Second Safe Schools Leaders Meeting

EERI School Earthquake Safety Initiative report by Barry H Welliver, chair
Introduction

The United Nations Office for Disaster Risk Reduction (UNISDR) in conjunction with the Islamic Republic of Iran hosted the Second Safe School Leaders Meeting in Tehran on October 4 and 5, 2015. The Ministers of Education from the Safe School Leader Countries were invited to attend along with all other interested member nations.

The meeting continued the work begun at the First Safe School Leaders Meeting in October, 2014 in Istanbul, Turkey to build upon commitments made to the Worldwide Initiative for Safe Schools (WISS) and school safety implementation at the Third United Nations Conference on Disaster Risk Reduction.

The program consisted of field visits to three schools followed by a peer-review process of Iran’s achievements in rehabilitating and replacing vulnerable buildings on the first day followed by Ministerial discussions and political commitments to school safety practices on the second day. A final action plan was issued following the meeting.

City of Tehran

The Secretary of the United States Department of Education was unable to attend and I was invited at the request of Professor Yousef Bozorgnia from the University of California, Berkeley to attend with him as “unofficial” representatives of the United States in an effort to strengthen the sharing of technical resources with Iran. Professor Bozorgnia has been working with the Organization for Development Renovation and Equipping Schools of I.R. Iran (DRES) in developing their rehabilitation standards for schools for a number of years.

My official capacity was as chair of EERI’s School Earthquake Safety Initiative (SESI) however I also reported on work under development by the Applied Technology Council for

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1 http://www.unisdr.org/we/inform/events/45628

2 http://www.unisdr.org/files/45628_finalactionplaninsupportofwissimple.pdf
the FEMA project ATC 122 - *Reducing the Risk to our Schools from Natural Hazards and Improving the Safety of Our Children* as the Project Technical Director.

**Iran’s Safe Schools Program**

The 2003 Bam earthquake was perhaps the defining event for school safety in Iran. With over 30,000 lives claimed and many schools destroyed, national attention was focused on the safety of school buildings. The Parliament passed a Law of Schools in 2005 allocating $4.5 billion to help ensure that 95,000 schools and 13 million students would be kept safe from earthquakes, floods and fires. An additional $3 billion was committed in 2015 to complete their program over the next five years for rehabilitation and replacement of dangerous schools.

Dr. Morteza Raissi Dehkordi, Deputy Minister for Education and head of Iran’s Safe Schools program indicated that during initial assessments over 66% of schools were found to be unsafe and requiring additional retrofitting or reconstruction. The program began in 2006 and 83% of the work has been completed and the remaining will be finished in the next several years. Dr. Raissi indicated that there is very strong cultural support for safe schools in Iran as evidenced by strong financial support from private sector donors supplementing the public funds.

As part of the Worldwide Initiative for Safe Schools, Iran has used the three pillars of comprehensive school safety in developing their school safety programs; 1. Safe Learning Facilities; 2. School Disaster Management; and 3. Disaster Risk Reduction and Resilience Education.

**Safe Learning Facilities** recognizes the need for structural safety in new school construction and the retrofitting of vulnerable ones. Iran's approach included significant
research and development of guidelines for building construction standards for both new and existing schools. They consulted over twenty national and international building codes and regulations regarding earthquake resistant design including those from ACI, AISC, ASCE, ASHTO, BS, FEMA and other architectural resources. DRES is also responsible for coordinating many aspects of school design including space planning and energy efficiency.

In order to responsibly spend the generous dollars allocated by their parliament and private donors for safe school buildings, DRES developed programs to prioritize their needs for retrofitting by considering various factors including costs, quality and expected useful life of the school building. Additionally, they developed time and budget algorithms which considered the many factors influencing the decision-making process.

Of particular note during the meeting was the participation of the Iranian people in the public improvement of school buildings. The State and Provincial school builders charitable communities is considered one of the main assistants to the Ministry of Education in association with DRES in promoting safe schools, raising donations, and helping to organize and supervise projects. This unique commitment by private individuals both from Iran and around the world supports an important message — all children deserve a good education and safe schools.

Some additional noteworthy efforts undertaken in Iran include the training and re-training of technical and professional experts (architects and engineers) in the use of these new standards and guidelines for safe school design and construction. Construction personnel are also included in seminars and teachings to assure compliance with the new standards.

School Disaster Management in Iran has embraced the protocol established in the International Initiative of the Hyogo Framework for Action addressing natural disasters and commits both governmental and non-governmental resources to managing the operation of response, resilience, recovery, and rehabilitation following a disaster. Their disaster management plan includes a four phase approach — (1) Prevention; (2) Preparation; (3) Dealing with the Incident; and (4) Reconstruction and Rehabilitation.

Risk Reduction and Resilience Education has also been embraced and significantly developed in Iran. They have created a series of educational books, classroom courses,
teacher training materials, and other non-academic books aimed at improving the knowledge and awareness of children, teachers and the public.

A copy of the comprehensive report titled *Iran’s Activities on Disaster Risk Reduction of Schools* was provided to each attendee.

**Summary Report of Second Safe Schools Meeting**

The purpose of the Second Safe School leaders meeting was to advance the work of the member nations toward making safer schools and creating a culture of education which can sustain these efforts. By setting goals and creating guidelines, the UNISDR helps to move the agenda of world-wide disaster resilience forward. Iran’s efforts in this regard were the main focus of the first day’s meetings.

The first day activities started with a program introducing the morning field trip followed by visits to one retrofitted school (Edalat Primary School) and two demolished and reconstructed schools (Shahid Madani Educational Centre; Hazrat Zahra High School) in Tehran. The afternoon session consisted of a series of presentations on actions taken by Iran to assess, quantify and mitigate their unsafe schools. The day concluded with a feedback session and a lessons learned discussion.

During the second day meetings each member nation and interested country was invited to report on their accomplishments and challenges. The meeting chair, Ms. Margareta Wohlstrom, Special Representative of the Secretary-General for Disaster Risk Reduction, UNISDR Geneva, helped facilitate discussions and integrate the move from the Hyogo Framework for 2000-2015 to the Sendai Framework 2015-2030. Professor Bozorgnia reported on the work of the Pacific Earthquake Engineering Research Center and I gave a summary report on the EERI School Earthquake Safety Initiative and the ATC 122 *Reducing the Risk to our Schools from Natural Hazards and Improving the Safety of Our Children* project.

Discussions continued until the end of the second day on items for consideration for the meetings draft Action Plan. These were summarized in a report, given to the participants, and eventually finalized over the next several months. The meeting concluded with a reception and banquet at the Milad Towers — a landmark building in Tehran.

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6 See Appendix A for additional information of the retrofitting efforts for the Edalat Primary School.
The final Action Plan to Advance the Worldwide Initiative for Safe Schools includes the following:

1. To develop long-term national disaster risk reduction plans that integrate school safety by 2020, as per the Sendai Framework’s call, with an appropriate budget allocation for its implementation.

2. To facilitate the exchange of technical expertise and experiences including through a network of technical experts and the establishment of Working Groups on key areas of the meeting outcomes, namely on technical, financial and legal / insurance aspects for multi-hazard school safety implementation at the national level by the end of 2015. A special meeting is proposed to discuss refugee children and students’ needs for school safety together with relevant organizations in the course of 2016.

3. To develop a set of national indicators for school safety by the end of the first quarter of 2016 to inform the global indicators being developed by the open ended intergovernmental expert working group on indicators and terminology in relation to disaster risk reduction as well as the indicators on the related Sustainable Development Goals.

4. To support the implementation of the Worldwide Initiative for Safe Schools in at least four countries by the end of 2016 with the technical support from other Governments, experts from the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector and others, and the engagement of the private sector, private foundations and charity organizations in supporting resilient educational facilities and in mobilizing appropriate resources.

5. To expand the membership of the Safe School Leaders group by at least 50 percent before the next meeting.

6. To request each Working Group and associated technical partners to submit a progress report once a year to the secretariat on their accomplishments in support of the Worldwide Initiative, for compilation by the secretariat into an annual report on the work of the Worldwide Initiative to be circulated to Safe School Leaders.

7. To request the secretariat to:
   - Pursue the development of an implementation plan engaging the private sector, regional authorities, local governments, UN country teams, and other education initiatives for circulation to Safe School Leaders by the end of 2015, as a possible resource mobilization mechanism for school safety implementation.
• Identify opportunities for profiling and advancing the Worldwide Initiative on Safe Schools at upcoming regional and global platforms for disaster risk reduction and other relevant meetings.
• Support the development and dissemination of consolidated practical guidance and case studies on safe schools implementation by June 2016 in cooperation with the working groups and technical partners.
• Provide appropriate guidance and support to Host Governments with regard to the organization of Safe School Leaders meetings, including meetings of the Working Groups to inform and report on progress to a Ministerial meeting every 12-18 months.
• Coordinate action with Governments, the United Nations system and technical partners for an effective and concerted implementation of the Worldwide Initiative for Safe Schools in designated countries.

Conclusions

The Second Safe School Leaders meeting presented me with a unique opportunity to learn about the efforts of the UNISDR and the Worldwide Initiative for Safe Schools. Their development of the three pillars of comprehensive school safety has evolved over a number of years and is being embraced by nations throughout the world. A key component of the effort is to assist all countries in advancing school safety by the sharing of knowledge and experiences and potentially resources.

Here in the United States our efforts have largely been focused around the Safe Learning Facilities and School Disaster Management pillars. The additional pillar — Risk Reduction and Resilience Education — is just recently being looked upon here as another key to disaster risk reduction. This additional “leg” would seem to provide a loop back to an education component which would provide a sound foundation for a comprehensive school hazard safety program for the U.S.

Recommendations

1. Given that the U.S. Department of Education, FEMA, and other federal agencies have been instrumental in developing tools and standards for school hazard safety that in some part are being used by other countries in disaster hazard safety planning, it would seem appropriate that the United States should become a member nation of the UNISDR Worldwide Initiative for Safe Schools and support its efforts.
2. EERI SESI can benefit substantially from the work done by UNISDR and should consider helping to establish similar subcommittees aligned with the three pillars of school safety. In particular, we should consider active participation in their establishing Work Groups and development of national indicators for school safety (Items 2 and 3 in Action Plan)

3. The FEMA project ATC 122 - *Reducing the Risk to our Schools from Natural Hazards and Improving the Safety of Our Children* would also benefit from using the three pillars for comprehensive school safety. These could be the foundation for a Comprehensive School Hazard Safety Plan which would improve upon and unify the present efforts in the U.S.

Respectfully Submitted,

Barry H. Welliver, chair
EERI School Earthquake Safety Initiative
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Appendix A - Edalat Primary School Retrofit

Edalat school after retrofit

Edalat school before retrofit
The Edalat Primary school is an elementary girls school constructed in 1993. The original building is unreinforced masonry and houses 512 students and contains a library, store room and computer laboratories.

The building was retrofitted in 2008 with shotcrete on interior and exterior walls connected to concrete footings and floor and roof tie beams.

Preparations for shotcrete included removal in finishes to the bare brick and installation of steel dowels.
Application of shotcrete

Finishes were applied to the concrete.