

## ***What Will WSSI Do?***

### **WSSI Will Address Worldwide Seismic Safety Needs**

The World Seismic Safety Initiative is driven by ten high-priority seismic safety needs:

- 1. Disseminate state-of-the-art engineering knowledge so that engineers all over the world will have the knowledge necessary to build structures that can withstand earthquakes.*
- 2. Make engineering resources—data, technology, library resources, etc.—available at little or no cost to every engineer in the world.*
- 3. Develop reliable ways to characterize earthquake hazards and risks.*
- 4. Bring together the world's experts to develop a consensus on what constitutes adequate building performance in an earthquake.*
- 5. Determine how these desired performance levels can be achieved, including both structural and land use approaches*
- 6. Develop technical measures to reduce damage to existing buildings*
- 7. Ensure the continued operation of critical facilities during and following earthquakes*
- 8. Respond effectively to emergency needs during and after earthquakes.*
- 9. Restore social and economic activity promptly after earthquakes.*
- 10. Reconstruct damaged buildings, facilities, and communities safely and economically.*

The WSSI will sponsor and endorse projects that advance these goals. Most projects will require international cooperation, but many earthquake-prone countries have unique problems that must be solved by the professionals in that country. The WSSI will also address these unique problems with international resources where necessary.

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## WSSI Will Not Reallocate, But Increase Resources

The WSSI will not replace, but will supplement and extend participating nations' research and hazard reduction activities by:

- Developing new supporters of earthquake hazard reduction efforts from among international institutions,
- Seeking increased commitment from institutions now supporting earthquake hazard reduction efforts,
- More effectively organizing national efforts to achieve common international goals.

The WSSI will not build installations or purchase testing equipment, but will encourage use of existing facilities and equipment.

## WSSI Will Propose Problem-Focused Projects

The WSSI will achieve its goals through problem-focused projects that have specific objectives and work plans. Projects that will advance the goal of making buildings safer include:

### 1. Scenarios and Land Use:

- *Prepare scenarios for earthquake hazards and selected specific earthquakes that will characterize the ground motion, site failure, and damage likely at different locations.*
- *Develop land use programs to reduce seismic risk*



*Sputak Earthquake, Armenia,  
December 1988*

## 2. Retrofit and Upgrade:

- *Develop engineering design practices for retrofit of existing buildings that can be incorporated into local and national building codes*
- *Initiate engineering and research projects on how to upgrade reinforced concrete buildings that are not earthquake-safe.*

## 3. Training, Education and Knowledge Transfer:

- *Develop courses that will train engineering teachers in: (a) State-of-the-art engineering knowledge and construction techniques; and (b) How to incorporate this information into their curricula.*
- *Disseminate knowledge about ways to improve the seismic capacity of traditional, non-engineered housing*
- *Develop education and training programs for skilled and unskilled builders*
- *Prepare an ongoing series of short engineering briefs, each one spelling out an aspect of earthquake engineering practice or construction detailing and distribute them worldwide.*
- *Develop and distribute a comprehensive library of earthquake engineering articles, research findings, and resources.*
- *Overcome the language barrier by providing dictionaries, translations and technical resource documents for materials published in different languages*

## 4. Post-Earthquake Activities:

- *Provide technical expertise to regions that want to address seismic safety issues, especially following an earthquake when reconstruction and development planning are at issue.*
- *Organize an international strike force of technical experts who can quickly obtain perishable data at an earthquake site and develop a system by which this information can be rapidly published worldwide*
- *Collect ground and building motion recordings following an earthquake and distribute them worldwide without delay*

The above projects are merely an indication of what could and should be undertaken by the WSSI. The WSSI will provide the world leadership that will enable engineers to work together on activities that will make the world's buildings safer.



*Tangshan Earthquake, China, July 1976.*

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Some of the international resources that will be brought to bear on the above projects include: knowledgeable individuals, special facilities, new technologies, and many strong national engineering organizations. Project proposals may be prepared by any interested party. Projects must be directed toward practical actions that improve seismic safety in wide regions of the world.

### **WSSI Will Endorse Other Activities**

The IAEE believes that many worthwhile projects may receive more favorable consideration by their national funding organizations with WSSI endorsement. The Board of Directors may endorse individual projects that are consistent with the goals of the WSSI, even though these projects are not formally a part of the WSSI.

In addition to the projects the WSSI will be sponsoring directly, it will also serve as a vehicle for IAEE member national organizations to organize and conduct programs that will improve seismic safety and advance technical understanding of earthquake engineering principles. The WSSI will facilitate IAEE members' joint actions, not be a substitute for their individual efforts. The WSSI will also advise public and private institutions on seismic safety issues, and endorse actions taken by other national or international organizations in support of the WSSI goals.

### **WSSI Will Encourage Individual Country Initiatives**

While WSSI projects are expected to be international in character, it can and will assist national groups in obtaining financial and technical support for their national activities. The WSSI recognizes that initiatives conducted by individual countries are the primary means of improving that country's seismic safety. Most countries have unique problems that are best solved by professionals from that region. Therefore, the WSSI will encourage and assist national groups as they develop seismic safety projects for their individual country's needs.

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