

INCEDE IN MOTION

by

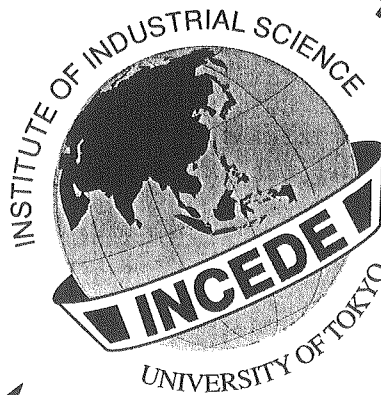
Tsuneo Katayama ¹⁾, M.A.H. Pramanik ²⁾,

A.S. Herath ³⁾ and Kimiro Meguro ⁴⁾

THE PROPOSAL BY DR. PRESS

The International Center for Disaster-Mitigation Engineering (INCEDE) was newly established in the Institute of Industrial Science, University of Tokyo, in April, 1991. The inception of the INCEDE goes back to July, 1984, when the Eighth World Conference on Earthquake Engineering was held in San Francisco. During the opening ceremonies of the Conference, Dr. Frank Press, the President of the U.S. National Academy of Sciences, delivered a keynote address entitled "The Role of Science and Engineering in Mitigating Natural Hazards", in which he proposed an idea to establish an International Decade of Hazard Reduction.

"I believe there is great need, and much support can be found, to establish an International Decade of Hazard Reduction. This special initiative would see all nations joining forces to reduce the consequences of natural hazards. The planning could start within a year or two, with the



preparation of national plans. The implementation could take place in a few years. Perhaps it would be appropriate for the final decade of this century. What better way to start the new millennium than a world better organized to reduce suffering."

Although the Press' proposal gained the general attention of academic institutions and associations worldwide, it seemed too big and heavy for most of the scientists and engineers,

1) Professor and Director, 2) Foreign Visiting Professor, 3) Associate Professor, and 4) Research Associate, International Center for Disaster-Mitigation Engineering (INCEDE), Institute of Industrial Science, University of Tokyo.

who were at a loss how to realize the idea. In Japan, it was individual researchers in earthquake engineering who first showed real interest in the proposal. In June, 1986, a 17-member Ad Hoc Committee for the IDNDR, which was known as IDHR or IDNHR at that time, was established. The Committee met many times to search for ways by which to realize the proposal, and invited Dr. Press to Japan so that not only academicians but the general public become familiar with the Decade concept through his own words. In his speech in Tokyo, he emphasized the importance of Japanese participation in the Decade activities:

"Advanced countries like Japan and the US can do more with modern science & technology and organizations to protect their populations. However, the impact is especially great on developing nations, where burgeoning population growth and the urgent demands of economic development often work at cross-purposes to hazard reduction.....A three-pronged approach would be adopted to meet the IDNHR's objective. The cataloging and wider dissemination of what we already know about hazard mitigation and the identification of gaps in that knowledge would comprise the first step. This would be followed by adaptation of these known mitigation and preparedness techniques to each nation's unique circumstances for immediate application. At the same time, a coordinated program of research would seek to fill the gaps in knowledge that had been identified and to pioneer improved mitigation practices."

"What we are speaking of, then, is a program of shared knowledge and the shared pursuit of new knowledge.....the IDNHR should certainly not be seen simply as a grand transfer of aid from industrialized countries to developing nations.....I should point out that, though international collaboration is the object of the IDNHR, most IDNHR activities must originate from individual national efforts. This means the IDNHR will have what we call 'grassroots' or local quality, with each participating country assessing its own needs and priorities, and forging its own plan of action on matters of local concern."

IDNDR - A UNITED NATIONS RESOLUTION

It was a surprise to most of the scientists and engineers that the forty-second General Assembly of the United Nations unanimously adopted a resolution on "International Decade for Natural Disaster Reduction (IDNDR)" on December 11, 1987. In the resolution, the General Assembly decided to designate the 1990s as a decade in which the international community, under the auspices of the United Nations, will pay special attention to fostering international cooperation in the field of natural disaster reduction.

The objective of the Decade is to reduce through concerted international actions, especially in developing countries, loss of life, property damage and social and economic disruption caused by natural disasters. The goals of the Decade are:

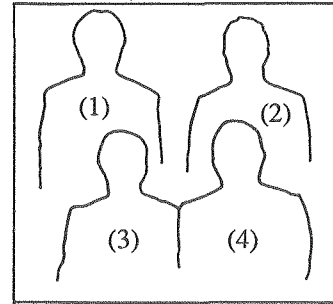
- (a) To improve the capacity of each country to mitigate the effects of natural disasters;
- (b) To devise appropriate guidelines and strategies for applying existing knowledge;
- (c) To foster scientific and engineering endeavors aimed at closing critical gaps in knowledge;
- (d) To disseminate existing and new information related to measures for the assessment, prediction, prevention and mitigation of natural disasters;
- (e) To develop measures for the assessment, prediction, prevention, and mitigation of natural disasters through programs of technical assistance and technology transfer, demonstration projects, and education and training, tailored to specific hazards and locations, and to evaluate the effectiveness of those programs.

Since the 1987 resolution, a multitude of (some efficient and mostly inefficient) discussions and activities were made in academic/non-academic organizations at national/international levels, and the IDNDR officially began on 1 January 1990. It is important to note that the Decade activities are recommended to be implemented by extrabudgetary (with respect to the UN) resources. This makes the self-help efforts at the national level the critical factor to achieve the goals of the IDNDR. However, such efforts have been far too slow to come, and at the present rate of progress, it seems difficult to meet the broad objectives of the IDNDR.

INCEDE - AN EXAMPLE OF JAPAN'S NATIONAL EFFORT

The Institute of Industrial Science, University of Tokyo, has a number of researchers specializing in various fields of natural disaster sciences. When it was known that the UN adopted the resolution on the IDNDR, a group in the Institute began to consider a possible contribution to the IDNDR by establishing an international center for natural disaster sciences. It was our feeling that we must act as positively as possible to achieve the objective of the Decade. The first proposal drafted in autumn, 1988, and submitted early 1989 to the university was unsuccessful. The second proposal submitted early 1990 was eventually adopted by the Ministry of Education, after a drastic reduction in size and money.

The International Center for Disaster-Mitigation Engineering (INCEDE) was officially established on April 12, 1991, as a humble 4-member organization; a professor, an associate



- (1) *Kimiro Meguro*
- (2) *A.S.Herath*
- (3) *M.A.H.Pramanik*
- (4) *Tsuneo Katayama*

professor, and a research associate all of which are supposed to be chairs for Japanese, and a foreign visiting professor. However, since the Center is to be of really international nature, it was decided to have a non-Japanese researcher for the associate professor's chair.

To launch a new organization is always a difficult task, however small it may be. It took sometime to secure two rooms in the Institute, but it was more important and difficult to have good staff. Professor Tsuneo Katayama was appointed as Director, who had acted as the key person for drafting proposals and making the groundwork for the establishment of the Center.

Dr.Herath was appointed as Associate Professor on September 1, 1991, and Dr. Kimiro Meguro joined the staff as Research Associate on October 16, 1991. Finally, Dr.Mohammad Abul Hossain Pramanik filled the chair of Foreign Visiting Professor on January 27, 1992.

Dr.Pramanik from the People's Republic of Bangladesh is a graduate of University of Rajshahi (1961), holds M.Sc.'s from University of Rajshahi (1963) and University of Wales, U.K. (1967), and Ph.D. from Jahangirnagar University (1985). He is a former Director General, Department of Environment, Ministry of Environment and Forest (Bangladesh), and also a former Chairman (acting) and Founder Director, Bangladesh Space Research and Remote Sensing Organization (Dhaka). His research fields in INCEDE will be "Disaster Information System", in which information on disasters, especially that on geo-related disasters, is to be analyzed by utilizing remote-sensing and GIS (Geographical Information

System) techniques.

Dr. Anura Srikantha Herath, a Sri Lankan, graduated from University of Peradeniya in Sri Lanka (1980), obtained a degree of M.E. from Asian Institute of Technology in Bangkok (1983), and Ph.D. from University of Tokyo (1988). He has work experiences in Sri Lanka, Thailand and also in Japan. He is a specialist in water resources engineering and his major research fields in INCEDE will be water-related disasters such as floods and tidal wave with special emphasis on those in the southeastern Asian countries caused by typhoons, cyclones and monsoons.

Dr. Meguro, a Ph.D. from University of Tokyo (1991), specializes in the development of a new distinct element method and its application to the fracture simulation of various civil engineering structures and other systems. He will be working in INCEDE with Dr. Katayama (Director) in the fields of earthquake disaster mitigation engineering, especially on the problems related to seismic disasters in large urbanized areas.

Because of the limited size and capacity of the Center, the members of INCEDE will work together with other members of the Institute of Industrial Science in their respective research fields. The major activities of the INCEDE for the time being will be to coordinate works made in various disciplines of disaster-related engineering, and to become a focal point and an information clearing house for disaster-mitigation researchers and practitioners worldwide, especially for those in the developing southeastern Asian countries.

The IDNDR officially started on January 1, 1990, but the rate of progress of its implementation has been slow both on the national and the international level. Although small, the INCEDE would like to be the place where scientists and engineers from all over the world will work together to mitigate the life and property loss, and socioeconomic disruption caused by natural disaster.