INCEDE ACTIVITIES EXPAND

by

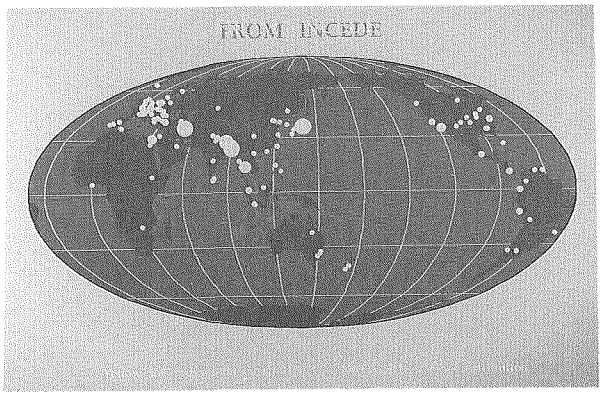
Tsuneo Katayama[1], M.A.H. Pramanik[2], A.S. Herath[3] and Kimiro Meguro[4]

ABSTRACT

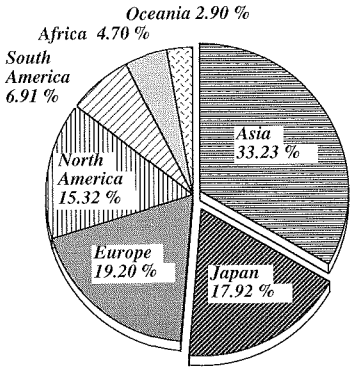
*Almost three years have passed since the International Center for Disaster-Mitigation Engineering (**INCEDE**) was established in the Institute of Industrial Science, The University of Tokyo, in April 1991. The background, formation, and states-of-the-arts at different times have been reported in References (1) through (3). In this article, we would like to summarize the most up-to-date activities of **INCEDE**.*

INCEDE AS INFORMATION CLEARINGHOUSE

One of the important roles of ***INCEDE*** is to work as a clearinghouse of disaster information especially in the Asian Region. For that purpose, we publish ***INCEDE Newsletters*** quarterly and ***INCEDE Reports*** irregularly. We are establishing the ***INCEDE Network*** of researchers and practitioners in the field of disaster mitigation. As of January 1994, the ***INCEDE Network*** has about 280 members from 66 countries all over the world. The Newsletter and the Report are presently sent to about 800 people, including the members of the Network, of which about three quarters are overseas people.

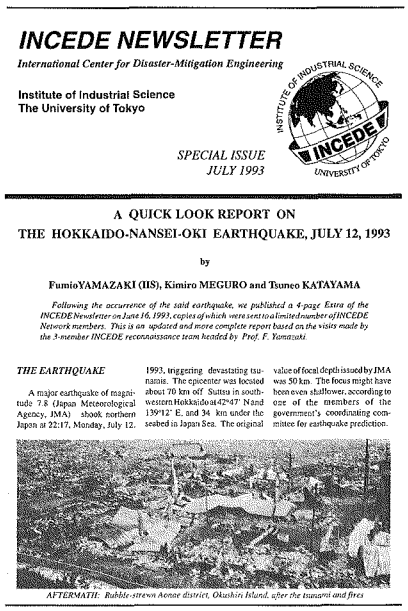


*Distribution of the **INCEDE** Network Members*



Regional Ratios of the Members

1) Director/Professor, International Center for Disaster-Mitigation Engineering, *INCEDE*, Institute of Industrial Science, The University of Tokyo
2) Visiting Professor, ditto.
3) Associate Professor, ditto.
4) Research Associate, ditto.



INCEDE NEWSLETTER

International Center for Disaster-Mitigation Engineering

Institute of Industrial Science
The University of Tokyo

SPECIAL ISSUE
JULY 1993

A QUICK LOOK REPORT ON
THE HOKKAIDO-NANSEI-OKI EARTHQUAKE, JULY 12, 1993

by

FumioYAMAZAKI (IIS), Kimiro MEGURO and Tsuneo KATAYAMA

Following the occurrence of the said earthquake, we published a 4-page Extra of the INCEDE Newsletter on June 16, 1993, copies of which were sent to a limited number of INCEDE Network members. This is an updated and more complete report based on the visits made by the 3-member INCEDE reconnaissance team headed by Prof. F. Yamazaki.

THE EARTHQUAKE

A major earthquake of magnitude 7.8 (Japan Meteorological Agency, JMA) shook northern Japan at 22:17, Monday, July 12, 1993, triggering devastating tsunamis. The epicenter was located about 70 km off Suttsu in southwestern Hokkaido at 42°47' N and 139°12' E, and 34 km under the seabed in Japan Sea. The original value of focal depth issued by JMA was 50 km. The focus might have been even shallower, according to one of the members of the government's coordinating committee for earthquake prediction.

AFTERMATH: Rubble-strewn Aonae district, Okushiri Island, after the tsunami and fires

***INCEDE Newsletter** Is sent To About 800 persons All Over the World.*

It is heartening and encouraging that our publications are well received because we are trying hard to make them as readable as possible for people working in different fields of disaster problems. It should be noted that in 1993 we published three supplementary issues of the Newsletter on the two earthquake disasters in Japan, one on the 1993 January Kushiro-Oki earthquake and two on the 1993 Hokkaido-Nansei-Oki earthquake.

Following the occurrence of the Hokkaido-Nansei-Oki earthquake at 22:17, 12 July, 1993, a 4-page Extra of the ***INCEDE Newsletter*** was first made on July 16 by editing newspaper articles. It was sent to a limited number of ***INCEDE Network*** members. A more detailed and updated report was published as a 12-page Special Issue by the end of July based on the visits made by the 3-member ***INCEDE*** reconnaissance team. Our quick responses were highly commended by many of our Network members. They were much impressed by our ability to prepare and disseminate the information so quickly, but we have to admit that we could only made it by stretching our ability to the limit.

We consider the activities related to the formation of the ***INCEDE Network*** to be of utmost importance, because the interaction between information generators and users/receivers must be two-way. The ***INCEDE Network*** was established so that all the members can be the generators as well as the receivers of information. Our efforts seem to be bearing fruit. Recently we are hearing news from our Members on the disasters they had and the activities they are making as well as how they evaluate our activities.

To reach more people and be recognized by the international community has always been one of our many aims in the ***INCEDE*** activities. We have so far held three ***INCEDE Open Lectures***, the last of which was coorganized with the United Nations University in Tokyo on 13 October, the 1993 International Disaster Reduction Day. We do believe that, after almost three years' activities, ***INCEDE*** is becoming a byword in the international circuit.

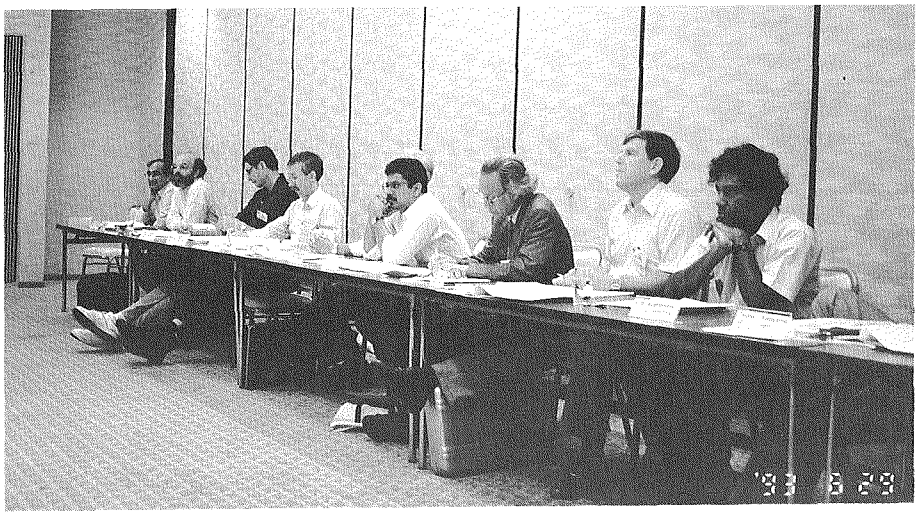
INCEDE ACTIVITIES IN WORLDWIDE PERSPECTIVE

We have so far signed three Memoranda of Understandings (MOU). They are the ones with ***CUREe*** (California Universities for Research on Earthquake Engineering), ***NCEER*** (National Center for Earthquake Engineering Research), and ***Department of Civil Engineering, Stanford University***. The MOU's recognize each other's activities and call for closer collaborative work to promote and facilitate technology transfer, knowledge utilization mechanisms and other areas as identified by each party for the promotion of the goals of ***IDNDR***. They also call for a meeting of the directors or their representatives at least once a year to discuss the progress on cooperative areas.

We coorganized two international workshops, one in Bangkok, Thailand, and the other in Okinawa, Japan. For both of them, most of preparatory work was made in ***INCEDE***, and the organizational expertise during the Workshops was rendered by ***INCEDE*** members.

The "Workshop on Seismic Risk Management for Countries of the Asia Pacific Region" was held in Bangkok from February 8 to 11, 1993, coorganized by the World Seismic Safety Initiative (***WSSI***) and ***INCEDE***. ***WSSI*** is a new initiative of the International Association for Earthquake Engineering (***IAEE***) in support of the International Decade for Natural Disaster Reduction (***IDNDR***). The purpose of the Workshop was to discuss how ***WSSI*** could help countries in the Asia Pacific Region with respect to their indigenous problems in earthquake engineering

*First **WSSI** Workshop in Bangkok, Thailand*



International Workshop on "Towards Natural Disaster Reduction" in Okinawa, Japan, June, 1993

and what they themselves could do to meet the goals of ***WSSI***. The Workshop was attended by about 30 participants from 20 countries, including such countries as Bangladesh, Burnei, Malaysia, Myanmar, Nepal, Pakistan, Thailand, and Vietnam where earthquake engineering community has not been well identified.

During the Bangkok Workshop, it was suggested that each of the participating countries should hold High-Level Meetings (***HLM***) to raise the awareness of decision makers on the importance of earthquake issues. An ***HLM*** should invite government officials, business leaders, people from social and cultural institutions, banking/insurance industries, and mass media. Three ***HLM***'s were held in November, 1993, in Malaysia, Singapore, and Nepal. ***INCEDE*** substantially contributed to the success of these ***HLM***'s.

INCEDE coorganized a three-day workshop on "Towards Natural Disaster Reduction" with the Task Force on Natural Disaster Reduction of the Pacific Science Association, the United Nations University in Tokyo, and ***WSSI***. The Workshop was held in Okinawa from June 28 to 30, 1993. It was attended by about 30 engineers, natural and social scientists, geographers, economists, and organizational experts from Pacific-rim countries. The goals of the Workshop was to highlight the advantages of integrated and multidisciplinary strategies to mitigate natural disaster risks. The Workshop was a success in bringing persons of various professions and in letting them understand the commonalities and differences among their views on natural disasters.

EMPHASIS ON WATER DISASTERS

With the very limited workforce of ***INCEDE***, it is impossible to deal with all different kinds of natural disasters. After considerable discussions among the ***INCEDE*** staff, we have decided to

Joint Research Project,
RS/GIS Study on Philippines Disasters and TheirOptimal Restoration Strategies

concentrate on water-related disasters in the Asian Region. Although big earthquakes or violent volcanic eruptions do cause serious disasters, their occurrences are not very frequent. On the other hand, typhoons, cyclones and monsoons cause scores of disasters in many Asian countries every year in the forms of floods, storm surges, and landslides.

With regard to water-related disasters, we have so far made reconnaissance surveys on the 1991 Typhoon No.19 in Japan, the 1991 flood in Leyte Island (Philippines), the 1992 floods in Hongkong and Colombo (Sri Lanka), the 1993 flood in Mississippi and Missouri valleys and the 1993 flood in the Tokyo Metropolitan District. With the collaborations of ***INCEDE*** Network members, we have also studied the floods in China (1991), Pakistan (1992), and Nepal and India (1993).

We have been trying to make cooperative research with China, Hongkong, Sri Lanka, and the Philippines. With respect to China and Hongkong, we have been successful in making only personal contacts with leading researchers, but no systematized research program has materialized so far.

With regards to Sri Lanka, contacts have been made with the University of Peradeniya and the Sri Lanka Land Reclamation and Development Authority (SLRDA) to carry out a study on flooding of Colombo City. A simulation model for the drainage canals would be carried out by the University of Peradeniya, with the SLRDA providing the necessary field data. Hydrological modeling would be carried out at INCEDE and coupled with those studies to form a flood analysis model. We are grateful to the Makita foundation which has provided funding for the project for a one year period.

It is very fortunate that a three-year (1993-1995) project has been funded by the Ministry of Education of the Japanese Government for the collaborative research with Philippine researchers.

The project, RS/GIS Study on Philippines Disasters and Their Optimal Restoration Strategies, will be a bilateral effort between the two countries. Our counterparts in the Philippines at present are the ***University of Philippines***, ***PAGASA*** (The Philippines Atmospheric, Geophysical and Astronomical Services Administration) and ***NAMRIA*** (National Mapping and Resource Inventory Authority).

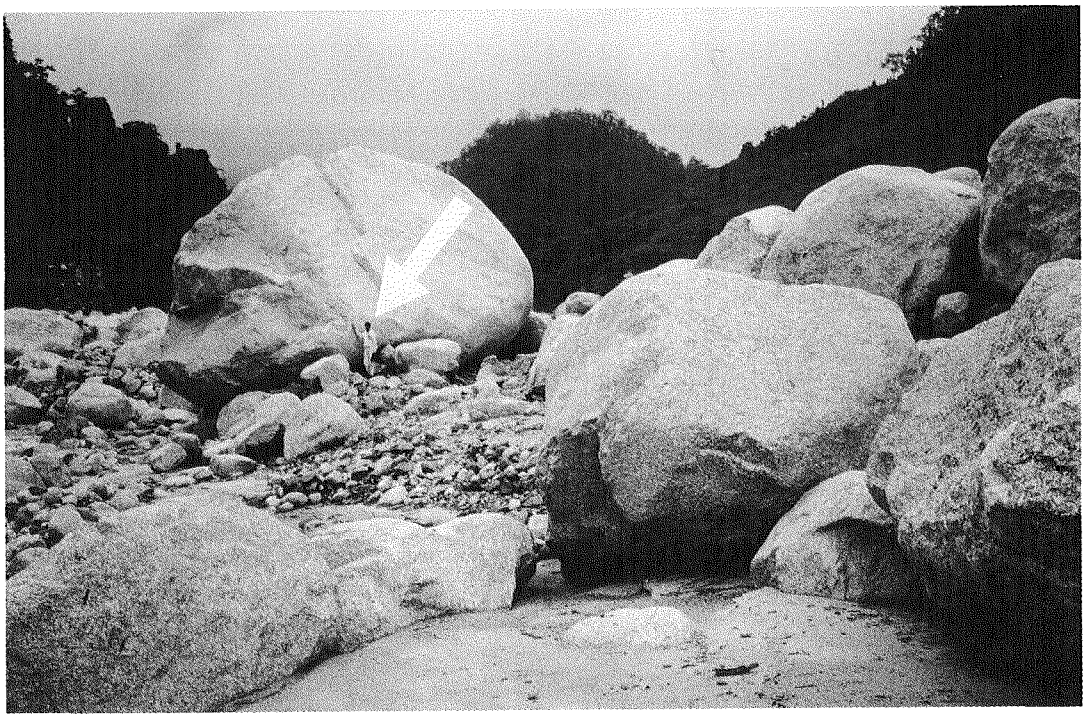
It was decided to focus attention on flood disasters. Hydrological and flood forecasting modeling will be carried out on a pilot basin in Luzon Island, using distributed input from remote sensing and geographic information systems. The methodology would then be used for the preparation of regional hazard maps for a few selected disaster-prone areas incorporating social and population distribution data as available.

A four-member ***INCEDE*** team visited Manila from 15 to 17 August, 1993, to hold initial discussions with Philippine researchers. In October 1993, Philippine researchers visited ***INCEDE*** for a week for in-depth discussions on the detailed work plan of the project. A catchment has been selected for the pilot study based on the availability of hydrological data and other information from a list of three potential locations. A coordinator for each organization was nominated and all participating organizations pledged full cooperation in terms of data, manpower and logistical support for the study.

In January 1994, a five-member ***INCEDE*** team visited the Philippines again. The purposes of the visit were to make a field trip to the catchment previously selected and to review the progress of data gathering in the Philippine participating institutions.

INCEDE is going to receive a Philippine researcher for three months from January to April 1994 supported by the United Nations University in Tokyo. We are also planning to have a wrap-

Flush Flood in the Tokyo Metropolitan District during the Typhoon No.11, Augast 27, 1993
-Photo by Yomiuri News



Nepal Flood Disaster, July 1993
*Photo by Mr. H.Oi, **INCEDE Network** Member*

up meeting in Tokyo early March 1994 to summarize the outcome of the first year's cooperative work.

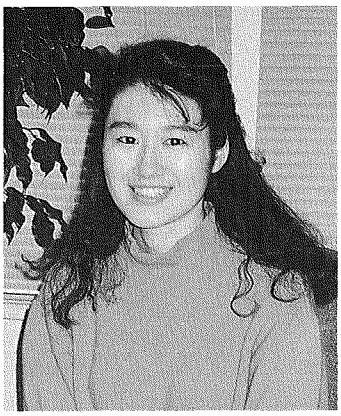
MISCELLANEOUS BUT IMPORTANT ACTIVITIES

Our Newsletters are always full of other information which cannot be simply categorized under the abovementioned three headings. They are miscellaneous but important. Several of less known disasters and their lessons have been summarized and published in our Newsletter: The Pakistan floods of September 1992 (***INCEDE Newsletter***, Vol.1, No.2), the Cairo earthquake of October 12, 1992 (Vol.1, No.3), disasters in Nepal (Vol.1, No.4), a summary of natural disasters in Asian countries in July-September, 1993 (Vol.2, No.2), and the Nepal floods of July 1993 (Vol.2, No.2).

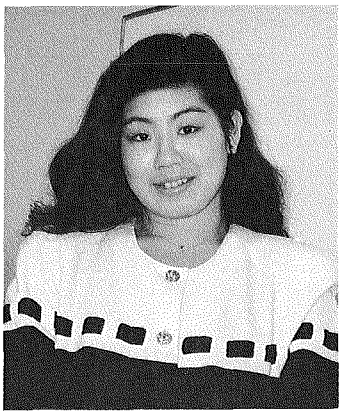
Symposia and workshops held in Japan and Asian countries have been also reported in the ***INCEDE Newsletters***: The 1992 ***IDNDR*** International Conference on "Toward New Frontiers Against Natural Disasters" (November 27-30, Chiba, Japan), the ***IDNDR*** International Symposium on Earthquake Disaster Reduction Technology (December 15-17, 1992, Tsukuba, Japan), the workshop on "Seismic Risk Management for Countries of the Asia Pacific Region" (February 8-11, 1993, Bangkok, Thailand), the workshop on "Towards Natural Disaster Reduction" (June 28-30, 1993, Okinawa, Japan), the first ***WSSI*** Board of Directors Meeting (September 7, 1993,

Tokyo, Japan), the Eighth International Seminar on Earthquake Prognostics (September 27-29, 1993, Tehran, Iran), the ***IDNDR*** Aichi/Nagoya International Conference 1993 Japan (November 1-4, 1993, Nagoya, Japan), and three High-Level Meetings on Earthquake Disaster Reduction (November 8 in Kuala Lumpur, Malaysia, November 9 in Singapore, and November 12 in Kathmandu, Nepal).

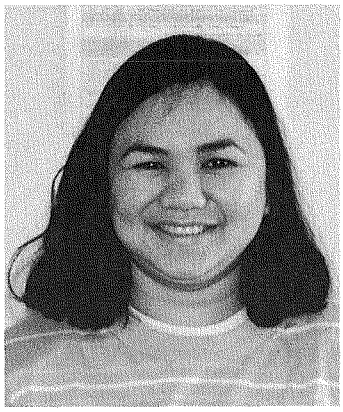
We are proud of the activities we have so far made in ***INCEDE*** in spite of the very limited resources. It is a great pleasure for us that many of our Network members have corresponded highly commending our activities. However, as we have repeatedly expressed in the past, ***INCEDE*** is always open and awaits your ideas, suggestions and criticisms.



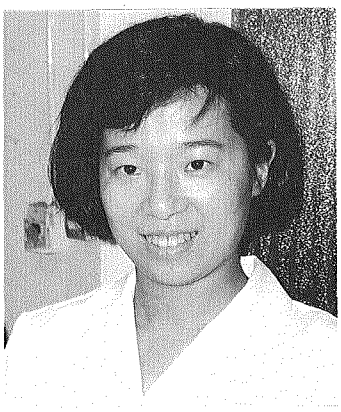
Ms.Y. Fujitani



Ms. T. Takayama

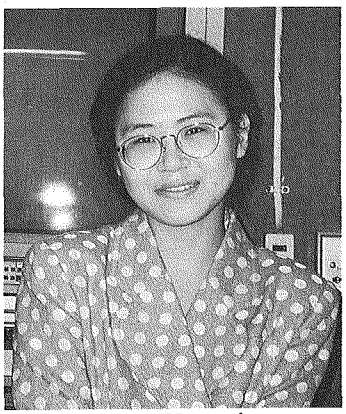


Ms. J. C. Molas



Ms. C. Wang

Ms. K. Kokuno



Ms. M.Yamada

*Pillars of **INCEDE** - Their Dedication Keeps **INCEDE** Going.*

ACKNOWLEDGMENTS

The activities of ***INCEDE*** in the last three years were possible thanks to warm encouragements from many people, domestic and overseas. We are thankful to the members of the Institute of Industrial Science, University of Tokyo, for their constant support. We appreciate Professors T.Okada, K.Musiake and F.Yamazaki for their positive cooperation in ***INCEDE***'s activities. We would like to say "Thank you" to Ms.Y.Fujitani, Ms.T.Takayama, Ms.J.C.Molas, Ms.K.Kokuno, Ms.C.Wang and Ms.M.Yamada for their miscellaneous clerical support without which ***INCEDE*** could never have survived until today.

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