

## 4-2. Cooperative Projects with Member Countries

By utilizing the network among member countries, ADRC has been identifying the needs of Asian countries and providing support mainly in the form of technology and momentary funds to disaster reduction projects applied by governments of member countries in cooperation with international organizations

Through these collaborative projects, ADRC has made efforts to improve the capabilities of member countries to reduce the negative impact of disasters. Furthermore, information regarding its achievements and knowledge gained through the projects has been disseminated not only in member countries, but also all over the world.

Cooperative project list follows.

Table. 4-2-1 Lists of Cooperative Projects

Fiscal Year	Country	Project
1999	Papua New Guinea	Public Awareness of Tsunami Reduction in PNG
2000	Cambodia	Disaster Management Training Project for Local Government Official
2000	Nepal	Project for Public Awareness of Disaster Reduction by Community Leaders
2000	Indonesia	Community-based Flood Disaster Mitigation Project
2001	India	Multinational Investigation of India Earthquakes
2001	Sri Lanka	Disaster Management Training Project for Local Government Official
2001	Singapore	Urban Search-and-Rescue Training
2001	Philippines	School Educational Program for Disaster Reduction
2002	Singapore	Urban Search-and-Rescue Training
2002	Bangladesh	Improvement of Early Warning System
2002	Laos	Disaster reduction training for media staff

### 4-2-1. Urban Search-and-Rescue Training in Singapore

#### 1) Basic concept

Singapore government conducts training courses every year for personnel in charge of search and rescue activities. The seminar has been accepting trainees from outside Singapore for the past 3 years and providing training on search-and-rescue skills in urban disaster situations. The training facility of the Civil Defence Academy (CDA) of Singapore Civil Defence Force (SCDF) is one of the top-notch facilities in Asia. In an effort to utilize these resources, ADRC called for member countries to participate in the training, starting last year. As a result, search and rescue officers from Cambodia, Laos, Mongolia, the Philippines and Vietnam have participated in the training.

#### 2) Dates

November 11 to 23, 2002 (2 weeks)

#### 3) Details

##### (1) Subjects

Total 10 search and rescue officers (of those, costs for five persons from Cambodia, Laos, Mongolia, the Philippines and Vietnam were covered by ADRC)

\* Due to the terrorist bombing in Bali, Indonesia in October, many applicants cancelled, which resulted in a smaller number of trainees.

##### (2) Lecturers

Staff from Singapore Civil Defence Force (SCDF)



Fig. 4-2-1-1 Simulation Facility at Singapore Civil Defence Academy  
(Left: Fire Rescue, Right: Rescue from the rubble)

- (3) Example of training program
- a) Lecture
    - Evaluate damages
    - Search and rescue in confined spaces
    - Rescue operations
    - Type of collapsed building
    - Rescue equipment
    - Mass/single casualties management
    - Rescue dogs
  - b) Practical training
    - Search training in the confined spaces
    - Search training in a crop storage tank (simulation facility)
    - Search training in a collapsed building (simulation facility)
    - Search training underground (simulation facility)
    - Rescue exercise at a ruined military facility

4) Explanation

The search and rescue training facility in Singapore is equipped with simulation facilities including a 10-story fire building, chemical plant, oil refinery, debris area, confined space, and also with lecture rooms, accommodation, canteen, and administration.

The first week of the training is centered on lectures and training, and the second week on practical exercise for search and rescue at the simulation facilities.

The Civil Defence Academy provides about 20 training courses a year for various objectives. For trainees from abroad, search-and-rescue training courses are available for 2 types of disasters – fire and urban disaster. Urban disaster

search-and-rescue training is further divided into courses for ASEAN personnel, for personnel from specially designated countries and for personnel from other non-designated countries. All these courses are held every year, and trainers all have solid experiences.

ADRC sent trainees to the course for non-designated countries. Although the training course consisted of trainees with different skill levels and needs, all the trainees achieved satisfactory results thanks to the effective coordination of the trainers with full experience (see questionnaire survey in Table 4-2-1-1).



Fig. 4-2-1-2 Temporary column construction training for a collapsed building rescue mission

Table. 4-2-1-2 Survey Results on the Program

## COURSE EVALUATION FOR 13TH INTERNATIONAL USAR COURSE 2002

## 1. Course Objectives

a. To what extent was the course objectives achieved?

4	5	50%	Very well achieved
3	5	50%	Well achieved
2			Adequately achieved
1			Not well achieved
			Not At all achieved

## 2 Learning Objectives

a To what extent were the objectives achieved?

4	5	50%	Very well achieved
3	5	50%	Well achieved
2			Adequately achieved
1			Not well achieved
			Not at all achieved

## 3 Course structure &amp; content

a Rate the relevance of the course to your work/ organisation.

4	4	40%	Very relevant
3	5	50%	Relevant
2	1	10%	Adequately relevant
1			Little relevance
			Not at all relevant

d How would you rate the overall pace of the course?

3			Too fast
2	10	100%	Just right
1			Too slow

b How would you rate the overall planning &amp; preparation of the course by the organiser?

4	2	20%	Excellent
3	5	50%	Very Good
2	3	30%	Good
1			Satisfactory
			Poor

e How would you rate the quality of handouts in clarity &amp; readability?

4	4	40%	Excellent
3	4	40%	Very good
2	2	20%	Good
1			Satisfactory
			Poor

c How would you rate the course duration?

3			Too Long
2	10	100%	Just right
1			Too short

f How would you rate the usefulness of the course materials?

4	4	40%	Extremely useful
3	5	50%	Very useful
2	1	10%	Adequately useful
1			Little use
			Not at all useful

Recommended duration :Nil

## 4 Trainers effectiveness

a To what extent were the concepts &amp; instructions clearly explained?

4	2	20%	Excellent
3	6	60%	Very Good
2	2	20%	Good
1			Satisfactory
			Poor

d How would you rate the interaction between participants and the trainers?

4	3	30%	Excellent
3	4	40%	Very Good
2	3	30%	Good
1			Satisfactory
			Poor

b To what extent was the trainers prepared and organised for the lessons

4	2	20%	Excellent
3	4	40%	Very Good
2	4	40%	Good
1			Satisfactory
			Poor

e How would you rate the overall presentation of the trainers?

4	2	20%	Excellent
3	5	50%	Very Good
2	3	30%	Good
1			Satisfactory
			Poor

c How would you rate the trainers effectiveness in using practical examples &amp; demonstrating an understanding of practical issues?

4	4	40%	Excellent
3	4	40%	Very Good
2	2	20%	Good
1			Satisfactory
			Poor

The survey demonstrated clearly that Singapore has the appropriate human resources as well as facilities for search and rescue training. The objective of this program is to utilize the resources owned by member countries to meet the needs of other member countries. ADRC is determined to continue to promote this type of project in the future.

## 4-2-2. Improvement of Early Warning System and Responses Seminar in Bangladesh

### 1) Organizations

Bangladesh Public Administration Training Center (BPATC)  
 Ministry of Disaster Management and Relief  
 Co-sponsored by: ADRC, UN OCHA Kobe

### 2) Basic Concept

Bangladesh is one of the countries most vulnerable to disasters in the world. Except for the Northern and Southeastern hilly regions, the height of the landmass is less than 20 meters above sea level. Bangladesh has suffered from cyclones and storm tides every year, and floods caused by monsoons damage to approx. one third of the land.

Being supported by the Bangladesh Red Crescent Society, Bangladesh has established an early warning system at the community level and achieved considerable success. However, as witnessed by the tragedy of the ferryboat that sank in a cyclone and killed as many as 400 passengers in May 2002, information and communication between the Meteorological Department and end users sometimes has not been functioning well. Bangladesh also experiences frequent earthquakes. However, preparedness against earthquake disaster is still poor due to the fact that severe earthquakes have not occurred in recent years. It is an important issue for the country to develop systematic and functional collaboration among the disaster-related organizations and enhance the level of preparedness. To cope with such difficulties, the Bangladesh Public Administration Training Center (BPATC) and Ministry of Disaster Management and Relief conducted a 6-day intensive course for a thorough training of early warning system and disaster reduction measures. For the course, BPATC invited resource personnel from Japan specifically to encourage effective collaboration among the organizations concerned.



Fig. 4-2-2-1 Speech by Mr. Chowdhury Kamal Ibne Yusuf Hon' ble  
 Minister for Disaster Management and Relief, Bangladesh

### 3) Date of Implementation

December 19 to 24, 2002

### 4) Participants

Approx. 40 individuals from the national and municipal governments, NGOs and organizations in charge of early warning of Bangladesh

### 5) Details

Day 1: December 19 (Thurs.) (Theme: Earthquake Disaster Management)

1. Geophysical Structure of Bangladesh with special reference to Earthquake  
 Dr. Md. Shamsul Alam, Professor, Jahangirnagar University
2. Earthquake Prediction, Forecasting, Preparedness and Peoples Awareness:  
 Bangladesh Perspectives  
 Dr. Md. Hossain Ali, Professor, Bangladesh Institute of Technology

3. Seismic Observation, Earthquake Information, Tsunami Warning and Earthquake Prediction in Japan  
Mr. Yuji Nishimae (Assistant Manager for Strong Earthquake Analysis, Earthquake and Tsunami Observations Div., Seismological and Volcanological Dept, and the Meteorological Agency)
  4. Earthquake Risk and Vulnerability Analysis: Japanese Practices and Lessons  
Mr. Toshiaki Udono (Pasco Co., Ltd.)  
Mr. Hidetoshi Kakiuchi (Pasco Co., Ltd.)
- Day 2: December 20 (Fri.) (Theme: Forecasting and Management)
1. Cyclone and Flood: Prediction, Forecasting, warning Systems and Dissemination Methods of Japan  
Mr. Hiroaki Nakaya (Assistant Manager for Disaster Reduction, Forecast div., Forecast Dept., Meteorological Agency)
  2. Hazard Mapping, Risk and Vulnerability Analysis: Japanese Experience  
Mr. Toshiaki Udono (Pasco Co., Ltd.)  
Mr. Hidetoshi Kakiuchi (Pasco Co., Ltd.)
  3. Total Disaster Risk Management Approach:  
Ms. Takako Izumi (UN OCHA Kobe)
  4. Cyclone Preparedness and Management in Bangladesh  
M.H. Khan Chowdhury, Consultant, Disaster Reduction Agency, National Government of Bangladesh
- Day 3: December 21 (Sat.) (Theme: Earthquake management)
1. Japan's Countermeasure for the Earthquake: Lessons Learned from the Great Hanshin Awaji Earthquake  
Mr. Fumiaki Yoshimura (ADRC)
  2. Earthquake Education and Training in School, Training Centre and Community Level  
Mr. Shinji Ito (Planning Section, Board of Education, Hyogo Prefecture)
  3. Plenary session: Developing Earthquake Warning and Management System in Bangladesh
- Day 4: December 22 (Sun.) (Theme: Forecasting and Management)
1. Case Presentation on the Responses in 1991 Cyclone  
Md. Monjurul Hoque, Administration and Management Training Center of Bangladesh
  2. Cyclone Prediction, Forecasting, Warning Systems and Dissemination Methods: Bangladesh Perspective  
Mr. Akram Hossain, Director-general, Meteorological Agency of Bangladesh
  3. Plenary session: Developing Cyclone Warning Management Systems in Bangladesh
- Day 5: December 23 (Mon.) (Theme: Forecast and management of floods)
1. Flood Forecasting, warning System and Flood Preparedness and Management in Bangladesh  
Dr. Aninun Nishat, Representative of Bangladesh, International Union for Conservation of Nature and Natural Resources)
  2. Flood Forecasting, Warning System and Flood Preparedness and Management in Bangladesh (continued)
  3. Community Based Approach for Disaster Preparedness and Mitigation: Bangladesh Perspective  
Mr. Syed Shamsul Alam, Administration and Management Training Center of Bangladesh
- Day 6: December 24 (Tues.) (Theme: Flood Forecasting and Management of Floods)
1. Plenary session: Developing Flood Forecasting, Warning, Preparedness and Management in Bangladesh
  2. Closing



Fig. 4-2-2-2 Seminar

#### 6) Recommendations of the Seminar for Earthquake Management

The following suggestions were generated from the seminar.

Because Bangladesh is located near an active earthquake belt, measures should be established to minimize the damage and suffering from earthquakes. Measures should include:

##### **Basic Support for Earthquake Response Management Systems**

- a. Research and studies on Earthquake Response Management Systems in Bangladesh will include evaluation of seismic hazards and vulnerability assessment involving geological perception and modeling, collection and preservation of historical data, development of data base and data analysis.
- b. Preparation of standard (both macro and micro level) seismic hazard map and preparation of liquefaction zoning map with recent aerial photographs and topography and evacuation plan.
- c. Institutional capacity building through establishment of coordination mechanism among concerned departments and agencies, providing fellowship programs, logistic supports, advanced training for rescue workers, training of trainers, exchange of technical specialist and professionals and transfer of latest technology.
- d. Establishment of an earthquake research institute with modern research facilities and professional developments through multi disciplinary approach.
- e. Provision of fund for continuous research.
- f. Establishment of regional and international cooperation among earthquake-prone countries for sharing and disseminating information.

##### **Support for Monitoring Seismic Events and Pre-Seismic Hazard Management**

- a. Establishment of required number of seismic stations and observatories for prediction and monitoring the seismic activities of the country, equipped with modern equipment like equipment for strong ground motion acceleration, velocity meter and geomagnetic monitoring instrument and high-speed computers.
- b. Strong network among the observatories and establishment of a central monitoring system.
- c. Development of data exchange process with the neighboring countries and other international seismic monitoring organizations.
- d. Proper assistance for concerned departments and agencies involved in public awareness building.
- e. Stockpiling of emergency logistic support-aids.

**Support for Immediate Response for Post Seismic Hazards**

- a. Debris removal and heavy recovery equipment like heavy jack, crane, earthmover, forklifter and power shovel.
- b. Early damage assessment.
- c. Information linkages and networking for coordination and response among concerned departments and agencies like Government Organizations and Non-Government Organizations (GOs-NGOs) and other development partners.
- d. Installation of modern radio systems and, if possible, satellite telephone networks.

**Support for Post Earthquake Management**

- a. Technical and engineering support for:
  - (i) Reinstallation and reestablishment of lifelines and other utility services.
  - (ii) Reconstruction of buildings, bridges, over and under passes.
- b. Technical and technological support establishment and management of data bank.

**Systems/Services to be Developed through Internal Initiatives for Earthquake Response Management**

- a. Integrated awareness development and preparedness activity for seismic hazards.
- b. Updating of Bangladesh National Building Code (BNBC)
- c. Earthquake drill/simulation exercises.
- d. Establishment of field hospitals with adequate and appropriate facilities.
- e. Inclusion of earthquake spectrum in education curriculum.

**ADRC can cooperate with Bangladesh in the following areas:**

- Capacity Building
- Transfer of latest technology
- Training of trainers
- Regional Cooperation

## 7) Evaluation of the seminar

Each participant was asked to evaluate the seminar. The 94% of the participants answered that, "similar seminars should be held at various levels of Bangladesh".

ADRC would like to make further efforts to define ideal assistance approaches in cooperation with the national government of Bangladesh.

### 4-2-3. Disaster Reduction Training for Media Staff in Laos

#### 1) Organizers

National Disaster Management Office, Laos

Co-sponsored by : ADRC, UN OCHA Kobe

#### 2) Basic Concept

In Laos 90% of the land belongs to the Mekong River Basin. Accordingly, damages caused by natural disasters such as floods and droughts have significant influences not only on the population, but also on agriculture, the most important economic sector of the country.

Establishing functional collaboration among the disaster-related organizations and improve the preparedness against disasters are critical issues for Laos. For example, information communication between the meteorological sector and end users of early warning system is still scarce.

With an aim to resolve such problems and focusing on the role of the media that links disaster reduction organizations and communities, the National Disaster Management office of Laos held a 4-day intensive training course for individuals in the media sector such as TV, radio and newspapers. Japanese resource were also invited to the course to the lessons learned regarding the role of the media.

#### 3) Date of Implementation

February 4 to 7, 2003



Fig. 4-2-3-1 Speech by H.E. Mr. Somphanh Phengkhammy  
the Minister for Labour and Social Welfare, Laos

#### 4) Participants

Approx. 40 individuals from the national government and the media sectors such as TV, radio and newspapers in Laos.

## 5) Seminar components

The seminar consisted of the main components outlined below.

- ① Terms and Definitions in Disaster Management (Mr. Vilayphong Sisomvang: Training Manager, NDMO, Laos)
- ② Risk Assessment (hazard, vulnerability and response capability) (Mr. Vilayphong Sisomvang: Training Manager, NDMO, Laos)
- ③ Roles of OCHA and TDRM (Ms. Takako Izumi: Humanitarian Affairs, OCHA Kobe)
- ④ Total Disaster Risk Management Approaches: Lessons learnt in Japan (Mr. Fumiaki Yoshimura: Senior Researcher, ADRC)
- ⑤ Roles of Mass Media in Disaster Prevention and Management (Mr. Hiroaki Mizukami: Overseas Survey Dept., Japan Weather Association)
- ⑥ Climate Forecasting in Monsoon season and earlywarning information in Lao PDR (Mr. Nithalath Somsanith: Director, Meteorological Department, Laos)
- ⑦ Lessons learnt from Flood in Vientiane Municipality (Mr. Bounchanh Sinthavong: Deputy Major of Vientiane, Laos)



Fig. 4-2-3-2 Participants of the Training