

---

## **5-2. Capacity Building in Member Countries**

### **5-2-1. ADRC Cooperative Project and Peer Review for Promoting the Implementation of the Hyogo Framework for Action**

The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (HFA) calls on regional organizations to contribute to periodic reviews on progress and to assist countries, as requested, in the preparation of periodic national summaries of their progress.

The year of 2014 is almost at the end of the implementation of HFA. The Mid-Term Review of the progress of implementation of the HFA, which was compiled by the UNISDR, highlighted that the significant progress had been made over the past five years in disaster risk reduction.

The Asian Disaster Reduction Center (ADRC) Cooperative Project for Promoting Implementation of HFA was conducted for providing support to the governments of the ADRC member countries to help them strengthen their commitment, expand resources and make further progress towards the expected goals of the HFA, and eventually build safer and more resilient communities in Asia.

ADRC called for the project proposals from the member countries, and the proposals from Armenia and Bhutan were selected after careful screening.

The project included the Peer Review in the process of the implementation of the proposed activities for making the project more effective.

#### **(1) Improving the Earthquake Safety of Nursing Homes and Orphanages in the Northern Region of Armenia**

##### **1) Context and Project Purpose**

The devastating Spitak Earthquake in Armenia (1988, approx. 25,000 casualties) and the Great East Japan Earthquake and Tsunami (2011, approx. 20,000 casualties) affected entire populations. However, not all generation are equally badly affected. The victims include a very high large number of children (approximately 25% of death toll in Armenia) and elderly people (approximately 65% of death toll in Japan). They have little opportunity to become involved in decision-making about disaster risk management measures and also their low level of participation within society can result in their needs being overlooked in this field.

In this context, a project of capacity building of seismic safety for the residents and staffs of nursing homes and orphanages was implemented.

##### **2) Period of the Project**

1 August 2014 to 28 February 2015

##### **3) Target Area of the Project**

Spitak, Gyumri and Vanadzor cities, the Northern Region of Republic of Armenia

#### 4) Outline of the Project Activities

To achieve the above-mentioned objectives, the following activities were conducted, (1) Studying an international experience in seismic protection behavior rules' education and training for inclusive groups of population like nursing homes and orphanages, (2) Developing and distributing educational information materials for the residents and staffs of nursing homes and orphanages, (3) Conducting a workshop for the stakeholder of the project on disaster risk reduction, collaborated with the experts dispatched by ADRC, (4) Implementing a disaster prevention education, training, and drills at nursing homes and orphanages.



Fig. 5-2-1-1 Workshop in Gyumri City

## **(2) Integrating Cultural Heritage and Disaster Risk Reduction / Disaster Preparedness and Sensitization Training program on Dzong (Fortress) Safety at Dagana, Bhutan**

### 1) Context and Project Purpose

The preservation of cultural heritage is one of the key elements of Gross National Happiness, Bhutan's development philosophy.

However, being in a high risk seismic zone, Bhutan's cultural heritage sites have always been vulnerable to earthquakes. In the 2009, 6.1 M earthquake in eastern Bhutan, many important cultural heritage sites were damaged. Other hazards like fires, flashfloods and windstorms have also destroyed many cultural heritage sites. The most recent devastating national disaster is the destruction by fire of Wangdue phodrang Dzong, one the oldest Dzongs in the country on 24th June 2012, which was built in 1638.

In this context, through this project, it is aimed at enhancing and strengthening disaster preparedness and response capacities at the Dagana Dzong Monastic Institutions in particular and District Administration in large.

### 2) Period of the Project

1 October 2014 to 28 February 2015

---

### 3) Target Area of the Project

Dagana Dzong, the Southwestern Part of Kingdom of Bhutan

### 4) Outline of the Project Activities

To achieve the above-mentioned challenge, the following activities were conducted.

- ① **1 Day Pre-Training vulnerability Assessment of the Dzong and 4 days actual training**
  - Overview of Disaster Management in the Country
  - Assessment of the preparedness and response capacities
  - Hands on training on using the fire safety equipment
- ② **Developing DM and Evacuation Plan**
- ③ **Fire Drills - testing the draft evacuation plan of the pilot monastic institution**



Fig. 5-2-1-2 Training at Dagana Dzong

### (3) Peer Review

ADRC has launched "ADRC Peer Review" since 2009 for further supporting the efforts for the implementation of the Hyogo Framework for Action (HFA) in member countries, through promoting information sharing and strengthening the relations among member countries.

Peer Reviews are generally evaluation and review of certain subjects by other professional and experts in the same field in order to appropriately maintain or enhance them from highly technical point of view. In the context of this project, it means that experts from the outside of the target country review and assess disaster risk reduction related measures and policies of member countries for further promoting disaster risk reduction.

The aims of Peer Review includes, (1) Contribution to the implementation of the HFA in the ADRC member countries, (2) Information sharing and exchange of ideas among the ADRC member countries, (3) Disaster risk reduction capacity development of the ADRC member countries

The Peer Review 2014 was conducted in Armenia and Bhutan. The outline of the Peer

Review activities is as follows:

**1) Outline of Peer Review in Armenia**

**A theme for Review is “Activity of the Disaster Risk Reduction on nursing homes and orphanages in Armenia”.**

The review was conducted based on country reports submitted by target country, as well as on-site interview survey. The reviewer teams identified strengths and weaknesses of the target countries and then developed recommendations for further promoting disaster risk reduction in the target country.

**< Reviewer Team >**

- **Professor, Kazuyoshi Ohnishi, Associate Professor, Graduate School of Engineering, Kobe University, Japan (Team Leader)**
- **Professor, Linsheng Gu, Professor and Executive Director, Institute for Disaster Management and Reconstruction (IDMR), Sichuan University - Hong Kong Polytechnic University, China**
- **Mr. Junji Moriwaki, Researcher, ADRC**

**<Accompanied Counterpart (Ministry of Emergency Situations (MES), Republic of Armenia) >**

Dr. Hrachya Petrosyan, Head, National Survey for Seismic Protection (SSP) Agency

**<Schedule of the review >**

October 2014 (The interview and field survey was conducted on 13 to 16 October)



Fig. 5-2-1-3 Workshop by Reviewers



Fig. 5-2-1-4 Visit to the orphanage in Spitak city

---

The reviewer team visited and conducted an interview survey to the organizations by the above schedule. Also, the team shared the case of Japan and China on the workshop. Based on the country report submitted from MES and the result of the interview, and also the on-site survey, the team discussed about achievements of the project for compiling a review report.

The suggestions of the final report are as follows:

**<Summary of the suggestions>**

- Evacuation drill with community is necessary.
- Daily collaboration efforts with government is necessary for backup function in emergency.
- Disabilities require special needs in emergency, so disaster supply or store should be customized for them such as medicine, foods and so on.
- Digging a well is desirable to maintain daily life without water supply after earthquake.
- Risk assessment of building vulnerability is one of the important precondition for better action choice after earthquake.
- History on Armenia Building code should be reviewed compared with advanced countries such as Japan.

**2) Outline of Peer Review in Bhutan**

**The theme for Review is Activity of the Disaster Risk Reduction on Dzong (Fortress) and relevant organizations in Bhutan.**

The review was conducted based on country reports submitted by target country, as well as on-site interview survey. The reviewer teams identified strength and weaknesses of the target countries and then developed recommendations for further promoting disaster risk reduction in the target country.

**< Reviewer Team>**

- **Ms. Yuko Nakagawa, Executive Director, NPO SEEDS Asia, Japan (Team Leader)**
- **Mr. Junji Moriwaki, Researcher, ADRC**

**<Accompanied Counterpart (Department of Disaster Management (DDM), Kingdom of Bhutan)>**

**Mr. Yeshey Lotay, Dy. Executive Engineer, Recovery and Reconstruction Division, DDM**

**<Schedule of the review>**

December 2014 (The interview and field survey was conducted on 15 to 19 December)



Fig. 5-2-1-5 Workshop at Dagana Dzong



Fig. 5-2-1-6 Interview at Punaka Dzong

The reviewer team visited and conducted interview survey to the relevant organizations. Also, the team observed Dozong and school. Based on the country report submitted from DDM and the result of the interview and on site survey, the team discussed for compiling a draft review report with all findings and recommendations. The summary of findings was introduced in the evaluation meeting, and the final review report was compiled among review team members after returning from Bhutan.

The suggestions of the final report are as follows:

**<Summary of the suggestions>**

- Continuous drills on fire safety in Dzong would be recommended.  
Disasters can occur at night time also. Drills should be planned considering various situations. Also, drills should be done involving all relevant stakeholders.
- Considering Dzongs are sightseeing spots for tourists, disaster management plans of both district administration and monastery should have plans how to evacuate tourists as well.
- DRR training should incorporate multi hazards risks not only fires.
- During annual gathering of monastery of all districts, DRR issues should also added to its agenda to let the monasteries share the issues.
- DRR awareness raising campaign at the time of local festival could be sought for wider dissemination of the importance of DRR.
- Collaboration with local media for awareness campaign on DRR can also be considered as it reaches to wide range of people.
- Important data should be stored by electronic media in several places as risk management measures in administrative office of Dzong.

---

## **5-2-2. Technical Cooperation Project in Indonesia**

### **5-2-2-1. Background of the Project**

Indonesia is a disaster prone country which is frequently affected by various types of natural disasters, such as earthquakes, volcanic eruptions, and Tsunamis. Examples of such disasters and the damage in recent years include: the Indian Ocean earthquake and tsunami in December 2004 and the Java earthquake in May 2006. These disasters have raised awareness of disaster management. The government of Indonesia, upon these occasions, enacted Law No. 24 on Disaster Management in 2007, and strengthened the disaster management systems of the country through establishing the BNPB (National Agency for Disaster Management).

However, BNPB, which has only a short history, does not have an adequate organization structure, budget, skills, knowhow or staff, and it is difficult for BNPB to give directions or sufficiently support the local governments in establishing BPBD (the Regional Agency for Disaster Management) or in formulating the Regional Disaster Management Plans. In addition, although each local government established its own BPBD primarily responsible for disaster risk reduction as a permanent organization, it seems difficult for many of local BPBDs to perform their duty effectively due to lack of knowledge and experience on disaster management.

Against this background, the JICA Technical Cooperation Project “the Project for Enhancement of the Disaster Management Capacity of BNPB and BPBD” was initiated with a goal of enhancing disaster management capacity of BNPB, provincial BPBDs in North Sulawesi and West Nusa Tenggara provinces, and regency/municipality BPBDs in both provinces for reducing damage from disasters in Indonesia.

ADRC with the Oriental Consultants Global Co., Ltd, a partner agency was commissioned the Project and started the project activities based on the proposal from November 2011.

### 5-2-2-2. Outline of the Project

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

<b>【Project Period】</b>	November 2011 – December 2015 (4 years)
<b>【Project Purpose】</b>	Enhancement of the disaster management capacities of BNPB, the provincial BPBDs, and the regency/municipality BPBDs in the pilot area
<b>【Project Target Areas】</b>	1. Jakarta (BNPB), 2. provincial BPBD of North Sulawesi province and regency/municipality BPBDs within it, 3. provincial BPBD of West Nusa Tenggara province and those of its regencies/municipalities.
<b>【Expected Outputs】</b>	<p>[Output 1]: Improvement of the capacity for the regency/municipality BPBDs to accumulate disaster data/information that is fundamental for disaster risk management and improvement of the accuracy of such data/information.</p> <p>[Output 2]: Creation of Hazard and Risk Maps at the regency/municipality level in the pilot area.</p> <p>[Output 3]: Formulation of Regional Disaster Management Plans for regency/municipalities in the pilot area.</p> <p>[Output 4]: Disaster Management Drills are to be conducted in the pilot provinces as well as in regencies/municipalities in the pilot provinces</p>

Two experts of ADRC joined the activities on “Disaster Information System” for Output 1 and “Community Based Disaster Risk Management” for Output 4. In the fiscal year 2014, the activities for the first pilot province, North Sulawesi province, were finalized in April 2014. (The activities of the Output 1 were only for the first pilot province and completed.) Those for the second pilot province (for Output 4), the CBDRM activities for the Tsunami risk reduction were conducted, based on which the draft village disaster management plan (including of community DRR map and early warning system) was formulated by March 2015.



Presentation on Output 1 in the Final Workshop in North Sulawesi



Community Workshop for Output 4 in West Nusa Tenggara

(Source: JICA Project for Enhancement of the Disaster Management Capacity of BNPB and BPBD)



---

## **5-2-3 Technical Cooperation Project in the Philippines**

### **5-2-3-1. Background of the Project**

The Republic of the Philippines has made substantial efforts for strengthening disaster risk management including of the development of Strategic National Action Plan for Disaster Risk Reduction (2009-2019) after the adoption of Hyogo Framework for Action 2005-2015 in the WCDR held on January 2005.

In recent years, the Philippine Government has been shifting the approach to disaster risk management from “Post Disaster Response” to “Proactive Disaster Management,” which focuses on mitigation and preparedness. The “Philippine Disaster Risk Reduction and Management Act of 2010 (RA No. 10121)” was enacted in May 2010, creating the legal framework to implement a new approach to disaster management called Disaster Risk Reduction and Management (DRRM). Under the DRRM Act, the NDCC (National Disaster Coordinating Council), the highest decision-making body related to disaster management on the national level, was reorganized as the National Disaster Risk Reduction and Management Council (NDRRMC) and the Office of Civil Defense (OCD) was appointed as the secretariat of the council and the central and leading organization for DRRM activities.

In order to implement the DRRM activities under the new approach, the needs for preparing various plans as well as strengthening the capabilities of related organizations were rapidly increasing. The OCD was also facing challenges in organizational and human resource capabilities enhancement.

Against this background, the JICA Technical Cooperation Project “The Disaster Risk Reduction and Management Capacity Enhancement Project” was formulated with a goal of strengthening capacity on DRRM of OCD. ADRC participated in the project as a support organization and provided technical cooperation activities based on the proposal from March 2012.

### 5-2-3-2. Outline of the Project

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

<b>【Project Period】</b>	March 2012 – February 2015 (3 years)
<b>【Project Purpose】</b>	Capacity on DRRM of OCD is strengthened
<b>【Project Target Areas】</b>	Metropolitan Manila (National Government) and some pilot areas (2-3 areas)
<b>【Expected Outputs】</b>	<p>[Output 1]: Planning and implementing capacity of OCD on DRRM is strengthened.</p> <p>[Output 2]: DRRM activities including information management are standardized.</p> <p>[Output 3]: DRRM education and training system and capacity is strengthened.</p> <p>[Output 4]: Support system to Community Based Disaster Risk Reduction and Management (CBDRRM) is strengthened.</p>

ADRC dispatched the expert on “Human Resource Development and Planning” for Output 3 for the Project.

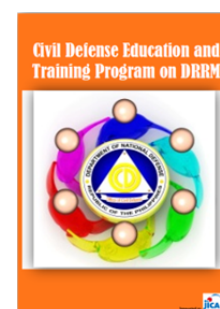
As of February 2015, Establishment of the "National DRRM Education and Training Plan" had been discussed and the activities for formulation of the DRRM training modules for local government officers, national government offices, and private sectors as priority training programs had been conducted. Further the Civil Defense Education and Training Program was formulated for the OCD staff members. The final report of the project was compiled in February 2014 with the proposals for the further improvement of the DRR capacities of the OCD, and all the project activities were completed.



National DRRM Education and Training Program



DRRM Training Course for LCEs, LDRRMCs, PSEs, Private Sector



Civil Defense Education & Training Program on DRR

(Source: JICA Disaster Risk Reduction and Management Capacity Enhancement Project in the Philippines)

Fig. 5-2-3-1 Outcomes of the Output 3 of the Project

---

#### **5-2-4 Research on Tsunami Disaster Awareness Among Residents of Indonesia**

In recent years, large-scale earthquakes and tsunamis occurred in Indonesia and Japan. These countries share similar geographic conditions and very high disaster risks. To reduce disaster risks, it is important to study the level of disaster awareness among residents, in particular their awareness of earthquakes and tsunamis. For this research project, two target areas in Indonesia were selected. One was Sukabumi, where it is predicted that a large-scale disaster will occur in near future. The other was Banda Aceh, where the Sumatra Earthquake occurred in December 2004.

In the Sukabumi district, a 100-item questionnaire survey was conducted around the center of the city of Pelabuhanratu. It showed that local residents have only a limited level of disaster awareness because of their limited past experiences with tsunamis. Also, only a few tsunami disaster drills had been conducted in the recent past. The results suggest that more active disaster awareness programs and activities are needed in this area.

The 100-item questionnaire survey was also conducted in Banda Aceh. Four tsunami evacuation buildings were constructed and many evacuation drills had been conducted since the tsunami that struck this region. However, budgets for disaster management efforts had been gradually decreasing. Funding for human resources and disaster management programs at research institutions are also weakening. Better approaches to DRR should be developed so as to maintain the disaster awareness of residents.

There is a disparity between Sukabumi and Banda Aceh in terms of their level of disaster awareness and activities as a result of their past real-life experiences. However continued disaster management activities, as well as reminders of the importance of such activities, are needed in both areas.

(Note: This project is part of the Hyogo Earthquake Memorial 21st Century Research Institute.)