Renovation, Rehabilitation and Capacity Building of Schools in I.R. Iran

Kambod Amini Hosseini
Director of Risk Management Research Center

International Institute of Earthquake Engineering and Seismology
Contents:

Part I:
Activities of Reducing the Vulnerability and Rehabilitation of Schools in I.R. Iran

Part II:
Capacity Building and Increasing Preparedness in Schools and their neighborhoods for DRR
Importance of School’s Retrofitting
Before Rehabilitation and Renovation
Before Rehabilitation and Renovation
Ministry of Education

State Organization of Schools Renovation, Development and Mobilization (SOSRDM)

- Developing guidelines to evaluate the physical status of school buildings and retrofitting
- Evaluating the vulnerability of school buildings based on the prepared guidelines
- Providing necessary justification for budget allocation by Iran’s Parliament for retrofitting the schools

Ministry of Science, Research and Technology

International Institute of Earthquake Engineering and Seismology (IIEES)
Classification of school buildings based on the provided guidelines:

- Sustainable (safe)
- Required Demolition and Renovation
- Required Rehabilitation

- 31% Sustainable
- 36% Required Demolition and Renovation
- 33% Required Rehabilitation
The Distribution of Students in Safe and Unsafe Schools (2003-2004)

- Safe: 63%
- Unsafe: 37%
Budget allocated by Parliament for Schools

The Law on Renovation and Rehabilitation (2006)

Enacted by parliament

- 3 billion USD
  For Renovation of schools

- 1 billion USD
  For Rehabilitation of schools
Renovation Projects According to the Parliament Law by end of 2012

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The area of schools are needed to be reconstructed (m²)</td>
<td>13,193,500</td>
</tr>
<tr>
<td>Area of Reconstructed Schools (m²)</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Schools under renovation and reconstruction (m²)</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Total (m²)</td>
<td>9,000,000</td>
</tr>
<tr>
<td>Total Classrooms</td>
<td>More than 52,000</td>
</tr>
<tr>
<td>Achieve to goal</td>
<td>69%</td>
</tr>
<tr>
<td>Allocated budget</td>
<td>More than 3.54 billion USD</td>
</tr>
</tbody>
</table>
New School Construction Approach
Photos of the outdoor view of some demolished-reconstructed schools
Samples of Retrofitted Schools

Before

Concrete Shear Wall

After
Samples of Retrofitted Schools
Reconstructed School was the **Only safe building!**

Source: USGS

**Magnitude: M=6.3**

**Longitude= 46.750**

**Latitude=38.209**

**Focal Depth (Km)=9.5**
2009 Fars-Provence-Iran Earthquake (M=6)
2011 Southern Khorasan-Provine-Iran Earthquake (M=6)
Number of students in safe schools changed from 37% in 2004 to 67% in 2013.
Allocated budget by Parliament for follow up program

Sixth 5 years National Development Plan 2017-2021

3 billion USD
For retrofitting remained schools
Lessons Learned

- Developing applicable methods and technologies to be used based on local conditions.

- Success in mobilizing collaboration between different entities (MoE, MSRT, Parliament, etc.).

- Prioritizing necessary interventions and developing short to long-term plans.

- Achievement the goals of the program in appropriate time period.

- Sustainability of work.
Part II: Capacity Building and Increasing Preparedness in Schools for DRR

- Joint work by MoI, MoE, MSRT (IIEES), RCS, IRIB

- Besides of physical improvement of the schools, necessary training are provided to the students for increasing their preparedness.

- Safe Schools are considered as community bases for risk reduction and disaster management.
• Preparing and sharing Diagnosis Map by local residents under school management.

• Organizing relevant trainings to school students and community members.

• Organizing Safety drills
Expanding the program in neighboring countries
Kabul, Afghanistan, May 2017
Thanks for your attention