

Disaster Reduction Hyperbase-Asian Application DRH-Asia Project

**Tokyo International Workshop 2006 on
Earthquake Disaster Mitigation for
Safer Housing
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1. Scheme of the DRH Project

- * *Disaster Reduction Hyperbase – Asian Application (DRH-Asia)*, a web-based facility, shall be developed to disseminate information on *appropriate disaster reduction technologies* in order to aid disaster reduction policy enhancements in Asian countries.
- * DRH-Asia will constitute a significant knowledge resource for international collaboration for *multi hazard* disaster reduction.
- * DRH-Asia as efforts to implement *Hyogo Frame for Action 2005–2015* adopted in the UN World Conference on Disaster Reduction, 2005

* Objectives:

- (1) States-of-the-art and practice in technology assessment and disaster culture
- (2) “Implementation Strategies” as key concepts: implementation oriented technology, process technology, and transferable indigenous knowledge
- (2) System development for DRH-Asia and compilation of contents through multilateral participation

* Management issues

- (1) International collaboration for coordination and research
- (2) Efforts for dissemination and application

(version: 1 Sep. 2006)

Disaster Reduction Hyperbase

– Asian Application –

Disaster Reduction Hyperbase (DRH) is a facility disseminating disaster reduction technology and knowledge under implementation strategies. It is being developed for **policy makers, community leaders, practitioners, and motivated researchers** as potential users who wish to make access to appropriate technical know-how's that can help them establish practical disaster management plans.

DRH is a site with open and interactive access and participation. Its major components consist of **DRH Database, DRH Forum, and DRH Links**. You may directly visit them, or visit Rationale for DRH for further conceptual elaboration.

DRH is developed as part of implementation of the Hyogo Frame for Action (HFA) 2005-2015 adopted in the UN-World Conference on Disaster Reduction.

Disaster Reduction Hyperbase - Asian Application (DRH-Asia) will deal with contributions from Asia and Pacific Islands (west of IDL). DRH systems for other regions will be developed by collaborating organizations and will altogether constitute an alliance of DRH, or DRH-Global. Until companion DRH's are open, DRH-Asia will accommodate proposals from other regions and later transfer them appropriately.



DRH Database

Database

Access to tested implementation technology, such as "implementation oriented technology," "process technology," and "transferable indigenous knowledge" (under construction: you see a demonstration sample)



DRH Forum

Forum

Free Forum for DRH enhancements and Proposal Forum for facilitating collation, testing and dissemination of mitigation models (open for test operation)



DRH Links

Relevant Initiatives

Guided links to relevant initiatives of disaster information platforms (to be prepared in 2007)



Rationale for DRH

Rationale for DRH

Purpose, objectives, motivations, and roadways that have led to the development of DRH



Project documents

Project documents

The documents from meetings and workshops in the DRH Project Phase I (April 2005-March 2006) are downloadable. Those from the DRH Project Phase II (July 2006-March 2009) shall be compiled upon its progress.



World Conference on Disaster Reduction

World Conference on Disaster Reduction

The UN-WCDR marked the substantial starting point of DRH development. Visit Thematic segment - Thematic sessions - Cluster 3 - Panel and Session 3.6.







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Framework of Activities

- + Project Title: Disaster Reduction Hyperbase–Asaian Application
- + Principal Investigator: Hiroyuki Kameda
- + Institution-in-Charge: National Research Institute for Earth Science and Disaster Prevention (NIED)

(1) Coordination nodes

- 1) Coordination of overall project management: NIED (Inst.-in-Charge) / Kyoto Univ. / * UN-ISDR
- 2) Policy related coordination (GoJ): Cabinet Office (Disaster Management) / MEXT (Office for Disaster Reduction Research)
- 3) Coordination for contents development: ADRC / *UNESCO / *CRID

(2) Development nodes

- 1) Development of DRH-Asia: NIED / collaborating Asian institutions
- 2) DRH for Europe – Africa (coordinated developments) / *EC/JRC
- 3) Link with ISDR information platform / *UN-ISDR

- ## (3) Information nodes: Survey & identification of items for DRH contents and their documentation
- NIED / Kyoto Univ. / *Beijing Normal Univ. (China) / *NDRC (China) / *NSET (Nepal) / *Bandung Tech. (Indonesia) / *PHIVOLCS (Philippines) / *SEEDS (India) / *BDPC (Bangladesh) / *IIEES (Iran) / *Bogacici Univ. (Turkey) / *UNESCO / other collaborating institutions

<Description of activity nodes>

- (1) Coordination node: Institutions to conduct overall project management and international coordination for the development and dissemination of DRH-Asia
- (2) Production node: Institutions to develop the DRH-Asia on a web system, and those who will develop DRH for areas outside Asia
- (3) Information node: Institutions to develop information resources to constitute contents of DRH-Asia

Note: Asterisks stand for international and overseas institutions, and the rest are Japanese institutions

2. Roadway to DRH

EqTAP Project (April 1999-March 2004) (APEC initiative)
Implementation Strategies in R&D

<http://eqtap.edm.bosai.go.jp/>

http://eqtap.edm.bosai.go.jp/apec_eqtap/index.html

WCDR (January 2005) (UN initiative)

HFA 2005-2015 / "Portfolios" proposed / "Pilot Project"

DRH Project - Phase I: April 2005-March 2006

International framework for DRH development

<http://www.edm.bosai.go.jp/old/m-n.html>

DRH Project - Phase II: July 2006-March 2009

Production of DRH

"Disaster Reduction Hyperbase – Asian Application"

(Message from Phase I to Phase II of the DRH Project)

Mission Statements and Resolution

developed in the

Workshop on International Framework for Development of Disaster Reduction Technology List on Implementation Strategies "Disaster Reduction Hyperbase (DRH)"

Tsukuba, Japan, 27-28 February 2006

Mission

- *Reduction of Vulnerability (Physical & Socio-economic)
- *Implementation Strategies
- *Creating information resource
- *Integrated Disaster Risk Management

- *Hyogo Frame for Action 2005-2015 / "Disaster Reduction Portfolio"

Proposed DRH Attributes

- Open and Interactive access and participation
- access to tested implementation technology database, such as implementation oriented technology, process technology, transferable indigenous knowledge
- Forum for facilitating collation, testing and dissemination of mitigation models
- Link with relevant initiatives

Resolution (CMM-Final, Tsukuba, 27-28 February 2006)

Participants in the Workshop on International Framework for Development of Disaster Reduction Technology List on Implementation Strategies – "Disaster Reduction Hyperbase", Tsukuba, 27-28 February 2006, have agreed that

1. Development of the Disaster Reduction Hyperbase (DRH) is a significant contribution to reducing vulnerabilities and enhancing integrated disaster risk management.
2. DRH will be an open and interactive database of implementation technologies, will provide a forum for facilitating collation, testing, dissemination of mitigation models, and will link with relevant initiatives.
3. Within a scheme of coordination, development and information nodes, participants will mobilize resources (organizational, fundraising, and in-kind) for contributing to successful achievement of the DRH Mission.
4. DRH development activities contribute to the implementation of the Hyogo Framework for Action 2005-2015 adopted in the UN-World Conference on Disaster Reduction, January 2005
5. We will meet in 2007 to continue further development of DRH

3. Types of Technologies We Target in DRH

(I) - Implementation Oriented Technologies

+ Outputs from modern R&D that are:

< Practiced under a clear implementation strategies

< International perspective

< Not a one-sided show case of “research for research”

+ Look at both

i) Product technologies and

ii) Process technologies

(II) - Transferable Indigenous Knowledge

+ Art of disaster reduction that are:

< Indigenous to specific regions but having a universal nature to be applied to other regions

< Not outputs from modern R&D, but having time-tested reliability

(Example/ implementation oriented technology - product)

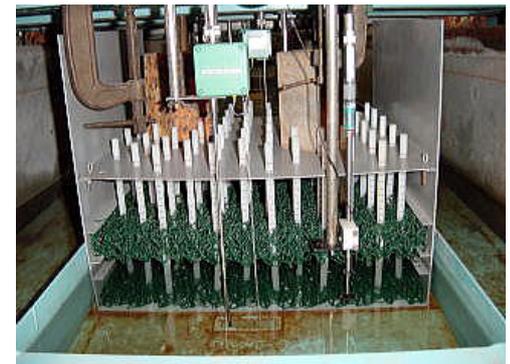
+ Reduction of tsunami flow pressure in greenbelt-
(mangrove, waru, etc.)

(EqTAP Project: PARI, Japan and
CDRC, Indonesia)



Project in Sulawesi Island, Indonesia

- *Can not stop tsunamis but can reduce their effects.
- *Inexpensive, no "high-tech" required
- *Design guideline developed through lab tests and numerical simulation
- *Being implemented in Sulawesi Island, and other 14 sites in Indonesia.



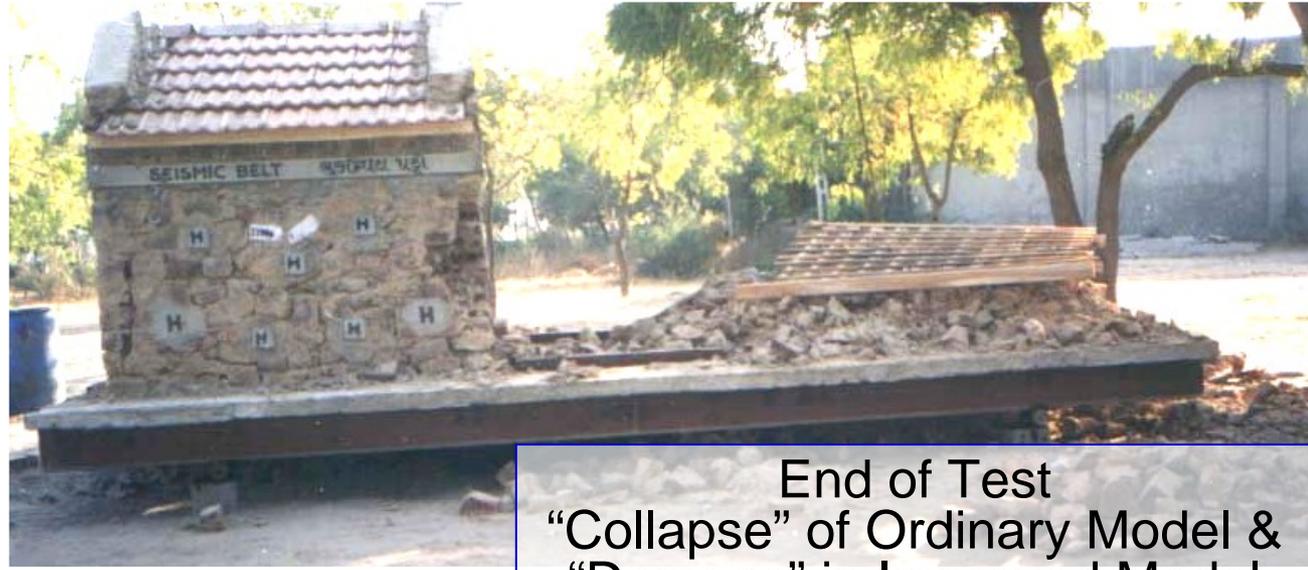
Laboratory test

(Example/ implementation oriented technology - product+process technology)

(Nepal, India, Afghanistan, Tajikistan, Iran, Aceh, WCDR Kobe, Pakistan)

Retrofitting Increases Seismic Resistance

In View of
Large Gathering



End of Test
“Collapse” of Ordinary Model &
“Damage” in Improved Model

(source from
Sharma: CMM2)