

## Template for DRH Database (ver.6 / 070425: fixed through 2007FY)

### Disaster Reduction Technology and Knowledge under Implementation Strategies

I. Heading		
<b>Title</b>	Earthquake Risk Reduction and Education	
<b>Major significance (less than 60 words)</b>	<ul style="list-style-type: none"> <li>- Universal.</li> <li>- Children represent the future</li> <li>- Schools have post-disaster roles as shelters and relief centers</li> <li>- Important role in development</li> <li>- Act as a catalyst to bind the community</li> <li>- Provides confidence in the community</li> <li>- Promotes safety culture</li> <li>- Ensure leadership among future generations.</li> </ul>	
<b>Keywords</b>	Disasters, Education, Risk, Earthquakes	
II. Categories (Multiple answers allowed)		
<b>Focus of this information</b>	<input type="checkbox"/> Implementation Oriented Technology <input checked="" type="checkbox"/> Process Technology <input checked="" type="checkbox"/> Transferable indigenous knowledge	
<b>Anticipated users</b>	<p><b>Practitioners (<u>"Who are supposed to act as protectors?"</u>)</b></p> <p>Instruction for writers:                      - Items of "experts" may overlap with other categories. In that case, please mark both categories.                      - You can ignore sub-categories.</p>	<input checked="" type="checkbox"/> Community leaders (voluntary base) <input checked="" type="checkbox"/> Administrative officers <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Municipalities</li> <li><input checked="" type="checkbox"/> National governments and other intermediate government bodies (state, prefecture, district, etc.)</li> </ul> <input checked="" type="checkbox"/> NGO/NPO project managers and staff International organizations (UN organizations and programmes, WB, ADRC, EC, etc.) <input type="checkbox"/> Commercial entrepreneurs <input checked="" type="checkbox"/> Financing and insurance business personnel Experts <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Teachers and educators</li> <li><input type="checkbox"/> Architects and engineers</li> <li><input type="checkbox"/> Sociologists and political economists</li> <li><input type="checkbox"/> Information technology specialists</li> <li><input type="checkbox"/> Urban planners</li> <li><input type="checkbox"/> Rural planners</li> <li><input type="checkbox"/> Environmental/Ecological specialists</li> </ul> <input checked="" type="checkbox"/> Others (Please explain using the blank space below.)
		Psychological Experts and Specialists
	<b>Associated users</b>	<input checked="" type="checkbox"/> Policy makers <input checked="" type="checkbox"/> Motivated researchers <input checked="" type="checkbox"/> Local residents

<p><b>Hazards focused (Secondary hazard should be included in the categories of the original hazards.)</b></p> <p>Instruction for writers: Multi-Hazard approach: Initiatives that focus on the combined risks of all hazards likely to occur in a given region.</p>	<ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Earthquake</li><li><input type="checkbox"/> Tsunami</li><li><input type="checkbox"/> Volcanic eruption</li><li><input type="checkbox"/> Landslide</li><li><input type="checkbox"/> Mudflow</li><li><input type="checkbox"/> Dust storm</li><li><input type="checkbox"/> Cold wave</li><li><input type="checkbox"/> Heat wave</li><li><input type="checkbox"/> Zud</li><li><input type="checkbox"/> Cyclone/ Typhoon</li><li><input type="checkbox"/> Storm surge</li><li><input type="checkbox"/> Flood</li><li><input type="checkbox"/> Flash flood</li><li><input type="checkbox"/> Glacial Lake Outburst Flood (GLOF)</li><li><input type="checkbox"/> Snow avalanches</li><li><input type="checkbox"/> Epidemic</li><li><input type="checkbox"/> Wildfire</li><li><input type="checkbox"/> Drought</li> <li><input type="checkbox"/> Desertification</li><li><input type="checkbox"/> Climate change</li><li><input type="checkbox"/> Land degradation</li> <li><input type="checkbox"/> Multi-hazard (Multi-hazard approach)</li> <li><input type="checkbox"/> Others (Please explain using the blank space below. Other hazards, disaster chains, etc.)</li></ul>
<p><b>Elements at risk</b></p>	<ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Human lives</li><li><input checked="" type="checkbox"/> Human networks in local communities</li><li><input type="checkbox"/> Business and livelihoods</li><li><input type="checkbox"/> Infrastructure</li><li><input type="checkbox"/> Buildings</li><li><input type="checkbox"/> Information and communication system</li><li><input type="checkbox"/> Urban areas</li><li><input type="checkbox"/> Rural areas</li><li><input type="checkbox"/> Coastal areas</li><li><input type="checkbox"/> River banks and fluvial basin</li><li><input type="checkbox"/> Mountain slopes</li><li><input type="checkbox"/> Agricultural lands</li><li><input type="checkbox"/> Cultural heritages</li> <li><input type="checkbox"/> Others (Please explain using the blank space below.)</li></ul>

**III. Contact Information**

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<b>Country (ies) / region (s) where the technology/knowledge/practice originated</b>	Iran
<b>Names and institutions of developers</b>	International Institute of Earthquake Engineering and Seismology (IIEES)  Mr. Ali Ehsaan Seif, IIEES, seif@iiees.ac.ir Dr. Yasamin O. Izadkhah, IIEES, izad@iiees.ac.ir Ms. Vida Heshmati, IIEES, Heshmati@iiees.ac.ir
<b>Title of relevant projects if any</b>	
<b>References and publications</b>	Izadkhah Y.O. and Parsizadeh, F. "Planning Guides for Preparedness Before, During, and After an Earthquake", Proceedings of the Second International Conference on Seismology and Earthquake Engineering (SEE-2), May 1995.  Parsizadeh, F., Izadkhah, Y.O., and Heshmati, V., 2003. "The Necessity of Teaching Earthquake Preparedness in Iran's Kindergartens", Fourth International Conf. on Seismology and Earthquake Engineering, (SEE-4), Vol. 4, May, Iran.  Izadkhah, Y.O. and Heshmati, V. "Applicable Methods in Teaching Earthquakes to Preschool Children", SEE-5 Conference, May 2007, Tehran, Iran.  Parsizadeh, F. and Izadkhah, Y.O. and Heshmati, V. "Guidelines on Earthquakes and Safety for Kindergarten Teachers", SEE-5 Conference, May 2007, Tehran, Iran.
<b>Note on ownership if any</b>	IIEES

#### IV. Background

<p><b>Disaster events and/or societal circumstances, which became the driving force either for developing the technology or enhancing the practice</b></p>	<p>Iran, being in one of the most active tectonic regions of the world, faces high seismic hazard. The country has experienced many devastating earthquakes with a magnitude of 7.0 or more throughout its history. After the Manjil-Rudbar Earthquake of June 1990 and during IDNDR, there has been considerable effort in Iran, nationally and internationally to develop effective public awareness and education for different levels of the society. The comprehensive earthquake risk reduction programme in Iran was launched in 1991. Along with the improvement of new methods for design and construction of structures, earthquake education has developed and grown as another effective activity.</p> <p>In this regard, educating the children, as the future of any community at risk, can be regarded as an effective strategy to communicate safety messages to the entire community. In other words, educating the children serves to disseminate vital information to most of the population via the knowledge, skills and enthusiastic motivation of children. The children convey messages throughout society, starting with their parents. Consequently, schools play a major role in the development of disaster-aware citizens. It is proposed that children can act as a key factor in the promotion of safety culture, leading to disaster prevention and risk reduction.</p>
<p><b>V. Descriptions</b></p>	
<p><b>Feature and attribute (Aim and key mechanism to achieve the aim)</b></p>	<p>The main objective is to initiate a series of activities to protect people from the impacts of future earthquakes.</p> <p>Also:</p> <ul style="list-style-type: none"> <li>- Development and implementation of a comprehensive program addressing all groups of the society.</li> <li>- Increasing public awareness and preparedness using all types of media.</li> <li>- Educating children and youngsters about earthquake preparedness at all school levels by including materials in textbooks, films, conducting drills, exhibitions, drawing and writing competitions, posters, etc.</li> <li>- Conducting annual national drill in schools on November 8th.</li> <li>- Organizing annual art, painting and training exhibitions.</li> <li>- Strengthening the key role of women in hazard mitigation programs and promotion of seismic safety culture.</li> </ul>
<p><b>Necessary process to implement</b></p>	<p>In order to update the teacher's information, there is on-the-job training, for teachers as well as administrative staff. Materials including scientific definitions of earth and the related science, earthquake preparedness, and the national drills have been taught. These classes are in two participatory and non-participatory sections. In participatory section, the face to face method is used by the instructors. In non-participatory sessions, the teachers use books. They will then be tested in a specific date through an exam. It is worth to mention that the sources for these materials is produced by the IIEES and is distributed through Ministry of Education.</p> <p>In order to increase the public awareness and teaching on national drills, the TV short announcements is conducted by IIEES and is broadcasted through national Radio and TV 10 days before the drills.</p>
<p><b>VI. Resources required</b></p>	

<p><b>Facilities and equipments required</b></p>	<p><b>1- Conducting guidelines</b>  The guideline is for schools' administrators giving instructions on how to perform the national drill. The contents of this guidelines consists of:</p> <ul style="list-style-type: none"> <li>- The necessity of performing the drills</li> <li>- Drills objectives</li> <li>- Role of parents</li> <li>- Drill performance</li> <li>- Time of the drill</li> <li>- Necessary measures before and during drills</li> </ul> <p>This guideline is published in 150,000 copies and is sent to all schools.</p> <p><b>2- Posters</b>  One of the ways to increase the public awareness is through posters. The poster should be designed in a way that it can transfer some visual information to the children as well as increase their awareness. The poster is published in 300,000 copies each year and every school receives two copies.</p> <p><b>3- Street billboards</b>  This is another media to help in increasing the public awareness and stimulating the society curiosity and interest about national drill, the seismic strengthening and the seismicity of the country.</p> <p><b>4- Conducting films and short announcements</b>  One of the methods in teaching students is through educational films. The educational film related to national drill is conducted and produced by IIEES. Additionally, for public awareness and distributing more information on drills, short announcements are produced by IIEES and broadcasted from national Radio and TV channels.</p> <p><b>National Drill Permanent Council</b>  The strategy of drill performance is designed through the National Drill Permanent Council. This council consists of the representatives of Ministry of Education (with the full authority), Ministry of Science, Research and Technology, Ministry of Interior, The Red Crescent Society of Iran, and National TV and Radio. This council submits the projects to the planning committee after identifying the general policy for implementing them. It is worth mentioning that the permanent secretariat of this council is located in IIEES.</p> <p><b>Planning Committee</b>  This committee has to implement the approved issues of the National Drill Permanent Council after review. The members of this committee consists of: A representative from IIEES, 4 representatives from Ministry of Education, one representative from Tehran Ministry of Education, one representative from National TV and Radio, one representative from The Red Crescent Society of Iran, one representative from Ministry of Interior, and one representative from the Student Organization.</p> <p><b>Provincial Committee</b>  In order to approve the decisions in the whole country, a provincial committee is held in each province. This committee consists of the representative of the province (The head of unexpected events committees), the representative of National TV and Radio, the representative of the Red Crescent Society of Iran, and the representative of Ministry of Education. Their responsibilities are to accomplish an effective drill in their province.</p>
<p><b>Costs, organization, manpower, etc.</b></p>	<p>100,000 US Dollars</p>

<b>VII. Self evaluation in relation to applicability</b>			
<b>How do you evaluate the technology/knowledge/practice that you have proposed/reported?</b>  Instruction for writers: - Only a single answer allowed		<b><i>("It is a ...")</i></b> <input type="checkbox"/> a. Tested technology (verified through implementation) <input type="checkbox"/> b. Indigenous knowledge (verified historically) <input checked="" type="checkbox"/> c. Case study <input type="checkbox"/> d. Technology supported by scientific experiment <input type="checkbox"/> e. Others (Please explain using the blank space below.)	
<b>Notes on the applicability if any</b>			
<b>VIII. Application examples</b>			
Instruction for writers: - Writers who marked a or b in Section VII are expected to provide examples as much as possible. Those who marked c or d are also strongly recommended to fill in here, but not compulsory. - Please fill in this section in with technology/knowledge/practice applied to any fields.			
<b>(No. 1)</b>			
<b>Project name if available</b>		Conducting Earthquake Safety Council (Phase 1)	
<b>Place (Specify as much as possible)</b>		10 Secondary and High School in Tehran	
<b>Year</b>	2007-2008	<b>Investor</b>	
<b>People involved (Please indicate all contributors with their titles when available.)</b>		10 staff	
<b>Monetary costs incurred (Please show the breakdown with approximate cost for each facility or equipment if possible.)</b>		35000 US Dollars	
<b>Total workload required (Time frame and human resources)</b>		1240 hours	
<b>Evidence of positive results (Tangible / intangible)</b>			
<b>(No. 2)</b>			
<b>Project name if available</b>		Earthquake Safety Council (Phase 2)	
<b>Place</b>		20 Secondary and High School in Tehran	
<b>Year</b>	2008-2009	<b>Investor</b>	
<b>People involved</b>		10 staff	
<b>Monetary costs incurred</b>		40000 US Dollars	
<b>Total workload required (Time frame and human resources)</b>		1240 hours	
<b>Evidence of positive results (Tangible / intangible)</b>			

(No. 3)			
<b>Project name if available</b>		Earthquake Safety Network (Phase 3)	
<b>Place</b>		30 Secondary and High School in Tehran	
<b>Year</b>	2009-2010	<b>Investor</b>	
<b>People involved</b>		10 staff	
<b>Monetary costs incurred</b>		30 million Toman (30000 US Dollars)	
<b>Total workload required (Time frame and human resources)</b>		1240 hours	
<b>Evidence of positive results (Tangible / intangible)</b>			
<b>IX. Other related parallel initiatives (if any)</b>			
<b>X. Remarks for version upgrade</b>			