

5-2. Capacity Building in Member Countries

5-2-1. ADRC Cooperative Project 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 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 toward the expected goals of the HFA, and eventually build safer and more resilient communities in Asia.

The ADRC called for the project proposals from the member countries, and the proposal from Tajikistan was 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 through mutual learning.

(1) Project Outline

Khuroson district of Khatlon province of Tajikistan is a typical location where the landslide risk is very high, and has experiences of the large-scale landslide disaster twice from April to May 2009. Fortunately there were no human casualties, however, approximately 300 houses were totally destroyed by the landslide.

The ADRC Cooperative Project was conducted in the Ulali area, the affected area of the landslide disaster in Khuroson district in 2009 for the purpose to enhance the risk management capacities of the stakeholders in the area from 6 December 2011 to 15 March 2012. The detailed aims of the project were;

- To obtain experience of using satellite images in disaster risk and hazard assessment,
- To integrate risk assessment tool at community and district levels. The tool can be used by different local and international NGOs and the Committee of Emergency Situations and Civil Defense in hazard and risk assessment,
- To develop flood and landslide risk maps in Khuroson district, and
- To increase awareness and capacity of the local communities and authorities to understand risk maps and manage disaster risks at community level.

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

- 1) Information collection from relevant agencies
- 2) Field surveys on sociological and geological survey
- 3) Preprocessing and digitizing of satellite data and Google images for Khuroson district

- 4) Risk assessment
- 5) Conducting of a workshop on risk assessment for enhancement of capacities of relevant people
- 6) Development of flood and landslide hazard maps for target area
- 7) Conducting of a workshop to share the project results for the communities in the target area

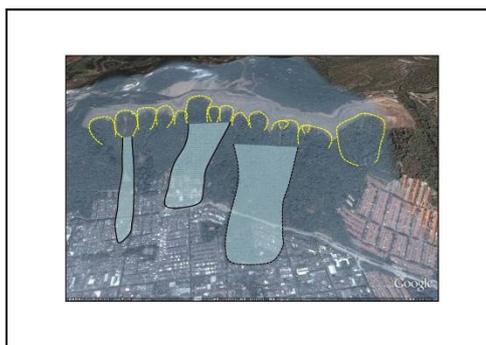


Fig. 5-2-1-1 Samples of analysis used Google image



Fig. 5-2-1-2 Workshop for sharing project result

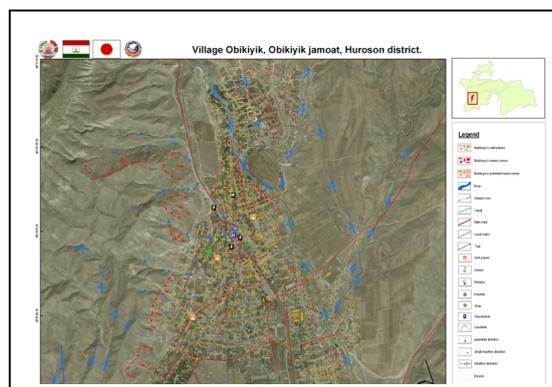


Fig. 5-2-1-3 Developed Hazard Map 1

(2) Peer Review

As mentioned above, the Peer Review 2011 was conducted to contribute to effective implementation of the ADRC Cooperative Project, for the efforts in the landslide risk management in Tajikistan. The outline of the Peer Review activities is as follows.

Prof. Hiroshi Fukuoka (Kyoto University), Dr. Tai-Hoon Kim (National Disaster Management Institute (NDMI), Republic of Korea), Mr. RMS Bandara (National Building Research Organization (NBRO), Sri Lanka), and Ms. Miki Kodama (ADRC) conducted the survey visit on 13-15 February 2012 as a reviewer team. And Mr. Alisho Shomakhmadov (Committee for Emergency Situations (CoES), and, Mr. Saidov Mirzo (Research Center of the State Committee for Land Use and Geodesy) accompanied the visit and supported the reviewer team.

After the survey, the reviewer team discussed on the site and through e-mail for compiling a review report with all findings and recommendations. The outline of the finalized report is as follows.

Positive Aspects	Challenges Ahead
<ul style="list-style-type: none"> • There are NGOs that are able to conduct DRR activities in close cooperation with the residents and with consideration for the real needs of them • In areas devastated by landslides, residents evacuated smoothly based on the information provided by a resident who noticed the sign of risks and there were no human casualties. Mutual tie among local residents seems very strong. • The research institutions have developed motivated young researchers and also have good networks with researchers in developed countries. • Geological Survey Institute and Earthquake Engineering and Seismology Institute have recently integrated. Collaborative research can be expected in the future. • Approximately 400 undergraduate and graduate students are enrolled in the geology department of the National University. The department has strong relationship with Moscow State University and Russian Academy of Sciences. • Main Geology Department under the Government of Tajikistan has accumulated useful geological information including witness information on geological hazard and information of past landslides in the past. • Under the Committee for Emergency Situation, Information Management and Analysis Center was established in 2007 with the independent command chain based on common understanding of the importance of system for aggregating disaster-related information. 	<ul style="list-style-type: none"> • There is no landslide risk management system in association with the observation of rainfall. • Disaster early warning mechanism for transmission of information to residents is still weak. • The many of hazard maps have been created during the Soviet era, and have not been updated the information. • Capacities of landslide zoning of the local engineers who participate in the disaster mitigation activities are insufficient. • The lack of latest observation equipments due to the limitation of budget. Preparation of the equipments is relied heavily on support from abroad. • Students cannot receive PhD in the Department of Geology in the National University. Therefore they go to universities in Europe for continuing the research activities, and resulted in loss of specialist personnel. • Due to budget shortfall, disaster prevention activities are not appropriately conducted based on the risk information gained. • Number of the staff members in the Information Management and Analysis Center of CoES is only 11 yet. They need more staffs to effectively gather and analyze information.
<p>Recommendations</p>	
<ul style="list-style-type: none"> • More effective activities by strengthening collaboration among relevant agencies and stakeholders <ul style="list-style-type: none"> - Cooperation of research institutions in the activities of NGO - Promotion of cooperation among government agencies, research institutes, organizations that directly involved community activities including NGOs • Create easy-to-understand materials for residents <ul style="list-style-type: none"> - Create easy to understand maps and materials about the risks they face to and actions to be taken for reducing damage • Restriction of settlement in the risk areas or promotion of people's sound understanding of the signs of disasters for living with risks • Public awareness rising for understanding about human activities affect the geology and taking necessary measures to the current issues: Inspection and repair of old irrigation systems • Development of a monitoring system in landslide risk area: Observation of rainfall and signs • Development of information dissemination system on disaster risks to reach to the residents • Capacity development of researchers through participation in international conferences and workshops • Enhancement of coordination capabilities of Committee of Emergency Situations. 	



Fig. 5-2-1-3 Visit to Committee for Emergency Situations (CoES)



Fig. 5-2-1-4 Field Visit to the Khuroson district

5-2-2. Multi-disciplinary Hazard Reduction from Earthquakes and Volcanoes in Indonesia

5-2-2-1. Outline

This project “Multi-disciplinary Hazard Reduction from Earthquake and Volcanoes in Indonesia” officially started in June 2009, as a part of “Science and Technology Research Partnership for Sustainable Development” supported jointly by Japan Science and Technology Agency (JST) and Japan International Cooperation Agency (JICA). The ultimate goal of this project is to reduce disaster from earthquakes and volcanoes by enhancing capability of forecasting hazards, by reducing social vulnerability, and by promoting education and outreach activity of research outcomes. We also plan to provide platform of collaboration among researchers in natural science, engineering and social sciences, as well as officials in national and local governments.

The research activities consist of six groups. For hazards, natural science approaches are taken for: (1) Evaluation of potential and prediction of earthquakes and tsunami based on geophysical investigations, and (2) Short-term and long-term prediction of volcanic eruptions and development of their evaluation method. For the vulnerability, engineering and social/human science approaches to: (3) Establishment of social infrastructure based on engineering developments and (4) Mitigation of social vulnerability against geo-hazards. On the basis of these, the last research group is (5) Education and outreach for disaster reduction. Each group has several sub-groups, and in total more than 20 subgroups is conducting joint field surveys and workshops. In addition, to coordinate these research activities and to utilize the research results, we conduct: (6) Application of the research and establishment of collaboration mechanism between researchers and the government officials.

The Joint Coordinating Committee, consists of the group leaders and government officials of related agencies in Indonesia, is organized and meets regularly to supervise the project activities. The project not only reports research activities to JCC but also plans to make policy recommendations to utilize the research finding to disaster reduction activities of the

governments. This project was finished in March 2012. ADRC joined Group 6 and take charge of sub Group 5-1.

5-2-2-2. Activities

Group 5-1-1: Research on the effective disaster education at school

G5-1-1 Develops a disaster awareness education material, by which the risks or disaster preventive resources will be easily understood in school and community. An education material will be produced based on the results of discussion on the state of the art of present disaster education in Indonesia.

In 2011, ADRC carried out following activities;

- ✓ Monitoring for teachers Date: January to July 2011
- ✓ Third Training of Teachers Date: July 2011
- ✓ Final Workshop Date: October 2011

Disaster Education Material as final output was distributed to teachers in Indonesia. This material will be help for future own disaster education activity in Indonesia.

Group 6: Application of the research and establishment of collaboration mechanism between researchers and the government officials

Activities of Group 6 aimed to build up synergy among research, policy-making and policy-implementation, thereby results of research activities can be applied to policy-making both practically and effectively in Indonesia. As a result, a platform composed of researchers, government officials at different levels and practitioners was established.

Group 6 leaders, Mr. Pariatomono of Indonesia and Mr. Koresawa of Japan, discussed how to develop a system to enable the above-mentioned objectives. In so doing, they tried to involve the Badan National Penanggulangan Bencana (BNPB, Indonesia's National Disaster Management Agency) which was responsible for overall coordination of disaster-related activities in Indonesia and representatives from relevant regional/local authorities, identified gaps and challenges, and proposed ways to improve coordination among stakeholders.

Table 5-2-3-1 Achievement and impact on Group 6

	Date	Place
Joint Coordination Committee	5/6/2011	Jakarta
Disaster Management and Climate Change conference and Indonesia-Japan workshop on multi disciplinary hazard reduction from earthquake and volcanoes in Indonesia	10/27/2011	Jakarta
Indonesia-Japan workshop on multi disciplinary hazard reduction from earthquake and volcanoes in Indonesia	10/28/2011	Jakarta

5-2-3. The Data collection Survey on Seismic and Tsunami Observation System (Papua New Guinea)

(1) Objectives

The purpose of this project is to collect basic information to strengthen seismic and tsunami observation and alert system in the Pacific Rim countries located in the Pacific Ring of Fire.

(2) Outline

About “Seismic observation and alert system” and “Tsunami observation and early warning system”, we have investigated the following:

- 1) Data and/or information of existing system
- 2) Existing plans and/or programs for improving or expanding the system, including concept, plan, specification, location and budget
- 3) Needs for equipment and systems for upgrading the system
- 4) Highly prioritized equipment and systems

(3) Progress

The Asian Disaster Reduction Center visited Papua New Guinea in order to make interviews at NDMOs and relevant organizations and affected areas of past disasters over their DRM systems and activities. Faced with various disaster risks such as volcano, earthquake and tsunami, and cyclone, Papua New Guinea has taken proactive measures especially in risk assessment, early warning and public awareness.



Fig.5-2-3-1 Geohazards Management (Port Moresby)



Fig.5-2-3-2 Volcanological Observatory (Rabaul)

5-2-4. Study on the business continuity plan and Emergency Preparedness in APEC

(1)Background

The private sector plays an important role in reducing economic damage and regional impacts when they are well prepared for disasters. As its supply chains are closely intertwined, a single disaster could affect the economic activities of the entire region. The ADRC conducted a survey on the preparedness of the private sector among APEC economies to understand the current status of BCP adoption and the level of BCP awareness in the private sector in the APEC region.

(2)Methodology

This study conducted web-based online survey in English for the period of 14 June to 30 August 2011. The content of the Questionnaire is comprised of such topics as general information, BCP adaptation and awareness, obstacles to BCP development. The survey gained 272 responses from 18 economies in total.

(3)Results

The following are some key conclusions drawn from the survey's findings:

- BCP development and awareness vary by economy and company size. About 16 percent of SME(Small and Medium-sized Enterprise) respondents have a written BCP while 52 percent for large-scale respondents. In some economies, such as Japan, Singapore, and the United States, the majority of respondents have a written BCP, whereas in economies such as Malaysia or Viet Nam, over 50% of respondents do not even know about BCP.
- Public support is used in the process of BCP development
Over 40 percent of respondents indicated that public organizations have support systems for BCP development.
- Bottlenecks identified for BCP development

The main obstacles for many respondents which don't have a written BCP are "lack of knowledge and expertise about BCP for companies," "lack of human resources," and "lack of information needed for BCP development."



Q6. Is your company listed or unlisted?
[single answer]

1. Listed
 2. Unlisted

<< RETURN

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Survey conducted by Asian Disaster Reduction Center
Contact [apec.survey@adrc.asia]



5-2-5. Study on the use of ICT for disaster preparedness and response

As part of an ongoing study on the use of ICT for disaster preparedness and response in ASEAN countries, the ADRC has recently visited Hanoi, Hue and Ho Chi Minh City in Vietnam to interview experts at various government's institutions, including Vietnam Ministry of Agriculture and Rural Department and Ministry of Natural Resources and Environment, and collect information relevant to this subject.

The use of ICT for disaster preparedness and response has been making a steady progress in Vietnam, in particular weather forecasting and monitoring, risk assessment and risk mapping, early warning to local communities and residents, etc. Moreover, state-of-the-art ICT technologies have been widely applied such as broadband networking of observation stations and automatic communication by mobile phone, but mostly on an experimental basis.

While good progress has been made for typical meteorological and hydrological hazards such as typhoon and flooding, relatively less progress has been made for landslide, flash flood, and geological hazards such as earthquake and tsunami. Among them, tsunami warning system (towers) has recently been developed in Da Nang city in Central Vietnam, but more has to be done in view of future tsunami risks in its long coastal line. Likewise, disaster preparedness and response capacity could be further enhanced if it would make more use of such ICT technologies as information sharing system among various institutions, remote sensing, imaging system, real-time measurement sensor, etc.

The result of the study will be used as a basis on which further cooperation is planned. We greatly appreciate kind cooperation extended by the Disaster Management Center (DMC) of the Ministry of Agriculture and Rural Development.