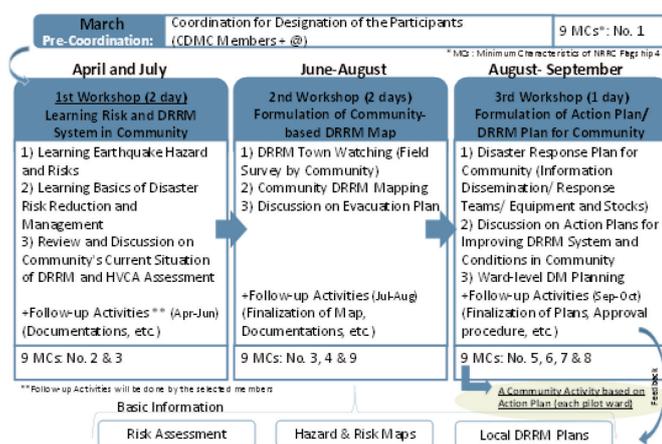


Fig.5-2-3. Flow of the CBDRM Activities



Fig.5-2-4. CBDRM Workshops

(Source: JICA Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley in Nepal)

For further promotion of the CBDRM activities, the following points should be pursued; to update and promote the guideline for the CBDRM activities, to increase regular opportunities for the municipality officers to learn DRR and CBDRM, and to secure budget for the sustainable implementation of the CBDRM in the municipality.

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## 5-2-2. Technical Cooperation Project in Mongolia

### (1) Background of the Project

In 2013, the National Emergency Management Agency (NEMA) of the central government of Mongolia requested the Government of Japan to provide assistance for the technical cooperation project aiming to promote disaster management capacities related to earthquakes in Mongolia. JICA conducted the Data Collection Survey of Disaster Protection and Prevention in Mongolia from February 2016, and collected relevant information. Through the survey, JICA coordinated opinions with the Mongolian government and modified the contents of the request above to the ones focusing on strengthening the capacity of NEMA. Then, in May 2016, the modified request was finally adopted by the government of Japan. Subsequently, JICA dispatched the Detailed Planning Study Team, and according to the result of the study, JICA and NEMA agreed on the details of the Project named “The Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia”, and started the project activities from November 2016.

### (2) Outline of the Project

【Project Period】	November 2016 – April 2020 (Total 3.3 years)
【Project Goal】	The capacity of the National Emergency Management Agency will be enhanced through the activities for strengthening the countermeasures for seismic risk.
【Expected Outputs】	Output 1: Capacity for data collection on disaster risk reduction and coordination among related organizations will be enhanced. Output 2: Capacity of public administration officer related to the seismic assessment and seismic strengthening of buildings will be enhanced. Output 3: Implementing a plan on disaster risk reduction education and awareness raising activities will be developed and realized.

ADRC dispatched the expert for taking the leadership of the overall activities to achieve above mentioned “Output 3” in this project. Also, the following activities related to the School DRR are the main responsibilities of the ADRC;

- Development of Guideline for DRR Education in Pre-School, Elementary School, And Junior High School,
- Development of Educational Materials for DRR Education in Pre-School, Primary School, and Junior High School,
- Implementation of Training Program for Teacher Instructors, and
- Indirect Support for Implementation of Training Program for Teachers and School Staff Members

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## 5. Promoting Cooperation with Member Countries, International Organizations and NGOs

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In the fiscal year 2017, through several workshops to introduce the practical examples of the School DRR education in Japan, the counterparts enhanced their understanding of the School DRR education. Further, through the second training program in Japan for the working-level counterparts, they learned the details of the current situation of the School DRR in Japan. Based on the information and knowledge gained in the above-mentioned opportunities, the counterparts have got on with the works to develop the School DRR guideline.



Fig.5-2-5. Trial Lesson of DRR Education in an Elementary School by the Japanese Expert



Fig.5-2-6. Observation of the Lesson of DRR Study in the Shichigo Elementary School (the Second Counterpart Training in Japan)

*(Source: Project for Strengthening the National Capacity of Earthquake Disaster Protection and Prevention in Mongolia)*