

#### 4-2-4. Flood Management Training in Vietnam

##### 1) Organizers

UNDP Project VIE/97/002, the Central Committee for Flood and Typhoon Control, the Ministry of Agriculture and Rural Development of Vietnam  
Co-sponsored by: ADRC, and UN OCHA Kobe

##### 2) Basic Concept

Vietnam is a country prone to water-related disasters including floods, landslides, and typhoons. The country stretches long from north to south. The South Region frequently suffers from water disasters centering around the Mekong Delta. The Middle Region often has water disasters along short and rapid rivers similar to those in Japan. The North Region experiences frequent floods in the Hong Delta.

As part of its water disaster reduction efforts, Vietnam started to construct dykes along the River Hong more than 1000 years ago. Today, the dykes extend more than 3,000 km along the river.

Vietnam has shifted weight in disaster management from post-event measures to preventive measures based on disaster forecasts. Now, Vietnam recognizes the importance of getting the whole picture of the situation at the occurrence of a disaster, and the importance of monitoring the course of the development of a disaster in order to prevent the spread of damages and to collect data for disaster forecasts. The idea is based on the concepts of disaster management information systems and the Total Disaster Risk Management (TDRM).

As a model project for alleviating damages from flood and typhoon disasters, ADRC jointly with the local counterparts co-hosted a four-day intensive training seminar for technocrats of Vietnam's national agencies and research institutes. The seminar consisted of lectures and trainings on the basic concept of TDRM and the application of remote sensing technology to disaster reduction.



Fig. 4-2-4-1 Group photo of the Vietnam Seminar Participants

##### 3) Period

November 17th to 20th, 2003

##### 4) Participants

30 individuals from the Vietnam Government and Vietnamese public research institutes, and two individuals each from neighboring Thailand, Cambodia, and Laos.

##### 5) Details

###### **Day One – November 17th (Mon) (Theme: Disaster Information System and Disaster Management)**

###### 1. Living with Flood Risks

Mr. Le Xuan Truong, Deputy Director, Disaster Management Center, Department of Dyke Management and Flood Control & Typhoon Committee (DDMFC)

###### 2. Disaster Information Systems in Cambodia

Mr. Khun SoKha and Mr. Cheng Nhan, National Committee on Disaster Management (NCDM) of Cambodia

3. Disaster Information Systems in Laos  
Mr. Thonephokham Inthasone and Mr. Kindavong Luangrath, Disaster Management Bureau, Ministry of Labour and Social Welfare, Lao PDR
4. Disaster Information Systems in Thailand  
Mr. Damri Thaikam and Mr. Chanarong Vasanasomsithit, Department of Disaster Prevention and Mitigation, Ministry of Internal Affairs, Thailand
5. Disaster Information Systems in Japan  
Mr. Masaru Arakida (Chief researcher, ADRC)
6. Estimation Method for Floods in Central Hanoi  
Mr. Nguyen Tat Thang, Researcher, Division of Fluvial and Marine Disasters, Disaster Prevention Research Institute, Kyoto University
7. Flash Flood Warning System  
Prof. Phan Anh, Research Center for Electronics and Communication, Hanoi National University
8. Integrated Modeling Using Environmental Data and GIS System  
Ms. Le Thi Quynh Ha, Institute of Applicable Mechanics
9. GLIDE – for Effective Disaster Information Sharing  
Mr. Masaru Arakida (Chief researcher, ADRC)
10. Flood Management in Plains  
Prof. Dao Xuan Hoc, University of Water Resource
11. DMU Vietnam Disaster Information System  
Mr. Duong Tat Toan, Project VIE/97/002 – DMU

**Day Two – November 18th (Tue) (Theme: Floods and TDRM Approach)**

1. Concept of TDRM – Theory and Application  
Ms. Takako Izumi (UN OCHA Kobe)
2. Flood Forecast Models for the Hong Delta  
Dr. Hoang Van Lai, Chief of Hydro informatics Department, Institute of Mechanics
3. Torrential Rain Forecasts for the Hong Delta  
Mr. Le Van Thien, Institute of Hydrology and Meteorology
4. Flood Control in the Hong River Basin  
Dr. Le Minh Nhat, Eng., Dyke Management Division, MARD
5. Floods in Central Vietnam  
Ass. Prof. Cao Dang Du
6. Disasters in Central Coast Areas and Transitions of Vegetation  
Dr. Nguyen Van Viet, Director of Research Center of Agricultural Meteorology, Institute of H&M
7. Transformation of Bays caused by Coastal Floods  
Mr. Tran Van Dien, Department of Marine Remote Sensing, Hai Phong Institute of Oceanology
8. Flash Flood Warning System for the Tuy Loan River  
Ass. Prof. Cao Dang Du
9. Flow Rate Monitoring in the 2001 Mekong Flood  
Ass. Prof. Vu Van Tuan, Ph.D., Institute of Hydrology and Meteorology.
10. Quantitative Rainfall Estimation  
Mr. Do Ngoc Thang, Engineer, National Center of M&H Forecast
11. Rapid Assessment of Flood Prevention in terms of Emergency Healthcare in Giang Province for Year 2000  
Dr. Le Van Tuan, Pasteur Institute (HCMC)
12. Flash Flood Management in Mountain Regions  
Mr. Dang Quang Minh, DDMFSC

**Day Three – November 19th (Wed)**

**(Theme: Use of Remote Sensing and GIS for Disaster Management)**

1. Remote Sensing and GIS Technologies for Disaster Management  
Dr. Kiyoshi Honda, Associate Professor, Space Technology; Applications and Research Program (STAR), School of Advanced Technologies (SAT), Asian Institute of Technology (AIT).
2. GIS Tools for Flood Forecasts for the Mekong Delta  
Dr. Nguyen Huu Nhan, Southern Station of Hydro-meteorology
3. Remote Sensing and GIS Technologies for Disaster Management in Asia and Japan  
Dr. Ono, Senior Researcher, Remote Sensing Technology Center of Japan (RESTEC)
4. Monitoring and Forecasting of Central Vietnam Coastal Floods Using ALOS Satellite Imagery  
Mr. Tran Van Dien, Institute of Oceanology, Hai Phong Institute of Oceanology
5. Integrated Remote Sensing GIS System for Forecasting Floods in Hoa Binh Province  
Dr. Ass. Prof. Nguyen Ngoc Thach, Vice Director, Department of Geography, HUS-VNU
6. Application of GMS Technology to Rainfall Estimation  
Mr. Nozomu Ohkawara, Senior Scientific Officer, Data Processing Department, Meteorological Satellite Center (MSC), Japan Meteorological Agency (JMA)
7. Flood Forecast Mapping System at TPHCH  
Mr. Nguyen Duc Vu, Engineer, Water Management and Storm and Flood Control Department, Ho Chi Minh City
8. Application of MODIS Data to Flood Monitoring  
Dr. Kiyoshi Honda, Associate Professor, Space Technology; Applications and Research Program (STAR), School of Advanced Technologies (SAT), Asian Institute of Technology (AIT).
9. Web-based Simulation Modeling for Floods and Other Disasters  
Mr. Nguyen Hoa Binh, PeaceSoft Solution Corp.

**Day Four – November 20th (Thr)**

**(Theme: Use of Remote Sensing and GIS for Disaster Management)**

1. Preliminary Study on the Use of MODIS Data for Monitoring and Management of Environment and Natural Resources of Vietnam  
Mr. Nguyen Dinh Duong, Director, Department of Environmental Information Study and Analysis, Institute of Geography
2. Linear Models Based on Rainfall Measurements for Assessing Erosion Risks Using NOAA-AVHRR data  
Dr. Bhuwneshwar Prasad Sah, Chief Researcher, Environment Group, Technical Dept., Central Government Ministries and Agencies Division, PASCO Corporation
3. Total Approach to Flood Management in the Ha Thanh River Basin Using Remote Sensing, GIS, and Hydraulic Technologies  
Dr. Tran Cong Yen, Ph.D, Ministry of Science and Technology
4. Use of Remote Sensing Data in Flood Monitoring and Flood Management  
Dr. Ono, Senior Researcher, Remote Sensing Technology Center of Japan (RESTEC)



Fig. 4-2-4-2 Snapshot of the Seminar

6) **5) Evaluations by Seminar Participants**

All participants were asked to evaluate the seminar. 90% of the respondents answered that the seminar should be followed up with similar seminars and trainings. There were also opinions that they would like to be joined by participants from neighboring countries in addition to Cambodia, Laos, and Thailand.

Members from all the participating countries commented that they hoped that countries suffering from similar disasters would hold joint seminars and field projects as a driving force for increasing such opportunities, sharing knowledge and promoting intra-regional cooperation.

It is necessary to continue support to Vietnam for improving the country's disaster response capabilities.



Fig. 4-2-4-3 Group Photo of the Seminar Participants