

(DRH)
Disaster Reduction Hyperbase

RTF-URR
Special Event at Global Platform for DRR
Geneva, 17 June 2009

Hiroyuki Kameda
Professor Emeritus, Kyoto University
Visiting Researcher, NIED
DRH Manager / DRH Project PI

* What is DRH ?

- + A *web-based* facility
- + To disseminate *appropriate disaster risk reduction technology and knowledge*
- + To deal with *multi hazard* disaster reduction
- + To aid disaster reduction policy in *interactive ways: developing & industrial countries*

"Hyperbase" because:

- * **Widened definition of technology "implementation technology" (IOT, PT, TIK)**
- * **Interactive-way information flow: developing & industrial countries**

* DRH Project

**“Disaster Reduction Hyperbase – Asian Application”
(Principal Investigator: Hiroyuki Kameda)**

- * **MEXT-NIED Project: approved for 2006-2008FY (July 2006-March 2009):**
- * **Major sponsor: MEXT (Ministry of Education, Culture, Sports, Science and Technology), Government of Japan**
- * **Contributions by multilateral participants: Nine Asian countries and international institutions: cash and/or in-kind**

*** Organizations in Charge – Asian Context:**

- + **NIED (National Research Institute for Earth Science and Disaster Prevention)-(Asian and cross-regional coordination)**
- + **Kyoto University (DPRI, Sch Eng, Sch GES)-(contribution from CASiFiCA framework)**
- + **CAO (Disaster Management)-(international collaboration policy)**
- + **MEXT (Office for Disaster Reduction Research)-(R&D policy)**
- + **ADRC-(gateways to the Asian member countries)**
- + **BNU, NSET Nepal, SEEDS India, IIEES, ITB + many other institutions -(national and regional coordination)**

*** Cross-regional Coordination and Participation:**

- + **UN-ISDR-(international coordination / contributions to web design / DRH link with PreventionWeb)**
- + **European Commission / Joint Research Centre (EC/JRC)-(coordination and production for Europe / Africa)**

Disaster Reduction Hyperbase (DRH) – Top

Page

[Home](#) | [Login or Register](#) | [Contact Us](#) | [Advanced Search](#) | [Language](#) ▼



DRH website Technologies only
DRH web system Ver.3.1 (upgraded 090612)

DRH Database



Find technologies

DRH Forum



Propose a technology

DRH Forum



Discuss technologies

DRH Links



DRH partners

DRH Project



DRH Project activities

What is DRH?

DRH is a web-based facility to compile appropriate disaster reduction technologies and knowledge that incorporates regional characteristics of Asian countries and has solid implementation strategy. It is a part of implementation of HFA 2005-2015.

[> more](#)

Join the discussion



You can join 1) general discussion on disaster reduction technologies and 2) discussion on proposed technologies under review. Please log in if you want to join discussion:

[> Join a discussion](#)

[> DRH membership \(Basic Member & Full Profile Member\) and procedure for registration](#)

Technologies for disaster reduction



[Seismic Retrofitting for School Buildings in Japan- Publication of a Reference Book - \(DRH 41\)](#)

Earthquakes can occur anywhere and at any time in Japan. Improving the seismic resistance of school buildings is a...

Provider: Takayuki Nakamura

Category: Implementation Oriented Technology (IOT)



[Duijiangyan Project \(DRH 44\)](#)

Duijiangyan Project, which consists of Fish Mouth Water-dividing Dam, Flying Sand Fence and Bottle-Neck Channel, is a...

Provider: Weihua FANG

Category: Transferable indigenous knowledge (TIK)



[Earthquake Risk Reduction and Education \(DRH 25\)](#)

• Universal • Children represent the future • Schools have post-disaster roles as shelters and relief...

Provider: Farokh Parsizadeh

Category: Process Technology (PT) , Transferable indigenous knowledge (TIK)

[> View all](#)

[✉ Propose a technology](#)

[✉ Get updates by email](#)

Project updates

What's new & information of DRH Project activities:

[> New DRH Contents in DRH Database](#)

09 June 2009

[> New DRH Contents in DRH Database](#)

09 June 2009

[> New DRH Contents in DRH Database](#)

09 June 2009

[> DRH Website has been upgraded to Ver.3 !](#)

30 March 2009

[> New DRH Contents in DRH Database](#)

16 March 2009

[> View all](#)

DRH Partners

DRH links : Guided links to relevant initiatives of disaster information platforms.

[> View DRH partners](#)

Copyright © 2006-2009 EDM-NIED. All rights reserved.

[Home](#) | [Sitemap](#) | [Contact us](#) | [Search](#) | [Legal](#)



DRH Consortium

Total 16120 Today 77 Yesterday 206

Technology and knowledge compiled in DRH

Implementation technology

- + **Implementation oriented technology (IOT):** Outputs from modern R&D that are practiced under clear implementation strategies
- + **Process technology (PT):** Know-how for implementation and practice, capacity building and social development for knowledge ownership
- + **Transferable indigenous knowledge (TIK):** Traditional art of disaster reduction that is indigenous to specific region (s) but having potential to be applied to other regions and having time-tested reliability

***DRH Criteria**

- **Understandable to users**
- **Implementable (Usable, Doable)**
- **Shown to be useful**

Plus

- **Criteria for each category (IOT, PT, TIK)**

***Facilitator-Proposer discussion using the DRH Forum is an essential procedure.**

*** DRH-Asia Facilitators:**

(IOT) Mosen Ghafory-Ashtiany and Hiroyuki Kameda

(PT) Amod Dixit and Norio Okada

(TIK) Anshu Sharma and Rajib Shaw

DRH Contents & DRH Contents proposals (as of June 15, 2009)

	under discussion on DRH Forum	registered in DRH Database	total
IOT	10	10	20
PT	9	11	20
TIK	0	10	10
total	19	31	50

Algeria	1	Japan	30
Bangladesh	2	Nepal	2
China	5	Peru	1
India	1	Philippines	1
Indonesia	3	Sri Lanka	1
Iran	3	(total)	(50)

IOT: Implementation oriented technology

Bold face: registered in DRH DB
Roman: being discussed

- +**Application of Mangrove Forest for Countermeasure Against Tsunami Disaster**
- +**Tsunami Disaster Mitigation Technique by Coastal Greenbelt**
- +**Numerical model for tsunami inundation and making tsunami hazard map**
- +**Disaster management support system by utilizing satellites under the framework of "Sentinel Asia"**
- +**Application of Spatial Temporal GIS for Earthquake Disaster Recovery Service**
- +**RADIUS Program for Earthquake Damage Estimation**
- +**Seismic Retrofitting for School Buildings in Japan - Publication of a Reference Book -**
- +**Nonstructural Seismic Retrofitting for School Buildings in Japan- Publication of a Reference Book -**
- +**Bamboo T-shelter for Post Disaster Reconstruction**
- +A Simple Method for Predicting a Landslide

IOT: Implementation oriented technology (continued)

- +Earthquake Early Warning and its Applications to Mitigate Human and Social Damages
- +Proposal to Realize RARMIS(Risk Adaptive Regional Management Information System) Concept by Spatial Temporal Information System DiMSIS-EX and Some Case Studies
- +Mobile Crusher and Cast-in-place Formwork
- + Design of a Friction Damper Applying Brake Lining Pads
- +Disaster Mitigation Technology by Soil Bag System for embankment and Road, dike, retaining wall
- +Flood Extent Mapping Method by means of Mathematical Morphology Using L-band SAR Data, Discrimination of Damaged Areas from Ordinary Inundated Areas in Paddy Fields
- +Development of a new tsunami monitoring system using a GPS buoy
- +Detection of Buried Objects by Electromagnetic Subsurface Sensing
- +Safety confirmation system using GIS and QR code

PT: Process Technology

Bold face: registered in DRH DB
Roman: being discussed

- +**Integrated Natural Risk Reduction through a Sustainable Cities Programme**
- +**Social Skills required to the researchers ensuring for acceptability to disaster area**
- +**Earthquake Risk Reduction and Education**
- +**Promoting to Make Schools Safe Against Earthquakes in Japan - Through National Subsidies and Prioritization of Vulnerable School Buildings -**
- +**Preparing Urban Development Standards and Guidelines for Earthquake Risk Mitigation in the City of Teheran**
- +**Community Based Disaster Risk Reduction (CBDRR)**
- +**Development of Community Based Hazard Mapping ("CBHM")**
- +**Effective Cyclone Early Warning Dissemination at Community Level**
- +**A Natural Disaster Emergency Communication System and its Information Product**
- +**Developing Instructors for Awareness Raising and Capacity Building for Earthquake Safer Construction**

PT: Process Technology (continued)

Bold face: registered in DRH DB
Roman: being discussed

- +**Process for community acceptance of earthquake technology --- UNCRD**
- Experiences applying NSET Approach of Shaking-table Demonstration ---**
- +**Engineering the Non-Engineered Masonry Houses for Better Earthquake Resistance in Indonesia**
- +Flood Risk Communication Procedure and Flood Risk Communication Support System for Raising Citizen's Awareness of Risk and Alternative Options
- +Disaster Reduction Education
- +**Effective Disaster Reduction Education by Making Simple Equipments and Experimental Apparatus from Accessible Materials**
- +Integrated river basin management due to climate change
- +Real-time disaster Prevention system for earth dams
- +Production process of electronic picture-story show as a risk communication tool
- +**Process for Community Acceptance of Earthquake Technology**
- +**Experiences Sharing and School Disaster Education: Implementation of Essay and Drawing Competition as School Disaster Education**
- +**Effective International Communication Method with Video Conference Network System**

TIK: Transferable Indigenous Knowledge

Bold face: registered in DRH DB
Roman: being discussed

- +Rediscovery and Revival of Traditional Earthquake-Resistant Techniques in Algeria: The Casbah of Algiers (Algeria)**
- +Disaster Protection Technology of Traditional Wooden Cultural Buildings**
- +Indigenous knowledge from Japan experience: Prevention, Damage reduction and Erosion control by Flood Disaster**
- +Stilt House Building Technology for Flood Disaster Reduction in Flood-prone Areas**
- +Indigenous Knowledge on Flood Risk Management in Bangladesh**
- +Village Tank Cascade Systems of Sri Lanka**
- +Indigenous knowledge for water management and drought mitigation in India**
- +Traditional construction method: the Saihiro Itabame Panel Dam**
- +Dujiangyan Project**
- +Karez Technology for Drought Disaster Reduction**

1. Seismic Retrofitting for School Buildings in Japan- Publication of a Reference Book -

(The Arabic numbers at the head of each text box correspond to those in the DRH Template 7.1. As the arrangements on the web is somehow different, they do not appear in a regular serial order)

ID:	DRH 41
Hazard:	Earthquake
Category:	Implementation Oriented Technology (IOT)
Provider:	Takayuki Nakamura
Country:	
Date posted:	24 September 2008
Date published:	07 November 2008



Installing Steel Bracing

8. Contact

(1) Masao YAMAKAWA (MEXT)

Director, Office for Disaster Prevention, Ministry of Education, Culture, Sports, Science and Technology (MEXT)

m-yama@mext.go.jp, TEL: -81-3-6734-2290

(2) Koichi SHINPO (NIER)

Director, Educational Facilities Research Center, National Institute for Educational Policy Research (NIER)

shinpo@nier.go.jp, TEL: -81-3-6733-6990

(3) Takayuki NAKAMURA (Hokkaido University)

Director, Facilities Department, Hokkaido University

s-bucho@facility.hokudai.ac.jp, TEL: -81-11-706-2063

1. RADIUS Program for Earthquake Damage Estimation

(The Arabic numbers at the head of each text box correspond to those in the DRH Template 7.1. As the arrangements on the web is somehow different, they do not appear in a regular serial order)

ID:	DRH 39	<p>The screenshot shows the RADIUS software interface. It includes a 'Casualties (Deaths) Distribution' table with columns for 'Case ID', 'Automatic Range', and 'Manual Range'. Below this is a 'Populatives & Casualty Summary' table with columns for 'Area', 'Population', 'Deaths', and 'Casualties'. To the right of the summary table is a 'Map Using Manual Range (Full elements show Area ID)' which is a grid map with colored cells representing different areas.</p>
Hazard:	Earthquake	
Category:	Implementation Oriented Technology (IOT)	
Provider:	Kenji Okazaki	
Country:	(not selected);	
Date posted:	09 June 2008	
Date published:	09 September 2008	


Casualty distribution.

8. Contact

Kenji Okazaki
 Professor
 National Graduate Institute for Policy Studies (GRIPS)
 7-22-1 Roppongi, Minato-ku, Tokyo, 106-8677 Japan
 Tel: 03-6439-6214 Fax: 03-6439-6010
 Email: okazakik@grips.ac.jp

1. Integrated Natural Risk Reduction through a Sustainable Cities Programme

(The Arabic numbers at the head of each text box correspond to those in the DRH Template 7.1. As the arrangements on the web is somehow different, they do not appear in a regular serial order)

ID:	DRH 13	
Hazard:	Earthquake , Tsunami , Volcanic eruption , Landslide , Mudflow , Cyclone/Typhoon , Storm surge , Flood , Flash flood , Snow avalanches , Drought , Multi-hazard	
Category:	Process Technology (PT)	
Provider:	DRH CM	
Country:	In Peru, South America. On going since 1998	
Date posted:	04 February 2008	
Date published:	09 November 2008	
		<p>General Plan of El Pinar by Miguel Romero, architect and urban developer.</p>

8. Contact

Prof. Julio Kuroiwa
 Chief technical advisor (CTA) of the SCP. Professor Emeritus National University of Engineering (UNI). Lima – Perú
 Av. Del Parque Sur 442. Lima 27. PERU
 E-mails: jkuroiwah@infonegocio.net.pe / editnsg@speedy.com.pe
 Telefax (511) 719-3555 Phone office (511) 719-3554 Phone home (511) 476-4834

1. Rediscovery and Revival of Traditional Earthquake-Resistant Techniques in Algeria: The Casbah of Algiers (Algeria).

(The Arabic numbers at the head of each text box correspond to those in the DRH Template 7.1. As the arrangements on the web is somehow different, they do not appear in a regular serial order)

ID:	DRH 11
Hazard:	Earthquake
Category:	Transferable indigenous knowledge (TIK)
Provider:	abdessemed-foufa amina
Country:	Algiers, Algeria. Since 18th century, after the 1716 Algiers earthquake
Date posted:	31 January 2008
Date published:	22 December 2008



The Horseshoe-pointed arches (Arcads).

8. Contact

Dr. Amina Aicha Abdessemed-Foufa (Architect, Senior Researcher)

Department of Architecture, Faculty of Engineers Sciences, University "Saad Dahleb" of Blida, (USTB) , Route de Soumaa, BP 270 Blida. Algeria.

E-mail: foufa_a_dz@yahoo.fr

Tel/fax: +213 25 438 434

Cell phone +213 771 309 595

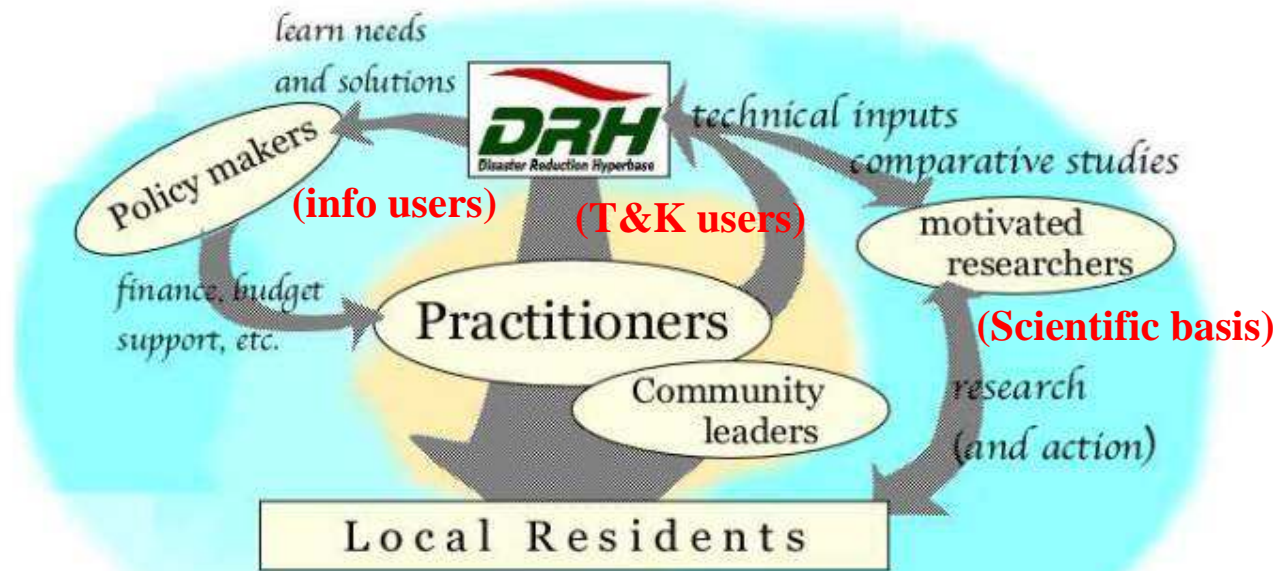
Functions of DRH

Note: *BM*=Basic Member / *FPM*=Full Profile Member



What you can do with DRH (membership requirement)	
+Access DRH Contents (<i>unlimited</i>) +Print & download DRH Contents (<i>unlimited</i>) +Discuss DRH Contents (<i>FPM</i>)	
+Submit DRH Contents proposals (<i>FPM</i>)	
+General discussion (<i>BM, FPM</i>) +Member discussion on proposed DRH contents (<i>FPM</i>)	
+Access to relevant initiatives on information platforms for disaster reduction (<i>IPDR</i>) (<i>unlimited</i>) +Register your initiative (<i>FPM</i>)	
+Access to all records of DRH Project – conceptual & practical developments / major documents and presentation materials downloadable (<i>unlimited</i>)	

* Expected users of DRH



* direct users of the technologies/knowledge

* users of information in DRH

***We welcome your membership registration, and:**

+Find technologies / DRH Database

+Propose a technology / DRH Forum

+Discuss technologies / DRH Forum

+Access to DRH partners / DRH Links

+Access to DRH development records / DRH Activities

***Visit the DRH booth at GP Marketplace**

•Answer a quiz and experience DRH



DRH
Disaster Reduction Hyperbase