3. Human Resources Development

3-1. Activities Including Cooperative Projects with Member Countries

3-1-1.Training Course on Flood Hazard Mapping in Vietnam

The Asian Disaster Reduction Center (ADRC) held a training course on flood hazard mapping in Vietnam, in cooperation with the United Nations Office for the Coordination of Humanitarian Affairs (UN / OCHA), the United Nations Development Programme (UNDP) and the Vietnamese government.

1） Part I

- Project Title:

  Training Course on Flood Hazard Mapping Using the Participatory Rural Appraisal (PRA) Methodology in Disaster Mitigation for Provincial Staff

- Dates: Jun. 28 – Jul. 2, 2004

- Venue: Thanh Binh Hotel (Qui Nhon, Binh Dinh Province, Vietnam)

- The Goal of the Project

  To develop flood hazard maps at the community level in seven provinces (Quang Nam, Thua Thien Hue, Da Nang, Quang Binh, Quang Tri, Quang Ngai and Binh Dinh) in the central region of Vietnam, with a view to educating residents so that they will become more aware of the importance of flood mitigation.

  * Vietnamese administrative territory units: nation, province/city, district/town, commune, village and hamlet. A rural hamlet consists of 5 - 10 households.

- Course Objectives

  This course aimed to train lecturers, who would then educate residents living in the Quang Binh, Quang Tri, Quang Ngai and Binh Dinh provinces, on the subject of flood mitigation. (The same course was held in the Quang Nam, Thua Thien Hue and Da Nang provinces in February and March 2004.)

  Trainees, approximately 40 provincial and district officials in charge of disaster

management, are expected to become lecturers for the community-based flood mitigation education programs after August 2004.

- Host Organizations

The UNDP Disaster Management Unit (DMU) and the Provincial Committee for Flood and Storm Control of each province.

* UNDP Disaster Management Unit (DMU): An organization created by the UNDP Vietnam Office and the Vietnamese government, staffed by high-ranking government officials.

- Trainers

[DMU]

- Mr. Bui Quang Huy, Project Manager, assigned from the Vietnamese Ministry of Agriculture and Rural Development
- Mr. Luong Anh Tuan, Geographical Information System (GIS) Expert, assigned from the Vietnamese Ministry of Agriculture and Rural Development
- Mr. Bui Dinh Toai, Participatory Rural Appraisal (PRA) Expert, a former official of the Vietnamese Ministry of Agriculture and Rural Development, who participated in the DMU as a PRA expert after his retirement from the Ministry.
- Ms. Nguyen Thi Thu Que, Training Coordinator, Vice-Director of Hoang & Thang Company
- Mr. Ngo Quang Minh, Interpreter (Vietnamese - English)

[Others]

- Ms. Takako Izumi, UN / OCHA Kobe: International Cooperation for Disaster Management in Vietnam and the Role of UN-OCHA
- Prof. Yujiro Ogawa, Fuji Tokoha University: Town Watching for Flood Disaster Reduction
- Dr. Tomohiko Hatori, ADRC: Flood Hazard Mapping and Its Uses

- Outline of the Course

Day 1 (Jun. 28)

Mr. Huy and Ms. Que (DMU) explained the project outline, including the aim and the schedule of the project. This course was intended to map the inundated areas and depths of the 1999 great flood, estimate the warning water level based on the map and develop

guidelines.

Mr. Tuan (DMU) explained the flood hazard mapping technique, which requires information on both flood and evacuation as well as cooperation of community residents to determine the inundated areas and depths, this time, of the 1999 great flood. The course started with flood hazard mapping at the community level, followed by the ones on the district and provincial levels.

Mr. Toai (DMU) outlined the Participatory Rural Appraisal (PRA) technique, which is based on communication between the administration and residents. The PRA, introduced in Vietnam first in 1991 for forestry and agricultural development, helps residents take the initiative in implementing a program. In flood hazard mapping, incorporation of residents' needs into the map is important.

PRA: Involvement of residents in surveillance and situation analysis helps the residents to recognize common issues in their communities, therefore encouraging them to play the main role in the development process.

The PRA focuses on education of residents through surveillance activities rather than on the results of the investigation. Participants from outside the community, such as administrative officials, are required to learn from local people. The concept of the PRA was originally proposed by Robert Chambers (U.K.) in the late 1970s to facilitate cooperation, between community residents and the developer in rural development.

Day 2 (Jun. 29)

Mr. Toai explained the PRA and one of its tools, the crop calendar. The PRA has the following advantages:

- local information from residents can be shared;
- the administration can understand opinions among residents;
- efforts by residents reduce administrative burdens;
- it encourages democratization and social equality; and
- it contributes to sustainable development.

Exercise 1: Crop Calendar

A graph was drawn which illustrates the precipitation, and the frequencies of typhoons and floods to prepare a timetable for rice production, upland farming and fishery, etc., by month. Trainees were required to identify what variables were needed.

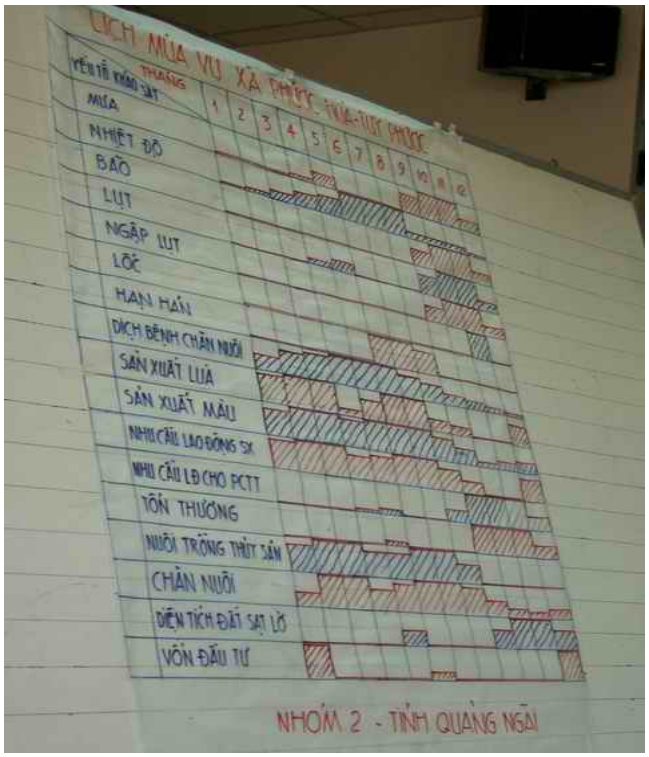

Fig. 3-1-1-1 Crop Calendar

Dr. Hatori explained the procedure of flood hazard mapping, the concept of the Geographical Information System (GIS) and the usefulness of GIS in flood hazard mapping. He also explained that GIS depends absolutely on data, that information on inundated areas and depths could only be obtained through field investigation, and therefore, that cooperation with local residents is essential.

Mr. Tuan provided maps of inundated areas in each province and explanations about them.

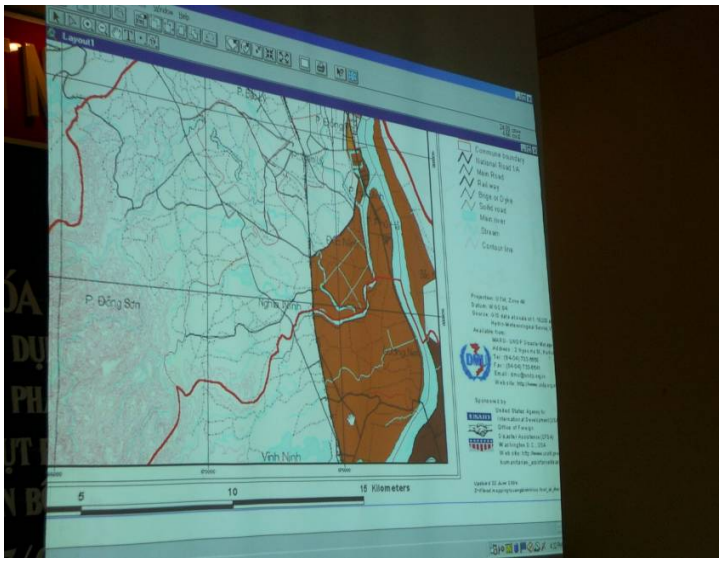

Fig. 3-1-1-2 Map of inundated area

Day 3 (Jun. 30)

Mr. Toai explained about another PRA tool, Venn diagram. The lecture consisted of the following three parts: 1) identification and listing of the roles and responsibilities of disaster prevention-related institutions; 2) classification of such roles and responsibilities by degree of importance; and 3) drawing of a Venn diagram that illustrates the resulting classification. (The circle size represents the significance of the role, and the distance stands for the degree of a responsibility.)

Fig. 3-1-1-3 Venn Diagram

Mr. Tuan explained the flooded area mapping procedure: 1) preparation of the list of flooded areas at the commune level; 2) preparation of the Global Positioning System (GPS) data, a rolling ruler and other tools; 3) preparation of basic maps--topographic maps in 1:2,000, 1:5,000, 1:10,000, etc.; 4) explanations to residents about the concept of flooded area maps; 5) explanations of the meanings of legends; 6) mapping of flooded areas by residents - hand-drawn using tracing paper placed over the basic map; 7) drawing of a socioeconomic map by residents - locating rivers, roads, rice and other fields, forests, hospitals, schools, government offices - hand-drawn using tracing paper placed over the basic map; and 8) combination of the flooded area map and the socioeconomic map into a hazard map that shows evacuation routes to refuges.

Fig. 3-1-1-4 Creation of Community-based Social Economic Map

Mr. Tuan also explained the concept of GPS and the use of eTrex Venture (Garmin Ltd.).

The flooded area maps of the respective province, handed out on Day Two, were revised and commented on by the trainees.

At the end of the programme on Day Three, Prof. Ogawa explained the method of Town Watching for Flood Disaster Reduction: 1) walking in the town to locate disaster-prone and disaster-resistant areas, taking pictures using a Polaroid camera and attaching comments to the pictures; 2) returning to the office to draw a town map with the pictures and comments posted on the map; 3) with all trainees, discussing possible measures for protecting the weak and vulnerable areas, and identifying organizations capable of taking such measures.

Day 4 (Jul. 1)

A Town Watching tour to a flood-prone area (Phuoc Hoa Commune, Binh Dinh Province) was made as a field survey for flood disaster.

Fig. 3-1-1-5 Map Created through Town Watching Program

Day 5 (Jul. 2)

Discussions on the results of the Town Watching carried out the previous day, chaired by Prof. Ogawa.

Fig. 3-1-1-6 Discussion of the results of Town Watching

Final presentations on the topics of the training course programs were delivered, each followed by discussions.

- Presentation and discussions on the results achieved by the crop calendar, chaired by Mr. Toai
- Presentation and discussions on the results achieved by flooded area mapping, chaired by Mr. Tuan
- Presentation and discussions on the results achieved by disaster management planning, chaired by Mr. Toai
- Presentation and discussions on the results achieved by the Venn diagram, chaired by Mr. Toai

Fig. 3-1-1-7 Trainers and Trainee at Closing Ceremony

2） Part II

- Project:

  Commune Official Training Course on Flood Hazard Mapping Using the PRA Methodology for Disaster Mitigation

- Dates: Jul. 5 - 8, 2004

- Venue: Hoi An People's Committee Office Building (Hoi An Town, Quang Nam Province, Vietnam)

- Course Objectives

  This course is aimed at identify areas prone to flooding on the commune level in the Quang Nam province and providing education on flood mitigation. (The instructor training course was already held in the Quang Nam, Thua Thien Hue and Da Nang provinces in February and March 2004, and one of the former trainees attended this course as a lecturer.)

  The trainees consisted of approximately 35 disaster management officials from 21 selected communes.

- Host Organizations

  The course was jointly hosted by the UNDP Disaster Management Unit (DMU) and the Provincial Committee for Flood and Storm Control of each province.

- Trainers and Staff

  [DMU]

  - Mr. Bui Quang Huy, Project Manager
  - Mr. Luong Anh Tuan, Geographical Information System (GIS) Expert
  - Mr. Bui Dinh Toai, Participatory Rural Appraisal (PRA) Expert
  - Ms. Nguyen Thi Thu Que, Training Coordinator
  - Mr. Ngo Quang Minh, Interpreter (Vietnamese - English)

  [Committee for Flood and Storm Control of the Quang Nam province]

  - Mr. Tran Van Binh, Chairman of the Quang Nam Province Committee for Flood and Storm Control, who was a trainee of the lecturer development course held in February and March 2004.

[Others]

- Ms. Takako Izumi, UN-OCHA Kobe: International Cooperation for Disaster Management in Vietnam and the Role of UN-OCHA
- Dr. Tomohiko Hatori, ADRC: Use of Flood Hazard Mapping

- Course Outline

Day 1 (Jul. 5)

Approximately 15 disaster management officials of the Cam Kim commune (10 minutes by boat to the south of Hoi An town) attended lectures and drills on the crop calendar, disaster management planning and the Venn diagram by Mr. Toai (DMU), and about flood hazard mapping by Mr. Tuan (DMU)

Day 2 (Jul. 6)

At the Hoi An People's Committee Office Building, Mr. Binh (the Quang Nam province) lectured disaster management officials from 21 selected communes in the Quang Nam province on flood-caused damage and flood mitigation measures in Vietnam, Mr. Toai (DMU) on the crop calendar, disaster management planning and the Venn diagram, and Mr. Tuan (DMU) on flood hazard mapping. Dr. Hatori gave a presentation on uses of flood hazard mapping in Japan.

Day 3 (Jul. 7)

The trainees returned to their communes to prepare crop calendars, disaster management plans, Venn diagrams, maps of areas struck by the 1999 great flood, and socioeconomic maps as had been explained on the previous day.

Day 4 (Jul. 8)

The trainees came back to the Hoi An People's Committee Office Building to discuss the results of their assignments. Mr. Tuan (DMU) carefully examined the handed-in assignments, and the maps of the flooded areas in paticular, to check the inundated areas and depths of each commune.

Fig. 3-1-1-8 Creation of Maps

At the end of the meeting Dr. Hatori commented that repetition is essential in training, that flood hazard mapping is not universally useful, but should be regarded as a means of stimulating imagination, and that it is important to discuss the experiences gained through this course with family members.

Fig. 3-1-1-9 Participants and lecturers in the training course (Hoi An)

3-1-2. National Workshop on Disaster Risk Management in Tajikistan

1） Background

The ADRC hosted the “National Workshop on Disaster Risk Management in Tajikistan”, in cooperation with the Ministry of Emergency Situations and Civil Defence of the Republic of Tajikistan （MoES） and other organizations, as an ADRC-member country cooperative project.

2） Date, Venue, Organizations and Language

(1) Date

August 2-6, 2004

(2) Organizations

- Ministry of Emergency Situations and Civil Defence of the Republic of Tajikistan (MoES)
- Asian Disaster Reduction Center (ADRC)
- United Nations Disaster Risk Management Project in Tajikistan

(3) In cooperation with

- Swiss Agency for Development and Cooperation
- UNDP/BCPR
- UN/ISDR

(4) Venue

Dushanbe Hotel

(5) Languages

Russian and English (with simultaneous interpretation)

3） Agenda

(1) Day 1 : 2 August 2004

a) Opening Statements

- Mr. Usmonkul Shokirov, Chief, President’s Executive Office, Government of Tajikistan
- Mr. Abdurahim Rajabov, First Deputy Minister, Ministry of Emergency Situations and Civil Defense of the Republic of Tajikistan (MoES)
- Mr. William Paton, Resident Coordinator, UN System in Tajikistan

- Mr. Koichi Miyoshi, Charge d'Affaires, Embassy of Japan
- Ms. Etsuko Tsunozaki, Senior Researcher, ADRC

b) Theme I: Disaster Risk Management: Towards a comprehensive approach

- Explanation on the adopted workshop program

  Workshop Facilitator: Mr. Abdurahim Rajabov, First Deputy Minister, MoES
- Review of national policies, legislation and strategies of disaster management

  Mr. Usmanov Islom Jumaevich, Deputy Minister, MoES
- Review of impacts of disasters, and ongoing initiatives on disaster risk reduction and management

  Mr. Alisho Shomahmadov, Head of Monitoring and Forecasting Department MoES
- Review of UN-coordinated assistance on disaster management in Tajikistan

  Mr. Paul Handley, Head of UN Coordination Unit
- Disaster reduction initiative by Swiss Agency for Development and Cooperation in Tajikistan

  Mr. Sebastian Eugster, Swiss Cooperation Office, Tajikistan
- Concept of Total Disaster Risk Management

  Ms. Etsuko Tsunozaki, Senior Researcher, ADRC
- Risk and vulnerability assessment of urban and rural areas in Tajikistan

  Tajik GlavGeology
- Reducing Disaster Risk - A challenge to sustainable development

  Ms. Maria-Olga Gonzales, UNDP/BCPR, Geneva
- Socio-economic cost of disasters and global framework for disaster reduction

  Mr. Haris Sanahuja, ISDR Secretariat, Geneva
- Group discussions:
  1) What are the existing gaps in disaster risk reduction and disaster management?
  2) What are the major factors contributing to the existing gaps in disaster risk reduction and disaster management?
  3) What needs to be done urgently to increase the efficiency and effectiveness of disaster risk reduction and disaster management in Tajikistan?

4) How can disaster risk reduction be integrated into development planning and activities such as poverty reduction, governance, education, water resources management, and land use and planning in Tajikistan?

- Group Presentations and Discussion

(2) Day 2 : August 3 2004

a) Recap of the main points of Day One

b) Theme II: Earthquake Risk Management

- Disaster risk management in Tajikistan

  Mr. Anatolii Ishuk, Director, PMP International

- Approach to concentrated deformation for solving the problems involved in structural seismic risk reduction

  Professor Nizomov Djahongir, Director, Institute of Earthquake Engineering and Seismology, Academy of Science, Republic of Tajikistan

- Mid-term earthquake forecasting and earthquake risk assessment

  Professor Karimov Farshed, Institute of Earthquake Engineering and Seismology, Academy of Science, Republic of Tajikistan

- Use of hazard maps as a tool for risk communication for effective disaster reduction

  Dr. Tomohiko Hatori, Senior Researcher, ADRC

- Measures to prevent earthquake disasters in urban and rural development: explanation on shaking table

  Mr. Arthur Svagard, Shelter for Life and Mr. Djamoliddin Vohidov, Tajik Technical University

- Lessons learnt from the Kobe Earthquake

  Ms. Etsuko Tsunozaki, Senior Researcher, ADRC

- Major Patterns of Urban Earthquake Disasters

  Professor Takuji Hamamoto, Musashi Institute of Technology, Japan

- Problems of the Lake Sarez and Usoy Dam

  Colonel Boboev Rustam, Lake Sarez Risk Mitigation Project, MoES

- To improve seismic performance of buildings in urban areas

  Professor Takuji Hamamoto, Musashi Institute of Technology, Japan

- Information management systems – use of GIS for disaster management

  Dr. Tomohiko Hatori, Senior Researcher, ADRC

- Central Asian Regional Earthquake Safety Initiative (CARESI)

Marziya Baidulloeva, FOCUS Humanitarian Assistance

- Group discussions:
  1) What are the major challenges in earthquake risk management in Tajikistan?
  2) What are the major gaps in comprehensive earthquake management and how to bridge the existing gaps?
  3) What needs to be done to reduce the potential impacts of earthquake risks?
  4) How can people living exposed to earthquake risks, be better informed and prepared to reduce the impacts of potential earthquake disasters on them and their property?

(3) Day 3 : August 4 2004

a) Field trip to landslide prone area – Varzob

b) Field trip to earthquake-prone area - Gisar

Fig. 3-1-2-1 Field survey after occurrence of landslide in Varzob

(4) Day 4 : August 5 2004

a) Recap of the main points of Day Two

b) Group presentations and discussion

c) Lecture on National Platform

Mr. Haris Sanahuja, ISDR Secretariat, Geneva

d) Theme III: Inter-ministerial, inter-sectoral and inter-disciplinary cooperation and collaboration for disaster risk reduction in Tajikistan

- National government's roles in disaster risk reduction: creating an enabling environment for mainstreaming disaster risk reduction into sustainable development activities, including national policies, strategy, action plan, legislation, and human

and financial resources development

1) Discussants: Representatives from the Presidential Apparatus, Ministry of Emergency Situations, Ministry of Health, and local government
2) Facilitator: Mr. Usmanov Islom Jumaevich, Deputy Minister, MoES
3) Rapporteur: Professor Karimov Farshed, Institute of Earthquake Engineering and Seismology, Academy of Science, Republic of Tajikistan

- National government's roles in disaster reduction: information sharing and capacity-building
    1) Discussants: Representatives from Glav Geology, Hydro-meteorological Agency,Ministry of Education, Ministry of Environment, Ministry of Water Resources Management, and Dushanbe City
    2) Facilitator: Dr. Tomohiko Hatori, Senior Resarcher, ADRC
    3) Rapporteur: Mr. Alisho Shomahmadov, Head of Monitoring and Forecasting Department, MoES
- The Roles of UN oaganizations in disaster risk reduction in Tajikistan: support to the national government in capacity-building, information management, and understanding of the complexity of disaster reduction, increase of effectiveness and efficiency of disaster response, and reduction of new risks in disaster recovery, rehabilitation and reconstruction
    1) Discussants: Representatives of UNDP, UNICEF, WFP, UNHCR, UN/ISDR
    2) Facilitator: Mr. Paul Handley, Head, UNCU
    3) Rapporteur: Ms. Etsuko Tsunozaki, Senior Researcher, ADRC

(5) Day : August 6 2004

a) Recap of the main points of Day Four
b) The roles of civil societies in disaster reduction: support to the national government in building resilient communities through community-based disaster reduction projects on disaster mitigation, vulnerability reduction, capacity-building and raising public awareness of disaster risks.
    - Discussants: Representatives from NGOs (Focus, IFRC/RCST, DIPECHO partners), private sectors, and academic communities (10 minutes each, followed by questions and answers)

c) Theme IV: Wrap-up of the achievements of the National Workshop
   - Summary of the national workshop by Etsuko Tsunozaki, Senior Researcher, ADRC
   - General comments on the Workshop by a participant from one of the ministries

d) Closing speeches:
   - Mr. Paul Handley, Head, UNCU
   - Dr. Tomohiko Hatori, Senior Researcher, ADRC
   - Mr. Rajabov Abdurahim, First Deputy Minister, MoES
   - Mr. Koji Ono, Second Secretary, Embassy of Japan in Tajikistan

e) Sub-group meeting on earthquake risk reduction and earthquake engineering
   - Facilitated by Professor Hamamoto, Musashi Institute of Technology, assisted by Dr. Tomohiko Hatori, Senior Researcher, ADRC
   - Participants: MoES staff, Institute of Seismology, Tajik Technological University, FOCUS, Shelter for Life, etc.

Fig. 3-1-2-2 Participants in the workshop

4） Summary

Upon the request from the Ministry of Emergency Situations and Civil Defense (MoES) of the Republic of Tajikistan, the Asian Disaster Reduction Center (ADRC) organized a "National Workshop on Disaster Risk Management" as one of ADRC-member country joint programs for enhancing the capacity of the member countries. The Workshop was held at Dushanbe Hotel in Dushanbe, Tajikistan, on August 2 to 6, 2004, jointly by the Swiss Agency for Development and Cooperation, the UNDP Bureau for Crisis Prevention and Recovery, and the United Nations Inter-Agency Secretariat of the International Strategy for Disaster

Reduction. The Workshop proceeded in Russian and English, with simultaneous interpretation.

In recognition that, to achieve sustainable development, a country should 1) strengthen multi-level, cross-sectional, and inter-disciplinary cooperation and collaboration in disaster risk reduction, and 2) integrate disaster risk reduction into the planning and implementation of national development politics, the Workshop was devised to contribute to sustainable development through the promotion of a holistic, comprehensive and integrated approach to disaster risk reduction, namely, the Total Disaster Risk Management (TDRM) approach.

The Workshop had an attendance of more than 40 individuals from the MoES, other disaster management-related ministries, scientific community, and NGOs as well as international organizations oparating in Tajikistan, all of whom actively participated. The Workshop was highly meaningful in that various actors of the society in disaster risk management were present.

From Japan, Prof. Takuji Hamamoto, an expert of earthquake engineering, of Musashi Institute of Technology, as well as two senior researchers of the ADRC, Dr. Tomohiko Hatori and Ms. Etsuko Tsunozaki, participated in the Workshop as resource persons. Prof. Hamamoto, with assistance from Dr. Hatori, conducted a sub-group meeting on "Seismic Disaster Prevention for Sustainable Urban Development in Tajikistan" on the last day to further discuss what measures should be taken in Tajikistan for effective earthquake disaster mitigation.

The Workshop participants visited Gissar, where a tragic earthquake took place in 1989, and Varzob where recent floods and landslides contaminated drinking water of Dushanbe.

3-1-3. Urban Search-and-Rescue Training in Singapore

1） Basic concept

The Singaporean government holds a training course every year for search and rescue unit personnel. The course has been accepting trainees from outside Singapore for the past 5 years and providing training on search-and-rescue skills required in urban disaster situations. The training facility complex of the Civil Defence Academy (CDA) of the Singapore Civil Defence Force (SCDF) is one of the top-notch facilities in Asia. In an effort to utilize their expertise and facilities, the ADRC has been inviting member countries to the training course since 2001. This year, search and rescue officers from Armenia, China, Nepal and the Philippines participated in the course.

2） Dates

February 21 to March 4, 2005 (2 weeks)

3） Details

(1) Participants

4 officers (from 4 countries: Armenia, China, Nepal and the Philippines)

(2) Lecturers

Staff from Singapore Civil Defence Force (SCDF)

Fig. 3-1-3-1 Simulation Facilities of the Singapore Civil Defence Academy

(Left: Fire Rescue, Right: Rescue from the rubble)

(3) Training program

a) Lecture

Evaluation of damages

Search and rescue in confined spaces

Knots & lines

Rescue operations

Type of collapsed building

Rescue equipment

Mass/single casualties management

Rescue dogs

b) Drills

Search drills in confined spaces

Search drills in a crop storage tank (simulation facility)

Search drills in a collapsed building (simulation facility)

Search drills in an underground space (simulation facility)

Rescue drills at a ruined military facility

High altitude rescue drills

4） Overview

The search and rescue training facility complex in Singapore consists of simulation facilities including a 10-story fire building, chemical plant, oil refinery, debris area, and confined spaces. There are also lecture rooms, accommodations, a canteen, and an administrative office in the premises.

Fig.3-1-3-2 Training for how to use rescue materials

The first week of the training consisted mainly of lectures and trainings, and the second week consisted of practical search and rescue drills at 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 disasters. There are two kinds of courses for urban disaster search-and-rescue training; the course accepting participants from various countries, and the customized course for personnel from specially designated countries.

The ADRC sent trainees to the course for those from non-designated countries. Although the training course consisted of trainees with different skill levels and needs, all the trainees achieved their goals successfully thanks to the effective guidance of the trainers with full experience (see questionnaire in Table 3-1-3-1).

Table 3-1-3-1 Evaluation Report of the Training Course by the Trainees(including 4 from ADRC and 7 from other schemes)

1. Course Objective

Very well achieved	54.5 %
Well achieved	45.5 %
Adequately achieved	-
Not well achieved	-
Not all achieved	-

2. Learning Objective

Very well achieved	63.6 %
Well achieved	27.3 %
Adequately achieved	9.1 %
Not well achieved	-
Not all achieved	-

3. Course Structure and Content

a. Relevance of the topics

Very relevant	36.4 %
Relevant	45.5 %
Adequately relevant	18.2 %
Less relevant	-
Not relevant	-

b. Overall planning and preparation

Excellent	27.3 %
Very Good	63.6 %
Good	9.1 %
Satisfactory	-
Poor	-

c. Course duration

Too long	-
Just right	63.6 %
Too short	36.4 %

d. Overall pace of the course

Too fast	9.1 %
Just right	72.7 %
Too slow	18.2 %

e. Quality of the handouts in the terms of readability and clarity

Excellent	18.2 %
Very Good	72.7 %
Good	9.1 %
Satisfactory	-
Poor	-

f. Usefulness of the course materials as a learning aid

Extremely useful	9.1 %
Very Good	81.8 %
Adequately Useful	9.1 %
Less Useful	-
Not at all useful	-

4. Trainer Effectiveness

a. Effectiveness in delivering the lesson

Excellent	54.5 %
Very Good	27.3 %
Good	18.2 %
Satisfactory	-
Poor	-

b. Effectiveness in practical examples and demonstration

Excellent	27.3 %
Very Good	54.5 %
Good	18.2 %
Satisfactory	-
Poor	-

c. Interactions between the participants and the trainer(s)

Excellent	45.5 %
Very Good	36.4 %
Good	9.1 %
Satisfactory	9.1 %
Poor	-

d. Overall presentation skills of the trainer(s)

Excellent	45.5 %
Very Good	36.4 %
Good	18.2 %
Satisfactory	-
Poor	-

The questionnaire demonstrated clearly that Singapore has the appropriate human resources as well as facilities for search and rescue training. The ADRC is determined to continue promoting this type of project in the future.

3-1-4. JICA Seminar on Disaster Management

The ADRC has held a yearly disaster management seminar upon the request of JICA and with its full support since the fiscal year 2000. The seminar was held for the fourth time. Its outline was as follows:

1) Overview

Title: Disaster Management Seminar

Period: January 12 - February 18, 2005

Implementing Organization: ADRC

Participants: 13 officials from 11 countries

Countries: Benin, China, Costa Rica, Guatemala, Honduras, India, Malaysia, Panama, Syria, Tanzania and Turkey

2) Objectives

Trainees are expected to:

- Study Japan's disaster management system to improve their disaster management capabilities
- Identify problems and challenges in the disaster management practice in their countries, and devise solutions to them
- Draft an action plan for improvement.

3) Background

Japan is located in an area frequently hit by typhoons. Every year the country suffers from disasters such as typhoons and torrential rains. Moreover, Japan is located on part of the Circum-Pacific Earthquake and Volcanic Belt, where active earthquakes faults and volcanoes exist. Historically, there have also been numerous tsunami disasters, making Japan one of the most disaster-prone countries.

Having made efforts to improve disaster management based on lessons learned from numerous natural disaster experiences, Japan has become one of the most advanced countries in disaster management in the world today.

On the other hand, natural disasters continue to increase in the world, and many developing countries suffer massive human and property losses, which impede their efforts for social and economic development.

As part of Japan's international disaster reduction cooperation, this program was

planned by JICA and the ADRC to share knowledge and experience, among disaster management officials from various countries in order to reduce the loss of lives due to natural disasters and contribute to the international community.

4） Trainees

13 trainees from 11 countries in fiscal year 2004.

5） Seminar program

To study the Japanese disaster management system comprehensively, the seminar program consists of the following modules:

(1) Report on disaster measures of each country and exchange opinions
(2) Study disaster management of the Japanese central government
(3) Study disaster management of local governments including measures taken for the Hanshin-Awaji Earthquake
(4) Study the role of the private sector in disaster management
(5) Study actirities for disaster reduction international cooperation
(6) Train and practice disaster management activities
(7) Develop an action plan and report it

The topics and outline of each module are as follows:

(1) Present situation and challenges of each country regarding natural disasters

■ Topics (Implementing Organization)

- Country reports by trainees

(ADRC)

■Outline

At the beginning of the seminar, the trainees presented their “Courtry Reports” on disaster management in their countries under the coordination of Mr. Anil K Sinha, ADRC Senior Technical Advisor. The “Country Report” session provided an opportunity for them to deepen their understanding of the disaster situations of other countries.

Fig. 3-1-4-1　Country Report

(2) Disaster management of the Japanese central government

■ Topics

- Disaster Management at the National Government Level and International Cooperation
  (Cabinet Office)
- Emergency Relief Disaster Information Systems
  (Cabinet Office)
- Emergency Rescue and Relief
  (Fire and Disaster Management Agency)
- Tachikawa Disaster Prevention Base:
- Substitute Facility of the Government Headquarters for Disaster Response
- Role of the Hyper Rescue Team
- National Disaster Medical Center
- Flood Control Policy of the Japanese Government
  (Ministry of Land, Infrastructure and Transport)
- Meteorological Information for Disaster Prevention
  (Japan Meteorological Agency)
- Disaster Relief Law
  (Ministry of Health, Labour and Welfare)

■Outline

At the Cabinet Office, the trainees attended a lecture on fundamental topics such as the Disaster Countermeasures Basic Act, the Basic Disaster Management Plan, and coordination between the central and local governments, and the budget for disaster reduction measures.

Fig. 3-1-4-2　Cabinet Office

At Tachikawa Disaster Management Base, the trainees visited three sites, Tachikawa Disaster Management Headquarters, the Hyper Rescue Team Base and the National Disaster Medical Center.

Fig. 3-1-4-3　Fire and Disaster Management Agency

At the Fire Rescue Team Base, the trainees observed a training of fire rescue team and visited various training facilities consisting of a fire fighting training building, high altitude rescue equipment, fire engines equipped with long-distance water supply capabilities, and rescue helicopters. Many of the trainees commented that they would like to have similar training facilities in their countries.

Fig. 3-1-4-4　Tachikawa Disaster Management Base

This module was a very important opportunity for the trainees to learn about Japan's disaster management. Prevention and mitigation measures to minimize the impacts of disasters contribute greatly to the national economy. Therefore, it is very important for disaster-related organizations to cooperate with each other much closely.

(3) Disaster management by local governments in Japan

■ Topics

- Great Hanshin Awaji Earthquake (GHAE), Jan. 17,1995
  (Disaster Reduction and Human Renovation Institution)
- GHAE Nojima Fault Preservation Museum
- Disaster Management of Hyogo Prefecture
  (Hyogo Prefecture)
- Disaster Management by Kobe City
  (Kobe City)
- Disaster Management of Hokudan Town
  (Hokudan Town)
- Disaster Reduction Education at Schools
  (Maiko High School, Shirogane Elementary School)

■Outline

A visit was made to the Disaster Reduction and Human Renovation Institution (DRI), which gives a general overview of the 1995 Great Hanshin Awaji Earthquake.

Then, the trainees had lectures on local government's disaster management at the Disaster Management Center of Hyogo Prefecture, then at the Crisis Management Office of Kobe City, and at the Nojima Fault Museum in Hokudan Town, Awaji Island. They studied countermeasures taken by Hyogo Prefecture and Kobe City, such as emergency measures, restoration and rehabilitation activities after the Great Hanshin-Awaji Earthquake. The Hyogo Prefectural Government constructed a large-scale disaster management base in Miki city, which serves as a back-up facility and as a fire and rescue training center. In Hokudan Town, some Great Hanshin-Awaji Earthquake survivors gave accounts on their experiences.

To see an example of disaster education at shools, they attended the evacuation drill at Nishinomiya City Kitashukugawa Elementary School. This evacuation drill was conducted with participation from not only the elementary school but also kindergardens and

Nishinomiya Fire Fighting Station, Nishinomiya Police Station, and voluntary disaster management organizations, etc.

The drill consisted of various types of trainings such as SAR, fire fighting by students, and pick-up of kindergarden children by their parents. The trainees had a better understanding of importance of school as a disaster management base.

Fig. 3-1-4-5　Maiko High School

(4) Roles of lifeline and insurance industries

■ Topics

- Disaster Management for Lifeline

  (Osaka Gas)

  (Kobe City Office – Water Supply, Sewarage System)

- Introduction to Risk Management & Insurance for Natural Disasters

  (Tokyo Marine Risk Consulting Co., Ltd.)

Fig. 3-1-4-6　Osaka Gas Company

■Outline

To learn about disaster management practices in lifeline facilities, the trainees visited the Kobe Municipal Bureau of Water Supply and Sewerage Service and Osaka Gas Co.,Ltd. this

year. Securement of clean drinking water, and water for medical use is a high-priority post-earthquake issue. The trainees learned about the endeavor for the construction of earthquake resistant structure and back-up systems of water supply based on the experiences of the GHAE.

They visited the control center of Osaka Gas, which is equiped with the damper in the building foundation, and learned about the measures of gas supply service in disaster.

The trainees saw various examples, which showed them how the private sector and lifeline campanies (including public corporation) play significant roles at the times of disaster.

Tokyo Marine Risk Consulting Co., Ltd. gave a lecture about risk management and earthquake insurance of Japan, New Zealand and U.S.A. from the viewpoint of economic recovery.

(5) Countermeasures by Disaster Type

■ Topics

- Countermeasures for Sediment Related Disasters

  Case Study:

  Sabo Works in Hyogo Pref. (Sabo=sediment control)

  Sabo Planning Workshop

  Nigawa Hillside Work

- Countermeasures for Road Disaster

  Case Study:

  Road conservation works in Hyogo Prefecture

- Flood Countermeasures

  Case Study:

Comprehensive Flood Control Countermeasures in Neya River Basin

■Outline

The theme of this training module was measures for floods, sediment-related disasters, road disasters, and other natural disasters besides earthquakes.

The Erosion Control Division of Hyogo Prefecutre provided a lecture on the Sabo (sediment control) dams and afforestation of Mt. Rokko. After the lecture, the trainees visited one of the Sabo dams in Mt. Rokko.

The trainees also visited the Neyagawa River Basin in Osaka Prefecture, because the river basin used to suffer from frequent floods, and therefore provides typical case-study

examples of urban flood control measures. Lowland flood control is a problem commonly seen around the world, and the trainees learned about the comprehensive flood control measures based on the partnership between the local government and residents. They also visited a retention reservoir and a construction site of a supplementaly drainage tunnel.

For road disaster management, the trainees learned about the road information network for real-time disaster infomation acquisition, and the information dissemination system using electric bulletin boards for drivers, as well as the latest information management technology using GPS cameras.

Fig. 3-1-4-7　Nigawa Landslide Museum

Fig. 3-1-4-8　Drainage pipe Construction site

(6) International Cooperation for Disaster Reduction

■ Topics

- International Symposium “Living with Risk – disaster reduction for future generation”
- United Nations World Conference on Disaster Reduction (WCDR)
- Activities of International Emergency Rescue Team

  (Japan International Cooperation Agency; JICA)

■Outline

The trainees attended the three-day United Nations World Conference on Disaster Reduction held in Kobe, Hyogo, Japan, to learn about the present and future trends in disaster management.

In the International Symposium panel discussion, Mr. Jan Egeland, Under-Secretary General for Humanitarian Affairs, Ms. Sadako Ogata, President of Japan International Cooperation Agency (JICA), Mr. Katsuji Ebisawa, President of NHK, Mr. Michel Jarravd, WMO Secretary General, Mr. Markku Niskala, IFRC Secretary General, and Mr. Shigeru Ito, ADRC Chairman, exchanged their views and opinions.

The trainees also had a precious opportunity to join the “Peace Talk Marathon”,organized by JICA, and the Disaster Management Exhibition.

The trainees attended lectures by the JICA Emergency Rescue Team on various rescue and relief operations. The team had participated in areas struck by the Sumatra Earthquake and in countries affectecd by the following tsunami.

This seminar program provided an excellent opportunity for the trainees to develop a human network that they will be able to rely on when playing important roles in international cooperation for disaster reduction back in their respective countries.

(7) Thematic Disaster Management

■ Topics

- New Technology for Disaster Reduction:
  3D Full-Scale Earthquake Testing Facility
- Protection of Cultural Heritage from Disasters
  Study Trip to Kyoto;
  Kyoto City Disaster Prevention Center
  Traditional Building Preservation Area
- First Aid Drill
  (Hyogo Disater Medical Center)
- Public Awareness Raising Method: Town Watching
  (Fuji Tokoha Univ.)
- GIS System and its Application in Disaster Management
  (ADRC)

■Outline

The trainees visited a newly completed full-scale 3D earthquake testing facility. The facility is large enough to perform an actual three-dimensional ground movement situation on a shake table. The trainees were surprised to see the high technology used for the facility.

As for the method of raising public awareness of disaster reduction, Prof. Ogawa of Fuji Tokoha University organized a “Town Watching” tour.

In this walking tour, the trainees walked around a town to assess the current level of potential disaster risks and discuss what should be considered in the development of countermeasures. Then, the trainees prepared a Disaster Management Map based on the results of the Town Watching tour. Because this method can be easily implemented at the community level at low cost, it is expected that trainees will promote it among local communities of their respective countries.

At the request from the trainees, Dr. Hatori, ADRC Senior Researcher, lectured them on the GIS system and its application to disaster management.

Fig. 3-1-4-9　Town Watching Method

(8) Evaluation and Closing Ceremony

■ Evaluation

The trainees were asked to answer a questionnaire to give their general opinions about this training course. They answered that “there should have been general, introductory explanations on the Japanese disaster management system at the beginning of the course to help the trainees better understand the topics”, that they “wanted to have more time for Q & A exchanges and for discussions”, or that they “wished to have lectures on software aspects of disaster management, such as post traumatic stress disorder (PTSD) care”. As the organizer, we consider, in retrospect, that each week should have been organized by theme for higher effectiveness, and that there should have been a time for evaluation of each week. We will

improve the course by incorporating these evaluation results and comments of the trainees into the course curriculum.

■ Closing Ceremony

Following the closing remarks by the organizer, the course certificates were presented to the respective trainees, and a group photo was taken. The representative of the trainees expressed their determination to use the knowledge and skills they learned in this course for the enhancement of their countries' disaster reduction capabilities.

(9) Others

As in the previous year, two ADRC visiting researchers (one from Nepal and another from Cambodia) participated in this program. This year, there was another participants from the staff of a Hyogo Prefecture's international cooperation program to exchange information with other participants.

Many of the trainees were impressed by the Japanese disaster management system, in which various efforts for disaster reduction are made not only by the central government but also by a wide spectrum of stakeholders in Japan. This ADRC-organized training program saw its fifth year, and further efforts will be made to make this program a better opportunity for the next year's trainees.

3-1-5. Disaster Management Training Course for Central Asia and the Caucasus

1) Objectives

The ADRC conducted the first training course on disaster management for Central Asia and the Caucasus from August 30 to September 17, in cooperation with the Japan International Cooperation Agency (JICA). The training course was designed to share the Japanese knowledge and experiences of disasters and disaster risk reduction to contribute to enhance the region's disaster resilience.

The course was conducted in the Russian language to facilitate the participation of representatives from the Newly Independent States, where Russian remains the common language.

2) Dates

August 30 to September 17, 2004

3) Participants

7 officials responsible for disaster management in the central or local government from Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz, Tajikistan and Uzbekistan participated in the training course. Their profiles are as follows;

Country	Name	Title, Organization
Armenia	Mr. Hamlet Matevosyan	Rector, Crisis Management Institute of the Emergency Management Administration
Azerbaijan	Mr. Sakhavat Boyukbala Oglu Asadov	Chief Constructor, Azerbaijan State Project Institute
Georgia	Ms. Lela Gogolidze	Ministry of Internal Affairs of Georgia
Kyrgyzstan	Mr. Amarkul Makstovich Aitaliev	Director, Department of Emergencies Monitoring and Forecasting and Mining Tailing Management, Ministry of Ecology & Emergencies
Tajikistan	Mr. Nurullo Mirzoev	Deputy Chairman, Khukumat of Vosa District
Uzbekistan	Mr. Abbos Almal Ugli Komilcv	Head, Centre of Monitoring and Forecasting of Emergency Situation
Kazakhstan	Mr. Nikolay Sennikov	Senior Officer, Division on Emergency Response and Planning, Emergency Agency of Republic of Kazakhstan

4) Program

After making presentations on the trends and impacts of disasters of the their respective countries, the trainees participated in a series of visits and lectures to learn about the

Japanese disaster management system and efforts by various stakeholders to reduce disaster risks.

The themes of the program included the roles of the central and local governments, private sector, mass media, civil society, international organizations, academia and schools in disaster reduction, as well as effective measures against specific hazards. In the region there is a pressing need to introduce a holistic, comprehensive and integrated approach to disaster reduction, involving all sectors and disciplines and promoting cooperation among all stakeholders.

It should also be noted that earthquakes, landslides and mud flows appear to be the major natural hazards which negatively affect the economy and livelihood in Central Asia and the Caucasus. Therefore, the program of this year's training course focused on the measures that Japan has developed and implemented to deal with these specific types of hazards.

Date	Content (Responsible Agency)
30 Aug	Orientation (JICA-HIC)
31 Aug	Briefing (ADRC) & Country Report (ADRC) Discussion on Posters for Earthquake Disaster Reduction
1 Sep	Japan’s Disaster Management (ADRC)
	The Great Hanashin-Awaji Earthquake (Disaster Reduction and Human Renovation Institution)
2 Sep	Disaster Management of National Government (Cabinet Office)
3 Sep	Flood Countermeasures (Ministry of Land, Infrustructure and Transport)
	Meteorological Information for Disaster Management (Japan Meteorological Agency)
4 Sep	Honjo Public Awareness Center
6 Sep	Counteremeasures for Earthquake Disaster (University of Tokyo)
	Disaster Reduction for Infrustructure (Tokyo Electric Power Services Co., Ltd.)
7 Sep	GIS for Disaster Reduction (GIS Plaza)
8 Sep	Role of JICA (JICA)
	Role of NHK (NHK)
9 Sep	Countermeasures for Sediment Disaster (University of Kyoto)
10 Sep	Recovery and Reconstruction from the Great Hanshin-Awaji Earthquake (Hyogo Pref. Disaster Management Center)
	Education for Disaster Reduction (Maiko High School)

Date	Content (Responsible Agency)
11 Sep	Visit to Nojima Active Fault Museum and Himeji Castle
13 Sep	Damage of the Great Hanshin Awaji Earthquake of Kobe city, Lessons Learned and Measures taken (Kobe Municipal Government)
	Activities of IFRC: International Federation of Red Cross and Red Crescent Societies (Japanese Red Cross Society)
14 Sep	Case Study of SABO works in Hyogo Prefecture (Hyogo Pref. Government)
15 Sep	Earthquake Disaster Countermeasures Taken by a private Company (Osaka Gass Co., Ltd.)
16 Sep	Discussion on the program of the following year (ADRC)
	Construction Site of SeismiResistant Building (Hyogo Pref. Art Center)
17 Sep	Action Plan Reporting (ADRC)

T

he trainees had lively and constructive discussions for further improvement of the program based on the needs of the region. What was discussed will be incorporated into the program of the upcoming years. The training course was concluded by the presentations on “action plans” consisting of specific proposals developed by the trainees to promote and enforce effective disaster reduction activities in their own countries, applying what they learned in Japan.

Fig.3-1-5-1 SABO works in Rokko Mountain

3-1-6. JICA Training Seminar in Turkey

1) Objectives

Turkey experienced serious damage in the 1999 Marmara Earthquake, which took more than 17,000 lives. Since the local seismic activities still threaten to wreak similar damages in the future, the Japan International Cooperation Association (JICA) organized a disaster management training seminar for disaster managers in Turkey in order to enhance the country's disaster management capabilities. The distinction of this seminar is that it consisted of two modules, the Japan module and the local module: Turkish specialists were trained in the Japan module about Japan's advanced disaster prevention technologies prior to the local module where they were to deliver lectures to the seminar audience consisting mainly of vice governors and county mayors. This approach allows a seminar configuration with more weight placed on the local module so that a large attendance can be accepted to extract a maximum effect out of a short period of time. At the request from JICA, the ADRC has been dispatching a group of lecturers to the seminars of the local module since 2003.

2) Periods

- Fifth round: May 31 – June 4, 2004
- Sixth round: June 7 – June 11, 2004
- Seventh round: September 20 – September 24 , 2004
- Eighth round: September 27 – October 1 , 2004

3) Seminar Contents

The seminar consisted of four different weeks taught mainly by the lecturers who attended the Japan module. From Japan, Mr. Satoru Nishikawa, former ADRC Executive Director, Mr. Masayuki Kitamoto, ADRC Executive Director, and Dr. Tetsushi Kurita, ADRC Senior Researcher, participated as short term expert lecturer and delivered speeches on Japanese disaster management systems. Table 3-1-6-1 shows the program schedule of the eighth round of the seminar.

The activity of Town Watching was introduced into the 7th and 8th rounds.

Prof. Alper of Istanbul Technical Univ., who had training on Town Watching at the ADRC, Kobe, led the exercise. It can be said that the trainees, who participated in the seminars in Japan, play an important role in the introduction of Japanese disaster reduction methods to Turkey.

Table 3-1-6-1 Programs of the 8th round (Progurams of 5th,6th,7th, rounds are similar

DATE	HOUR	SUBJECT	LECTURER
27.09.2004 MONDAY	09.30-10.15	Opening Ceremony	MINISTRY OF INTERIOR (MOI) JICA
	10.15-11.00	Orientation Introduction of JICA	Aziz YILDIRIM, MOI Assoc. Prof. Dr. Emin OZDAMAR, JICA
	11.15-12.00	Public Awareness on Disaster	Prof. Dr. Mikdat KADIOĞLU, ITU,istanbol Technical University (ITU)
	12.15-13.00	Emergency Operation Plan	Prof.Dr.Mikdat KADIOĞLU, ITU
	13.45-14.30	Disaster Management in Japan	JICA Expert
	14.45-15.30	Disaster Management in Japan	JICA Expert
	15.45-16.30	Disaster Management in Japan	JICA Expert
	16.45-17.30	Disaster Management in Japan	JICA Expert
28.09.2004 TUESDAY	09.30-10.15	Preparedness	Hüseyin GULER, METU
	10.30-11.15	Psychology of Victims	Prof. Dr. Nuray KARANCI, Middle East Technical University (METU)
	11.30-12.15	Mitigation Policies/Strategies	Prof. Dr. Polat GULKAN, METU
	12.30-13.15	Aid and Coordination at the National Level After Disaster	Dr. Oktay ERGUNAY Ex Director General of Disaster Affairs
	14.00-14.45	Incident Command Systems and Resource Management	Assoc. Prof. Dr. Ismail HELVACIOGLU, ITU Assoc. Prof. Dr. Derin URAL, ITU
	15.00-15.45	Analysis of Settlements (Town-Watch)	Prof. Dr. Alper UNLU, ITU Prof. Dr. Mikdat KADIOĞLU, ITU
	15.45-17.15	Analysis of Settlements (Town-Watch) Application/Free	Prof. Dr. Alper UNLU, ITU
29.09.2004 WEDNESDAY	09.30-10.15	Integrated Disaster Management System	Ergüder CAN, MOI
	10.30-11.15	Disaster Preparedness in Urbanization	Ass. Prof. Dr. Reyhan YiĞTER,ITU Prof.Dr. Handan TÜRKOĞLU, ITU
	11.30-12.00	Depart for Civil Defense College	
	12.00-13.30	Civil Defense Studies in Turkey and Lesson Learned	General Directorate of Civil Defense Civil Defense College
	14.30-16.00	Free	
30.09.2004 THURSDAY	09.30-10.15	Volunteer Resources and Relations with NGO's	Mehmet FIRIK, MOI
	10.15-11.00	Press and Public Information in Disasters	Aziz YILDIRIM, MOI
	11.30-12.15	Damage Estimation and Temporary Settlements	Turan ERKOÇ, Section Chief, G.D. of Disaster Affairs
	12.30-13.15	Case Study: PrepBreaktions of Izmir Governorship against Disaster	Hasan İPEK Director General Prime Ministry, General Directorate of Turkish Emergency Management
	14.00-14.45	Roles and Responsibilities of Media in Disaster	Ayda KAYAR, Journalist
	15.00-15.45	Roles and Duties of NGOs in disaster	Gulgun TEZGIDER NGO Representitive
	09.30-10.15	Emergency Management Center and Information Technologies in Disasters	Assoc. Prof. .Dr. Alper ILKI, ITU
	10.30-11.15	Reduction of Structural Risks	Yrd.Doç.Dr. Alper ILKI, ITU

01.10.2004 FRIDAY	11.30-12.15	Disaster Simulation and Exercise	Yrd.Doç.Dr. Alper ILKI, ITU
	12.30-13.15	Lesson Learned	Governor
	14.00-14.45	Evaluation of the Course	MOI JICA
	15.00-15.15	Certificates Awarding Ceremony	MOI Training Department
	15.15-15.45	Closing Ceremony/Reception	MOI JICA

Figure 3-1-6-2 Lecture by the Executive Director of ADRC, Mr. Kitamoto

Figure 3-1-6-3 Lecture by the Senior Researcher of ADRC, Dr. Kurita

Figure 3-1-6-4 Town-watching in Ankara

3-1-7. Mission on Establishing a Tsunami Early Warning Mechanism for the Indian Ocean

1) Objectives

The ADRC conducted the "Mission on Policy Dialogue for High Level Administrative Policymakers on Establishing a Tsunami Early Warning Mechanism for the Indian Ocean" on February 22-24 2005, organized by the UN/ISDR.

The purpose of the Mission was for the participants to acquire the necessary knowledge to establish an early warning system for Tsunami and raise public awareness of tsunami hazards in their countries, based on the experiences of Japan. It also aimed to promote further dialogues among high level officials of the Indian Ocean countries.

2) Dates

February 22 to 24, 2005

3) Participants

19 high level policymakers responsible for interministerial coordinations from Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka, Thailand, Kenya, Tanzania, and Seychelles.

4) Program

Following lectures by instructors from the Cabinet Office of Japan, Japan Meteorological Agency, and Fire and Disaster Management Agency, the participants visited many tsunami shelters in Shizuoka as an example of local tsunami disaster reduction measure.

The policymakers deepened their knowledge of the development of Japan's tsunami warning system and their understanding of the benefits of establishing such a system for the Indian Ocean by sharing experiences with Pacific-Rim countries, including Japan.

(1) Day 1: 22 February

- Opening remarks
- Outline of tsunami early warning mechanism (observation, information transmission, evacuation): Cabinet Office
- Tsunami early warning announcement mechanism (including the Pacific Ocean system): JMA
- Tsunami disaster reduction infrastructure and education: Cabinet Office

- Tsunami early warning communications system (local government): Fire Department Agency
- Tsunami hazard map: Ministry of Land, Infrastructure and Transportation
- Tsunami hazard education at schools: Ministry of Education, Culture, Sports, Science and Technology
- Examples of coordination in Asia based on Japan's experiences: ADRC
- Tour of earthquake system at JMA in Tokyo (Including developments Japan's tsunami early warning mechanism).

(2) Day 2: February 23

- Study tour in Shizuoka Prefecture

  Case study of local government tsunami disaster reduction mechanism
- Tsunami early warning communications system (mass media) by NHK (Japan Broadcasting Corporation), disaster center
- Exchange of views

(3) Day 3: February 24

- Outline of tsunami early warning mechanism: UNESCO/IOC
- Temporary measures for providing information based on tsunami observations: JMA
- Guidelines for identifying focal points in each country: IOC
- Discussion on tsunami disaster reduction: coordinated by UN/ISDR, UNESCO/IOC, PTWC, WMO, Cabinet Office, JMA, Ministry of Foreign Affairs, and ADRC

Fig.3-1-7-1 Study tour to a tsunami evacuation area in Shizuoka Prefecture

3-1-8. JICA Regional Seminar on Tsunami Early Warning System

1) Objectives

In response to the Indian Ocean Earthquake and Tsunami on December 26, 2004, the Asian Disaster Reduction Center (ADRC), in cooperation with the Japan International Cooperation Agency (JICA), held a regional seminar on the tsunami early warning system from March 7 to 18, 2005.

One of the seminar objectives was to share Japanese experiences of tsunami disaster reduction with the participants. Another was to provide the participants with basic knowledge of an effective tsunami early warning system for the Indian Ocean.

2) Dates

March 7 to 18, 2005 (2 weeks)

3) Participants

21 directors and senior officials in charge of tsunami warning mechanism and disaster reduction activities from Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka, Thailand, Kenya, Tanzania, and Seychelles.

Country	Name	Title
BANGLADESH	Arjumand Habib	Deputy Director, Bangladesh Meteorological Department
BANGLADESH	Zobaer Syed Mohammad	Director General, Disaster Management Bureau
INDIA	Ram Kumar Sharma	Director / Scientist "F", Department of Ocean Development
INDONESIA	Sunarjo Sunarjo	Director, Center for Observation Network System, Meteorological and Geophysical Agency
INDONESIA	Edie Prihantoro	Head, Sub-Division of Technological Resources, Ministry of Research and Technology
KENYA	Peter Kinuthia Thuo	Director, Department of Shipping and Maritime Affairs, Ministry of Transport
KENYA	Peter George Ambenje	Assistant Director, Meteorological Department, Ministy of Transport
MALAYSIA	Leong Chow Peng	Deputy Director General, Malaysian Meteorological Service
MALAYSIA	Mohd Sakri Hj Hussin	Assistant Director, National Security Division, Crisis Disaster Management Directorate
MALDIVES	WafiR Ali	Assistant Director, Department of Meteorology
MALDIVES	Ahmed Rasheed	Assistant Meteorology Forecaster, Department of Meteorology

Country	Name	Title
MYANMAR	San Hla Thaw	Director General, Department of Meteorology and Hydrology
MYANMAR	Ye Ye Nyein	Assistant Director, Department of Meteorology and Hydrology
SEYCHELLES	Wills Agricole	Director, National Meteorological Services, Ministry of Environment and Natural Resources
SEYCHELLES	Denis Chang Seng	Acting Assistant Director, National Meteorological Services, Ministry of Environment and Natural Resources
SRI LANKA	Samarakkody M.A.T.B.Mudunkotuwa	Deputy Director, Geological Survey and Mines Bureau
SRI LANKA	S.H.Kariyawasam	Deputy Director, Department of Meteorology
TANZANIA	Beatha O. Swai	Director, Department of Disaster Management, Prime Minister's Office
TANZANIA	Mohamed S. Mhita	Director-General, Tanzania Meteorology Agency
THAILAND	Khovadhana Kriengkrai	Deputy Director General, Thai Meteorological Department
THAILAND	Supratid Seree	Dean, Rangsit Univ.

4） Program

The program included lectures on the mechanism of tsunami generation, countermeasures, a tsunami early warning system, and an information transfer system to local authorities and mass media. Those lectures were given by ministries and agencies such as the Cabinet Office, the Ministry of Land, Infrastructure and Transport, the Japan Meteorological Agency, NHK (Japan Broadcasting Corporation), and the Fire and Disaster Management Agency. The ADRC also gave a lecture on raising awareness of local residents and on good practices of community based disaster management activities in the Asian region.

As for the field trip, the participants visited Wakayama Prefecture where they learned about infrastructural measures against tsunami, such as water gates and dykes. In Hirogawa town, a folk tale about a tsunami evacuation, “Fire of Rice Sheaves - Ina Mura no Hi-” was introduced. The story tells about a village chief who saved the people from a tsunami that occurred at night, by putting a fire on rice sheaves and leading the villagers up a hill.

Throughout the seminar, the importance of the domestic information transmission system and public awareness raising for prompt evacuation was stressed.

5） Program

Date		Content	Responsible Agency
7-Mar	Mon	Briefing	JICA Tokyo International Center
		Opening Ceremony - Video Message from Ms. Sadako Ogata, President of JICA - Video Message from Mr. Yoshitaka Murata, Minister for State for Disaster Management - Opening remarks from Mr. Masayuki Kitamoto, Executive Director of ADRC	JICA Tokyo International Center
		Program Orientation	JICA Tokyo International Center
		JICA's commitment in Disaster Reduction through ODA	JICA Global Environment Department
8-Mar	Tue	Basics of Mitigating Impacts of Tsunami Disasters	Cabinet Office
		Basics of Tsunami Phenomenon	Japan Meteorological Agency
9-Mar	Wed	Community-based disaster preparedness activities by Red Cross Red Crescent	The Japanese Red Cross Society
		Tsunami Early Warning System	Japan Meteorological Agency
		Information Transfer System to Local Authorities & Mass Media	Japan Meteorological Agency
		Information Transfer System to Local Authorities & Mass Media (Visit)	Japan Meteorological Agency
10-Mar	Thu	Awareness Raising of Local Residents	Asian Disaster Reduction Center
		Tsunami Disaster Coutermeasures of Local Authorities	Fire and Disaster Management Agency
11-Mar	Fri	Information Dissemination to the Public by Radio and TV	NHK (Japan Broadcasting Corporation)
		From Tokyo to Nanki-Shirahama/Wakayama	
12-Mar	Sat	Disaster Management System of Shirahama Town（Measures for Tourists）	Wakayama Pref./Shirahama Town
		Disaster Manaagement of Tanabe Town（Town Planning）	Wakayama Pref./Tanabe Town
		Voluntary Disaster Management Activities of the Bunri Local Community (Visit)	Representative of Local Community/Tanabe Town
		Showa-Nankai Earthquake & Education for Disaster Prevention	Tanabe Town Community Center
		Disaster Management System of Wakayama Pref.	Wakayama Pref.
		Current Situation and Challenges of Tanabe Town's Disaster Management Measures	Tanabe Town
		Infrastructual Measures against Tsunami	Wakayama Pref./Hirokawa Town
		Dykes and Historical Affected Area (Visit)	Representative of Local Community/Hirokawa Town
		From Wakayama to kyoto	
13-Mar	Sun	*From Kyoto to Kobe*	
		Disaster Reduction and Human Renovation Institution (Visit)	Disaster Reduction and Human Renovation Institution
14-Mar	Mon	Good Practices of Community-Based Disaster Management Activities in the Asian Region	Asian Disaster Reduction Center
		From Kobe to Tokyo	

Date		Content	Responsible Agency
15-Mar	Tue	Operation of Fire, Disaster and Risk Management Center	Fire and Disaster Management Agency/ Ministry of Public Management, Home Affairs, Posts and Telecommunications
		Responses of Fire and Disaster Management Agency to Disasters Occurred in Japan in 2004	
		Mechanism of Administration and Disaster Prevention	
		The Establishment of a Radio Communications System for Disaster Prevention in Japan -Development of telecommunications infrastructure for safety and security of the people-	
16-Mar	Wed	Workshop: Review of the Tsunami Disaster & Disaster Management System of Each Country	JICA/Cabinet Office
17-Mar	Thu	Basics of Tsunami Phenomenon, Review of Measures Taken	
		Tsunami Hazard Map and the Latest Research on Tsunami Disaster Prevention	Ministry of Land, Infrastructure and Transport
		Current International Information Transfer System and its Perspective	Japan Meteorological Agency
18-Mar	Fri	Disaster Reduction Education at Schools	Ministry of Education, Culture, Sports, Science and Technology
		Wrap-up Session: Toward the Establishment of Tsunami Early Warning System in the Indian Ocean	JICA Tokyo International Center
		Closing Ceremony	JICA Tokyo International Center

Fig. 3-1-8-1 Evacuation Route in Wakayama Pref.

Fig. 3-1-8-2 Lecture by Cabinet Office