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Preface

The purpose of this book is to introduce you to Disaster Reduction Hyperbase–Asian Application (DRH-Asia, or simply DRH), a knowledge base of disaster reduction technologies. It is a major product of the DRH Initiative whose basis was the DRH-Asia Project conducted in April 2005-March 2006 (Phase I) and July 2006-March 2009 (Phase II). EDM-NIED (Earthquake Disaster Mitigation Research Center of the National Research Institute for Earth Science and Disaster Prevention) served as the lead institution in this international project. MEXT, CAO, and Kyoto University collaborated as core institutions in managing the project.

DRH-Asia was designed as a vehicle to compile and disseminate "useful" disaster reduction technology and knowledge, and to facilitate its implementation. To realize the goal, the DRH Project team practiced various challenging tasks including conceptualization of useful DRR technology, definition of DRH attributes, compilation of DRH contents, and establishing international ties to promote such activities. A key issue was how to make DRH a tool that will help fill gaps between research and practice, the notion being referred to as "implementation strategy". Another important component of the DRH Initiative was the EDM-NIED International Team who constructed a web system Tech-DRAW, which was applied as the DRH-Asia platform, a powerful tool to substantiate the DRH philosophy. Collaboration with the CASiFiCA (Case Station-Field Campus) initiative led by Kyoto University contributed to enhancing scientific bases of the DRH framework.

These activities led to the current state of DRH-Asia (http://drh.edm.bosai.go.jp), operating stably, now with thirty-eight DRH Contents registered in the DRH Database. Continuing efforts are being taken for increasing the number of registered DRH Contents and for disseminating them. Actions are also being taken to offer the Tech-DRAW software to assist establishing national DRH systems.

In this situation, it was judged appropriate to publish a hard copy volume that presents specific features of DRH concepts. It was approved to make it a Special Volume of the Asian Journal of Environment and Disaster Management.

This book addresses the following three major issues;

- **Vehicles for Disaster Reduction Technology Information**: How DRH-Asia, Tech-DRAW and DRH Template were constructed: conceptual developments as well as system productions
- **Disaster Reduction Technology and Knowledge Compiled in DRH-Asia (typical examples)**: Demonstration of DRH Contents by which readers can access the significance of DRH-Asia through practical cases of disaster reduction technology information
- **Usage of Disaster Reduction Technology Information**: Some examples of utilizing DRH Contents in new technology development and education in disaster fields

It is hoped that this AJEDM Special Volume will draw attention of the readers to DRH-Asia. While most comprehensive and exhaustive set of information will be provided by direct access to the DRH-Asia web site (http://drh.edm.bosai.go.jp/), this book will be a useful guide to understand fundamentals of DRH-Asia and related activities for those who are interested in approaching useful disaster reduction technology and knowledge.

We sincerely hope that the new concepts and terminologies developed in the DRH Initiative will be a significant appeal to the readers and will eventually be accepted. They are linked with how to manage disaster reduction technology information: they include "implementation technology", "implementation oriented technology (IOT)", "process technology (PT)", "transferable indigenous knowledge (TIK)", "understandable, doable, and shown to be useful (DRH contents acceptance criteria)", "multilingual operation using Tech-DRAW", etc.

Finally, it is emphasized that successful management of the DRH Initiative was enabled by many institutional as well as personal cooperation and supports. The DRH-Asia Project (Phase I and Phase II) was financially supported by MEXT, government of Japan. Under this framework, motivated researchers and NGO leaders dedicated their time and efforts for realizing DRH-Asia as an international property. They joined the arena from eleven countries (Asia: Bangladesh, China, India, Indonesia, Iran, Japan, Nepal, Philippines, Sri Lanka/Africa: Algeria/South America: Peru) and international institutions including UN-ISDR, EC/JRC, etc. In the development of the Tech-DRAW web system, extensive collaboration and supports by UN-ISDR was essential to build up a mechanism of cross-initiative links.

The core element of DRH is the set of disaster risk reduction technology and knowledge compiled in DRH Database. The DRH contents currently registered have origins in Algeria, Bangladesh, China, India, Indonesia, Iran, Japan, Nepal,

Peru, Philippines, and Sri Lanka. Edition of this volume relied very much on these accomplishments. You are encouraged to visit the exhaustive set of the DRH contents registered in the DRH-Asia web site. You will find disaster reduction technology information in much wider variety than the set contained in this volume for a typical example.

All these contributions are gratefully acknowledged.

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