

INTRODUCTION

The Sixteenth Seminar in Technology for Disaster Prevention was held from September 7 to December 5 1992 at National Research Institute for Earth Science and Disaster Prevention (NIED) under the auspices of Japan International Cooperation Agency (JICA). In this seminar, 9 specialists relating to disaster prevention from 7 countries, such as China, Ecuador, India, Peru, Thailand and Venezuela participated.

The seminar course consisted of lectures in each specific disaster field, study tours, special lectures and final reporting including technical training on analysis of satellite remote sensing data commemorating the International Space Year (ISY) same as last year.

Through the most part of the seminar was conducted by NIED, Remote Sensing Technology Center (RESTEC) shared the technical training on satellite data analysis.

The lectures were carried out by researchers of NIED as well as requested specialists from other organizations. At the end of each session, participants made reporting concerning natural, socio-economic conditions and disaster case studies in their countries as well as discussing on their reports.

During the seminar, participants had good opportunities of observing two international conferences, such as "Asia-Pacific ISY Conference" held in Tokyo and "IDNDR-Chiba International Conference 1992" held in Chiba.

In the midst and near the end of the seminar, participants made study tours over Kanto and Kansai areas in which they could gain deep understanding on the actual states of various disaster countermeasures in Japan through observing and explanations.

In the special lectures, participants selected three special fields depending on their specialties such as rain storm disaster prevention, assessment of landslide risky areas and application of satellite remote sensing data for disaster area and obtained further detailed knowledges in respective area.

On December 3, final reportings were conducted in which participants reported present situations, plannings, problems and recommendations relating to disaster prevention in their countries and made discussions. This report is compiled to make the record on the participation, efforts and results obtained of participants in the seminar by collecting their reports presented to final reporting.

Finally, I would like to extend my hearty appreciation to the organizations concerned and lectures for their kind cooperations and assistances in this seminar. And I sincerely hope to contribute for science and technology as well as institutional aspect in developing countries through this seminar to be held every year so as to mitigate natural disasters and to promote international understanding and friendship.

December, 1992

Shigetsugu Uehara
Director General,
National Research Institute for Earth Science
and Disaster Prevention,
Science and Technology Agency
Japan

序

第16回防災技術セミナーは平成4年9月7日から同年12月5日まで、国際協力事業団の研修事業の一環として防災科学技術研究所において実施された。今回のセミナーには、中国、コロンビア、エクアドル、インド、ペルー、タイ、ヴェネズエラの7か国から防災関係専門家9人が参加した。

研修コースは、セッション別の講義、研修旅行、特論及び最終報告からなり、特に本年の国際宇宙年を記念して、昨年引き続き衛星リモートセンシングデータの利用技術の研修も含めた。

セッションの講義の大部分は防災科学技術研究所で行ったが、衛星データの技術研修はリモートセンシング技術センターで行った。講義は外部に依頼した講師及び当研究所の職員によって行われた。各セッションの終りには、研修員より自国の事情及び災害に関するケーススタディの発表が行われ、討議が行われた。

研修期間中には、”アジア・太平洋国際宇宙年会議”が東京都ホテルで開催され、また、”国際防災の10年―千葉国際会議1992―”が千葉幕張メッセで開催され、研修員はこれらの会議に出席する機会を得た。

講義の中間及び終期には、関東及び関西地方の研修旅行を行い、現地の視察及び説明により、日本における防災対策の実情についての理解を深めた。

特論においては研修員の専門に応じて、豪雨災害対策、地滑り地の予測、リモートセンシング（防災への応用）の3つのグループに分れ、より詳細な研修を行った。

12月3日、4日に最終報告を行い、各研修員から自国の防災体制の現状・計画・問題点・提言が発表され、討議が行われた。各研修員の研修参加とその研鑽の成果を記すため、最終討論に提出されたレポートをここに取りまとめている。

最後に、今回の防災セミナーに関し、ご協力を頂いた各機関及び講師の方々に深甚の謝意を表します。今後も本セミナーを通じて発展途上国の防災科学技術・防災体制の発展に資することにより、各国の自然災害の軽減並びに国際的な相互理解と親善に寄与することが出来ることを、心から願っています。

平成4年12月

科学技術庁

防災科学技術研究所

所長 植原茂次

**PROGRAM OF THE SEMINAR IN TECHNOLOGY FOR DISASTER
PREVENTION '92**

Japan International Cooperation Agency

&

National Research Institute for Earth Science and Disaster Prevention (STA)

- Sep. 7 Mon. Arrival in Japan
8 Tue. Orientation by TBIC
9 Wed. "
10 Thu. "
11 Fri. "
12 Sat. Free
13 Sun. Free
14 Mon. AM Opening Ceremony / Outlining of Seminar & NIED
PM Excursion in Tsukuba Science City / Welcome Party
15 Tue. Free
16 Wed. AM UEHARA : Overview for Present & Future Problems on the Science
and Technology (Director - General, NIED)
PM OYA : Multifunctional Uses of Geomorphological Survey Maps in
Identifying Flood Stricken Areas and Land Type (Professor, Waseda
University)
17 Thu. AM Sight seeing (Mt. Tsukuba)
PM OKAMURA : Administration of River in Japan (Chief Official,
River Bureau, Ministry of Construction)
18 Fri. *MITI ANEX
AM KINOSITA : Development of IDNDR Activities (Former Director
Earth Science Research, NIED)
PM Courtesy Call to the Science and Technology Agency
19 Sat. Free
20 Sun. Free
21 Mon. AM KISHII : Flood Runoff Models in Japan (Head, Atmospheric and
Hydrospheric Science Division, NIED)
PM TAKEDA : Global Change and Natural Disaster (Director for
Earth Science Research, NIED)
22 Tue. AM IWASAKI : Tsunami Warning Systems (Senior Researcher,
Atmospheric and Hydrospheric Science Division, NIED)

- PM ITO : Waju and 9.12 Flood Damage (Professor, Hanazono College)
- 23 Wed. Free
- 24 Thu. AM MAKI : Radar for Weather Surveillance (Senior Researcher,
Atmospheric and Hydrospheric Science Division, NIED)
PM Facility Tour
- 25 Fri. AM YONETANI : How Do Rainfall Disasters Arise? (Director,
Atmospheric and Hydrospheric Science Division, NIED)
PM KAWANO : Flood Disaster Prevention in Osaka (Senior Staff,
Urban Rivers Division, Osaka Prefectural Government)
- 26 Sat. Free
- 27 Sun. Free
- 28 Mon. AM Making a Report
PM MATSUO : Outline of Disaster Prevention Policies in Japan
(Senior Planning Officer, National Land Agency)
- 29 Tue. Presentation of Report & Discussion on Session 1
- 30 Wed. AM HAMADA : Present State of Earthquake Prediction Systems in
Japan (Director, Solid Earth Science Division, NIED)
PM IMOTO : Seismicity and Statistics for Earthquake Prediction
(Senior Researcher, Solid Earth Science Division, NIED)
- Oct. 1 Thu. AM TSUKAHARA : Earthquake and Stress in the Earth's Crust
(Professor, Shinshu University)
PM SHIMADA : GPS Interferometric Measurements for Earthquake and
Volcanic Eruption Predictions (Senior Researcher, Solid Earth
Science Division, NIED)
- 2 Fri. AM EGUCHI : Plate Tectonics and Earthquake Prediction (Senior
Researcher, Solid Earth Science Division, NIED)
PM OHTANI : Introduction of Earthquake Disaster Prevention
(Director, Disaster Prevention Research Division, NIED)
- 3 Sat. Free
- 4 Sun. Free
- 5 Mon. Visiting to Shimofusa Electrical Laboratories
- 6 Tue. AM MINOWA : Seismic Tests of Structures (Senior Researcher, Disaster
Prevention Research Division, NIED)
PM YAMAGUCHI : Japanese Building Codes and Seismic Regulations
(Research Engineer, Building Research Institute)

- 7 Wed. AM FUJIWARA : Prediction of Strong Motion (Researcher, Disaster Prevention Research Division, NIED)
PM UNJYO : Present Earthquake Engineering Efforts to Mitigate Earthquake Hazards of Road Transportation Facilities in Japan (Research Engineer, Public Works Research Institute)
- 8 Thu. AM S. HERATH : Flood Characteristics of the Asian Region (Associate Professor, International Center for Disaster Mitigation Engineering, Institute of Industrial Science University of Tokyo)
PM Making a Report
- 9 Fri. Presentation of Report & Discussion on Session 2
- 10 Sat. Free
- 11 Sun. Free
- 12 Mon. AM TANAKA : Site Prediction of Slope Failure by Heavy Rainfall (Head, Disaster Prevention Research Division, NIED)
PM TANAKA : Field Trip (Mt. Agakuni)
- 13 Tue. AM OYAGI : Overview on Landslide Disaster (Director, Fukada Geological Institute)
PM OYAGI : Identification of Landslide Landform
- 14 Wed. Observation Tour in Kanto Region
- 15 Thu. "
- 16 Fri. "
- 17 Sat. Free
- 18 Sun. Free
- 19 Mon. AM TERASHIMA : The Slope Failure and Its Prevention in Japan (Visiting Research Officer, NIED)
PM OHISHI : Outline of Sabo Works in Japan (President, Sabo Engineering Co., Ltd.)
- 20 Tue. AM MORIWAKI : Prediction of Landslide Hazard Area (Head, Disaster Prevention Research Division, NIED)
PM FUKUZONO : How to Predict the Failure Time of a Slope (Senior Researcher, Disaster Prevention Research Division, NIED)
- 21 Wed. AM UKAWA : Prediction of Volcanic Eruption (Senior Researcher, Solid Earth Science Division, NIED)
PM INOKUCHI : Case Study for Volcanic Debris Avalanche in Japan (Senior Researcher, Disaster Prevention Research Division, NIED)

- 22 Thu. OKADA : Scientific Approach for Mitigation World Volcanic Disasters (Director of Usu Volcano Observatory Associate Professor, Faculty of Science Hokkaido University)
- 23 Fri. Presentation of Report & Discussion on Session 3
- 24 Sat. Free
- 25 Sun. Free
- 26 Mon. REMOTE SENSING COURSE
 AM INAMURA : Fundamentals of Remote Sensing and Multiple Image Analysis (Professor, Gunma University)
 PM TAKEDA : Remote Sensing Activities in Japan (RESTEC)
- 27 Tue. AM NISHIKAWA : Analysis and Remote Sensing of Slope Collapse (Associ. Prof. Nihon University)
 PM NISHIMURA : Science on the Prevention of Coastal Disasters and Remote Sensing (Associ. Prof. Science University of Tokyo)
- 28 Wed. Observation (NASDA)
- 29 Thu. AM ARAI : Progress in Subsurface Radar (Associ. Prof. Univ. of Electro Communications)
 PM KIMURA : Spaceborne Imaging Radar (RESTEC)
- 30 Fri. Ground Truth Training (TAMA area)
- 31 Sat. Free
- Nov. 1 Sun. Free
- 2 Mon. TANAKA & SUGIMURA : Multispectral Analysis (RESTEC & others)
- 3 Tue. Free
- 4 Wed. OSHIMA : Preparation of the Numerical Topographic Map (Lecturer, Nihon University)
- 5 Thu. KONDO : Analysis on Hydrological Environment with the use of Remote Sensing (Associ. Lecturer, Tokyo Metropolitan University)
- 6 Fri. NISHIKAWA : GIS, Remote Sensing Application for Disaster Prevention (Associ. Prof., Tokyo Metropolitan University)
- 7 Sat. Free
- 8 Sun. Free
- 9 Mon. Observation Tour in Kansai Region
- 10 Tue. "
- 11 Wed. "
- 12 Thu. "

- 13 Fri. "
- 14 Sat. Free
- 15 Sun. Free
- 16 Mon. Asia Pacific ISY Conference
- 17 Tue. "
- 18 Wed. AM YAMAMOTO : People's Response to Disaster (Professor,
Komazawa University)
PM Visiting Japan Meteorological Agency
- 19 Thu. AM MIKAMO : City Planning in Tokyo (Professor, The Institute of
In - Service Training Institute, Tokyo Metropolitan Government)
PM Visiting Tokyo Metropolitan Government
Asia Pacific ISY Conference
- 20 Fri. Advanced Study
- 21 Sat. Free
- 22 Sun. Free
- 23 Mon. Free
- 24 Tue. Advanced Study
- 25 Wed. "
- 26 Thu. "
- 27 Fri. IDNDR Chiba International Conference 1992 JAPAN
- 28 Sat. "
- 29 Sun. Free
- 30 Mon. Advanced Study
- Dec. 1 Tue. "
- 2 Wed. Making a Final Report
- 3 Thu. Presentation of the Final Report & Discussion
- 4 Fri. Evaluation / Closing Ceremony / Farewell Party
- 5 Sat. Departure from Japan
- 6 Sun. "

PARTICIPANTS OF SEMINAR IN TECHNOLOGY FOR DISASTER PREVENTION
平成4年度 防災技術セミナー研修員名簿

研修期間：1992年 9月 7日～1992年12月 6日
受入機関：科学技術庁防災科学技術研究所

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